



## INTRODUCTION

### E & E Magnetic Products Limited

E & E Magnetic Products Limited (EEMPL) has been positioned as a major supplier of high quality magnetic related products. With the worldwide presence of our engineering teams, we design and manufacture a wide range of products such as magnetic components, magnetic integrated connectors and electronic modules. Products are widely used in telecommunications, networking, computing, industrial, automotive and consumer electronic applications.

As one of our key factors to success, EEMPL has established a far-reaching sales and marketing network which well covers our customers located worldwide. In addition to our sales representatives and distributors, we have direct sales support offices in USA, Canada, Europe, Singapore, Taiwan, Hong Kong and China.

In order to fulfill our mission of providing the best value to our customers, EEMPL is committed to develop cutting-edge technology with our high-tech business partners, uphold stringent product quality and compliances with international industrial standards, provide on time deliveries and offer our products at most competitive pricings.

### LAN Magnetic Modules

In order to fulfill various design challenges and criteria for various applications in the market, we are offering a wide range of discrete LAN magnetic modules which comply with various industrial standards, including IEEE 802.3 standard.

Our magnetic modules are designed and optimized for PoE/PoE+, 10GBase-T, 1000Base-T, 100Base-T, 10Base-T, ATM and other applications.

Our magnetic modules are also well designed to match with all leading transceiver chipsets.

Moreover, in order to provide an all-round solution to our customer's applications, a wide range of packages such as surface-mount (SMT), dual-in-line (DIL) and single-in-line (SIL) configurations are supported. Compact designs up to Hex port per package are also available for space limited designs.





**IC CROSS REFERENCE: 1000 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>	Turns Ratio <sup>2</sup>	Package		Data sheet
						Style <sup>3</sup>	L / W / H (in) Max.	
Agere	ET1011, ET1012 ET1081	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
	ET1310	824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
	ET4100 ET4001, ET4101	824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
Broadcom	BCM5345, BCM5346, BCM5384	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
	BCM5385, BCM5388, BCM5400	824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
	BCM5401, BCM5402, BCM5404	824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
	BCM5411, BCM5414, BCM5421/S	824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
	BCM5424, BCM5434, BCM5435	824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
	BCM5460, BCM5461, BCM5464/S	824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
	BCM5478, BCM5487, BCM5488	824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
	BCM5701, BCM5702, BCM5703							
BCM5704, BCM5705, BCM5707								
BCM5721, BCM5751								
Intel	82540, 82541, 82542	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
	82543, 82544, 82545	824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
	82546, 82547	824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
	82570	824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
LSI Logic	L80600, L80601	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
Marvell Semiconductor	88E1010, 88E1011S, 88E1040/S	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
	88E1041/S, 88E1042/S, 88E1111	824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
	88E1112, 88E1141, 88E1145	824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
	88E1149, 88E8000, 88E8005	824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
	88E8006, 88E8010, 88E8022	824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
	88E8036, 88E8050, 88E8062	824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108

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**IC CROSS REFERENCE: 1000 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>	Turns Ratio <sup>2</sup>	Package		Data sheet
						Style <sup>3</sup>	L / W / H (in) Max.	
Micrel (Kendin)	KS9020	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
Mysticom	MY1001	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
National Semiconductor	DP83820, DP83861, DP83864 DP83865	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
Realtek	RTL8169, RTL8211	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108
Vitesse	VSC7301, VSC7303, VSC7380 VSC7384, VSC8201, VSC8211 VSC8221, VSC8224, VSC8234 VSC8244, VSC8538, VSC8558 VSC8601	824-M0053	Single	T,C	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0060	Single	T,C,A	1CT:1	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0308	Single	T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH102
		824-M0327**	Single	C,T	1CT:1CT	SOIC, 24 Pin	.700 / .610 / .235	EH401
		824-00261	Single	T	1CT:1CT	SOIC, 24 Pin	.605 / .404 / .168	EH109
		824-M0167	Dual	T,C,A	1CT:1	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0168	Dual	T,C	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH105
		824-M0326**	Dual	C,T	1CT:1CT	SOIC, 48 Pin	1.100 / .610 / .275	EH402
		824-00182	Dual	T,C	1CT:1CT	SOIC, 50 Pin	1.100 / .430 / .340	EH108

**Notes:**

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
2. This indicates the turns ratio of the transformer (Chip side to Cable side).
3. SOIC = Small Outline Surface Mount package with pin pitch .050".

\*\* For 1000Base-T PoE application.

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**IC CROSS REFERENCE: 100 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>		Turns Ratio <sup>2</sup>		Package		Data sheet
				TX	RX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
AMD	AM79C874, AM79C875	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	AM79C971, AM79C972	824-M0052	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 12 Pin	.593 / .590 / .202	EH022
	AM79C973, AM79C975	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	AM79C976, AM79C977	824-M0080	Single	T,C,A	C,T	1CT:1.41	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH020
		824-M0125*	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
Broadcom	AC101, AC101L	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	AC104, AC205, AC206	824-M0052	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 12 Pin	.593 / .590 / .202	EH022
	AC207, AC208	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	BCM1100, BCM1101	824-M0125*	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	BCM1112, BCM1115	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	BCM5208R, BCM5220	824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
	BCM5221, BCM5222	824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
	BCM5226, BCM5228	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
	BCM5238, BCM5248	824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	BCM5315, BCM5318	824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	BCM5325(M)	824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
	BCM5338, BCM5350	824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305
	BCM5365, BCM5380									
BCM5384, BCM5721										
BCM6345, BCM6348										
Cirrus Logic	CS8952, CS8952T	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-00232**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .375 / .245	EH308
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Davicom	DM9102A, DM 9161	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	DM9301, DM 9331	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	DM9601	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-M0241	Single	T,C	C,T	1CT:1CT	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
		824-00232**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .375 / .245	EH308
		824-M0012	Quad	T,C	C,T	1CT:1CT	1:1	SOIC, 40 Pin	1.100 / .635 / .225	EH019
IC+	3097-F, 3299A	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	IP100A, IP101, IP108	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	IP1726	824-00232**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .375 / .245	EH308
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301

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**IC CROSS REFERENCE: 100 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>		Turns Ratio <sup>2</sup>		Package		Data sheet
				TX	RX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
IC+ (continued)		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
		824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305
ICS	ICS1890, ICS1891	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	ICS1893	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-00232**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .375 / .245	EH308
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Infineon (AMD Tek)	ADM6305, ADM6308	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	ADM6326, ADM6509	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	ADM6609, ADM6909	824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
	ADM6996L	824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
	ADM8511, ADM8513	824-00101**	Dual	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 24 Pin	.542 / .610 / .250	EH303
	ADM9511, ADM9513	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
	AN983B	824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	AN985B auto MDX	824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	AN985L auto MDX	824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
	PSB21553	824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305
Intel	82550, 82551	824-M0052	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 12 Pin	.593 / .590 / .202	EH022
	82551ER, 82551QM	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	82559, 82559ER	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	82562, 82562EZ	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	LXT970A	824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
	LXT971 (ALC)	824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
	LXT972, LXT972A	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
	LXT973, LXT974	824-M0061	Quad	T,C	C,T	1CT:1CT	1:1	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	LXT975, LXT9761	824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	LXT9762, LXT9763	824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	LXT9781, LXT9782	824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	LXT9784, LXT9785	824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	LXT9863, LXT9880	824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
	824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305	
LSI	L80223, L80225	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
	L80227	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301

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**IC CROSS REFERENCE: 100 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>		Turns Ratio <sup>2</sup>		Package		Data sheet
				TX	RX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
Marvell	88E3081, 88E3082	824-M0032	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	88E3083	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	88E6021, 88E6051	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	88E6052, 88E6060	824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
	88E6063, 88E6083	824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
	88E6095, 88E6218	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
	824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305	
MICREL (Kendin)	KS8695P, KS8721B	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	KS8721BL, KS8737	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	KS8993, KS8993M	824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
	KS8993F, KS8995	824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
	KS8995E, KS8995M	824-00101**	Dual	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 24 Pin	.542 / .610 / .250	EH303
	KS8995MA, KS8995X	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
	KS8997, KS8998	824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
	KS8999	824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
	824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305	
MicroLinear	ML6652	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Myson	MTD971, MTD972	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
	MTD981	824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305		
Mysticom	MystiPHY110	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304

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**IC CROSS REFERENCE: 100 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>		Turns Ratio <sup>2</sup>		Package		Data sheet
				TX	RX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
Mysticom (continued)		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
		824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305
National Semiconductor	DP83816 (Macphyter II) DP83847, DP83848	824-M0023	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
		824-M0052	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 12 Pin	.593 / .590 / .202	EH022
		824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0125*	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 16 Pin	1.000 / .510 / .235	EH021
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305		
Realtek	RTL8019AS RTL8100B, RTL8100C RTL8101L, RTL8139 RTL8139B, RTL8139C RTL8139CL RTL8150, RTL8201BL RTL8201CL, RTL8208 RTL8316	824-M0052	Single	T,C,A	C,T	1CT:1	1CT:1CT	SMT, 12 Pin	.593 / .590 / .202	EH022
		824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00119	Single	T,C	C,T	1CT:1CT	1CT:1CT	PCMCIA, 16 Pin	.510 / .380 / .078	EH203
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305		
SIS	SIS960	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
SMSC	LM83C183, LM83C185 LM91C96, LM91C96I LM91C100FD LM91C110, LM91C111	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301

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**IC CROSS REFERENCE: 100 Base-T Applications**

IC Manufacturer	IC Part No.	EEMPL Part No.	No. of Ports	Configuration <sup>1</sup>		Turns Ratio <sup>2</sup>		Package		Data sheet
				TX	RX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
SMSC	LM9115	824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Teridian (TDK)	78P2123, 78Q2123	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Texas Instruments	TPS2370, TPS2375	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
Zarlink (Plessey/Mitel)	MT933	824-M0069	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0143*	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .210	EH012
		824-M0145**	Single	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 16 Pin	.500 / .380 / .245	EH304
		824-00100**	Dual	T,C,A	C,T	1CT:1	1CT:1CT	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-00122**	Dual	T,C,A	T,C,A	1CT:1	1CT:1	SOIC, 24 Pin	.530 / .750 / .250	EH301
		824-M0116	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0240	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .225	EH019
		824-M0313*	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 40 Pin	1.100 / .635 / .275	EH009
824-00283**	Quad	T,C	T,C	1CT:1CT	1CT:1CT	SOIC, 48 Pin	1.100 / .635 / .275	EH305		

**Notes:**

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
2. This indicates the turns ratio of the transformer (Chip side to Cable side)
3. SMT = Surface Mount Package with pin pitch >.050",  
SOIC = Small Outline SMT package with pin pitch .050",  
PCMCIA = Low profile SMT package for PCMCIA applications,

\* Operating temperature = -40°C to +85°C

\*\* For 100Base-T PoE application.





**10/100/1000 BASE-T APPLICATIONS**

EEMPL Part No.	Turns Ratio <sup>2</sup>	Configuration <sup>1</sup>	Package		Data Sheet
			Style <sup>3</sup>	L / W / H (in) Max.	
<b>1000 Base-T, Single Port</b>					
824-M0053	1CT:1CT	T,C	SOIC, 24 Pin	.700 / .610 / .235	EH102
824-M0060	1CT:1	T,C,A	SOIC, 24 Pin	.700 / .610 / .235	EH102
824-M0330	1CT:1CT	C,T	SOIC, 24 Pin	.700 / .610 / .235	EH102
824-00092	1CT:1	T,C,A	SOIC, 24 Pin	.530 / .750 / .250	EH104
824-00093	1CT:1CT	T,C	SOIC, 24 Pin	.530 / .750 / .250	EH104
824-M0160*	1CT:1CT	T,C	SOIC, 24 Pin	.700 / .610 / .235	EH102
824-M0328*	1CT:1	T,C,A	SOIC, 24 Pin	.700 / .610 / .300	EH102
824-M0332*	1CT:1CT	C,T	SOIC, 24 Pin	.700 / .610 / .235	EH102
824-00166*	1CT:1CT	T,C	SOIC, 24 Pin	.530 / .750 / .250	EH104
<b>1000 Base-T, Dual Port</b>					
824-M0167	1CT:1	T,C,A	SOIC, 48 Pin	1.100 / .610 / .275	EH105
824-M0168	1CT:1CT	T,C	SOIC, 48 Pin	1.100 / .610 / .275	EH105
824-M0329	1CT:1CT	C,T	SOIC, 48 Pin	1.100 / .610 / .275	EH105
824-00182	1CT:1CT	T,C	SOIC, 50 Pin	1.100 / .430 / .340	EH108
824-M0265*	1CT:1CT	T,C	SOIC, 48 Pin	1.100 / .610 / .275	EH105
824-M0331*	1CT:1CT	C,T	SOIC, 48 Pin	1.100 / .610 / .275	EH105
824-00264*	1CT:1CT	T,C	SOIC, 50 Pin	1.100 / .430 / .340	EH108

**Notes:**

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
  2. This indicates the turns ratio of the transformer (Chip side to Cable side).
  3. SOIC = Small Outline SMT package with pin pitch  $\leq .050''$ .
- \* Operating temperature: -40°C to +85°C.



POWER OVER ETHERNET (POE) APPLICATIONS						
EEMPL Part No.	Turns Ratio <sup>2</sup>	Configuration <sup>1</sup>		Package		Data Sheet
	TX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
1000 Base-T, Single Port						
824-M0327	1CT:1CT	C,T	C,T	SOIC, 24 Pin	.700 / .610 / .235	EH401
1000 Base-T, Dual Port						
824-M0326	1CT:1CT	C,T	C,T	SOIC, 48 Pin	1.100 / .610 / .275	EH402
10/100 Base-T, Half Port						
824-00178	1CT:1CT	T		SOIC, 6 Pin	.300 / .400 / .250	EH309
10/100 Base-T, Single Port						
824-M0145	1CT:1CT	T,C	T,C	SOIC, 16 Pin	.500 / .380 / .245	EH304
824-M0286	1CT:1CT	T	T	SOIC, 16 Pin	.500 / .380 / .245	EH304
824-00232*	1CT:1CT	T,C	T,C	SOIC, 16 Pin	.500 / .375 / .245	EH308
824-00247*	1CT:1CT	T	T	SOIC, 16 Pin	.500 / .375 / .245	EH308
10/100 Base-T, Dual Port						
824-M0146	1CT:1CT	T,C	T,C	SOIC, 24 Pin	.700 / .610 / .235	EH302
824-00100	1CT:1	T,C,A	C,T	SOIC, 24 Pin	.530 / .750 / .250	EH301
824-00101	1CT:1CT	T,C	T,C	SOIC, 24 Pin	.542 / .610 / .250	EH303
824-00103	1CT:1	T,C,A	T	SOIC, 24 Pin	.542 / .610 / .250	EH303
824-00122	1CT:1	T,C,A	T,C,A	SOIC, 24 Pin	.530 / .750 / .250	EH301
824-00208	1CT:1CT	T,C	T,C	SOIC, 24 Pin	.530 / .750 / .250	EH301
824-M0206*	1CT:1CT	T,C	T,C	SOIC, 24 Pin	.700 / .610 / .235	EH302
824-00209*	1CT:1CT	T,C	T,C	SOIC, 24 Pin	.530 / .750 / .250	EH301
10/100 Base-T, Quad Port						
824-00186	1CT:1	T,C,A	C,T	SOIC, 48 Pin	1.100 / .635 / .275	EH305
824-00283	1CT:1CT	T,C	T,C	SOIC, 48 Pin	1.100 / .635 / .275	EH305

**Notes:**

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
  2. This indicates the turns ratio of the transformer (Chip side to Cable side).
  3. SOIC = Small Outline SMT package with pin pitch ≤ .050".
- \* Operating temperature: -40°C to +85°C.

### 10/100 BASE-T APPLICATIONS

EEMPL Part No.	Turns Ratio <sup>2</sup>	Configuration <sup>1</sup>		Package		Data Sheet
	TX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
<b>100 Base-T, Single Port</b>						
824-M0023	1CT:1	T,C,A	C,T	SMT, 16 Pin	1.000 / .510 / .235	EH021
824-M0052	1CT:1	T,C,A	C,T	SMT, 12 Pin	.593 / .590 / .202	EH022
824-M0069	1CT:1CT	T,C	T,C	SOIC, 16 Pin	.500 / .380 / .245	EH012
824-M0070	1CT:1CT	T,C	C,T	SMT, 16 Pin	1.000 / .510 / .235	EH021
824-M0074	2CT:1	T,C	T,C	SMT, 16 Pin	1.000 / .510 / .235	EH023
824-M0081	2CT:1CT	T,C	T,C	SMT, 16 Pin	1.000 / .510 / .235	EH023
824-M0085	2CT:1CT	T,C	T,C	SOIC, 16 Pin	.500 / .380 / .245	EH012
824-M0117	1:1	C,T,C	C,T,C	SOIC, 16 Pin	.505 / .610 / .235	EH015
824-M0144	1.41CT:1CT	T,C	T,C	SMT, 16 Pin	1.000 / .510 / .235	EH020
824-M0155	1CT:1CT	C,T	T,C	SOIC, 16 Pin	.500 / .380 / .245	EH012
824-00115	1CT:1	T,C,A	C,T	PCMCIA, 12 Pin	.480 / .460 / .085	EH204
824-00119	1CT:1CT	T,C	C,T	PCMCIA, 16 Pin	.510 / .380 / .078	EH203
824-00153	1CT:1CT	T,C	C,T	PCMCIA, 12 Pin	.480 / .460 / .085	EH204
824-M0118*	1CT:1CT	C,T	C,T	SOIC, 16 Pin	.500 / .380 / .245	EH012
824-M0125*	1CT:1	T,C,A	C,T	SMT, 16 Pin	1.000 / .510 / .235	EH021
824-M0142*	1CT:1CT	T,C	T,C	SMT, 16 Pin	1.000 / .510 / .235	EH021
824-M0143*	1CT:1CT	T,C	T,C	SOIC, 16 Pin	.500 / .380 / .245	EH012
<b>100 Base-T, Dual Port</b>						
824-M0020	1CT:1	T,C,A	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH018
824-M0169	1CT:1CT	T,C	T,C	SOIC, 40 Pin	1.100 / .635 / .225	EH018

#### Notes:

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
  2. This indicates the turns ratio of the transformer (Chip side to Cable side).
  3. SMT = Surface Mount Package with pin pitch > .050".  
 SOIC = Small Outline SMT package with pin pitch ≤ .050".  
 PCMCIA = Low profile SMT package for PCMCIA applications.
- \* Operating temperature: -40°C to +85°C.



10/100 BASE-T APPLICATIONS						
EEMPL Part No.	Turns Ratio <sup>2</sup>	Configuration <sup>1</sup>		Package		Data Sheet
	TX	TX	RX	Style <sup>3</sup>	L / W / H (in) Max.	
100 Base-T, Quad Port						
824-M0002	2CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH017
824-M0012	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0016	2CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH017
824-M0017	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0061	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0076	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0077	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0079	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0082	1.41CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH017
824-M0116	1CT:1CT	T,C	T,C	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0124	1:1	C,T,C	C,T,C	SOIC, 40 Pin	1.100 / .635 / .275	EH009
824-M0133*	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0170*	1CT:1CT	T,C	C,T	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0171*	1CT:1CT	T,C	T,C	SOIC, 40 Pin	1.100 / .635 / .225	EH019
824-M0187*	1:1	C,T,C	C,T,C	SOIC, 40 Pin	1.100 / .635 / .275	EH009
100 Base-T, 5-Port						
824-M0163	1CT:1	T,C,A	C,T	SOIC, 60 Pin	1.265 / .862 / .309	EH025
100 Base-T, Hex Port						
824-M0161	1CT:1CT	T,C	C,T	SOIC, 60 Pin	1.265 / .862 / .309	EH026
824-M0162	1CT:1CT	T,C	T,C	SOIC, 60 Pin	1.265 / .862 / .309	EH026

**Notes:**

1. T = Transformer, C = Common Mode Choke, A = Auto-Transformer.
  2. This indicates the turns ratio of the transformer (Chip side to Cable side).
  3. SMT = Surface Mount Package with pin pitch > .050".  
SOIC = Small Outline SMT package with pin pitch ≤ .050".  
PCMCIA = Low profile SMT package for PCMCIA applications.
- \* Operating temperature: -40°C to +85°C.



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### 10/100 Base-T applications

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**10/100 Base-T applications (continue)**

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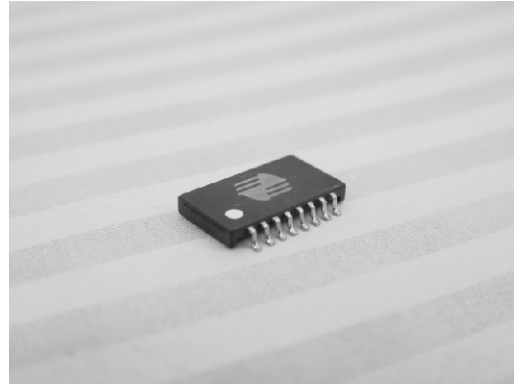




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- Compliant with IEEE802.3 specification
- Models with integrated two channels (half port) in ultra-low profile SMT package of 0.078" (1.98mm) thickness
- Designed for automatic pick and place process
- Operating temperature 0°C to +70°C.
- RoHS compliant

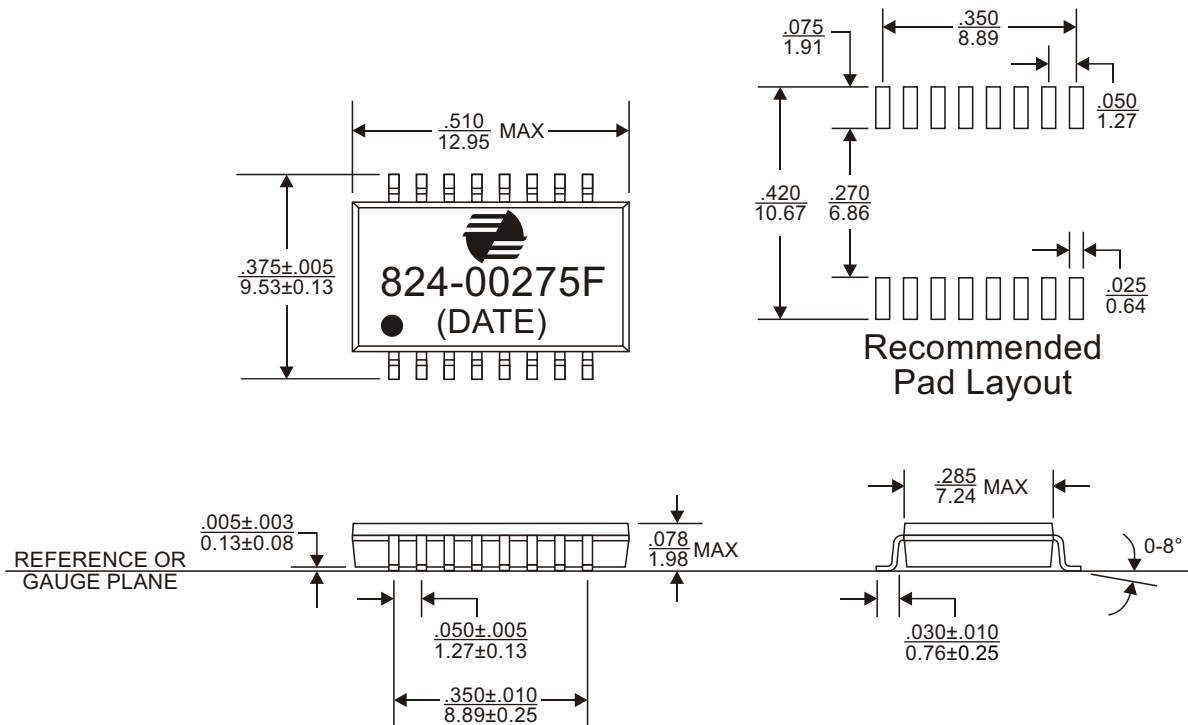


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-40MHz	50MHz	60MHz			
824-00275F	1CT:1CT	1CT:1CT	1.1	16.0	14.0	12.0	10.0	30.0	38.0	1500

**MECHANICAL DIMENSIONS**

Package: PCMCIA16B



**Notes:**

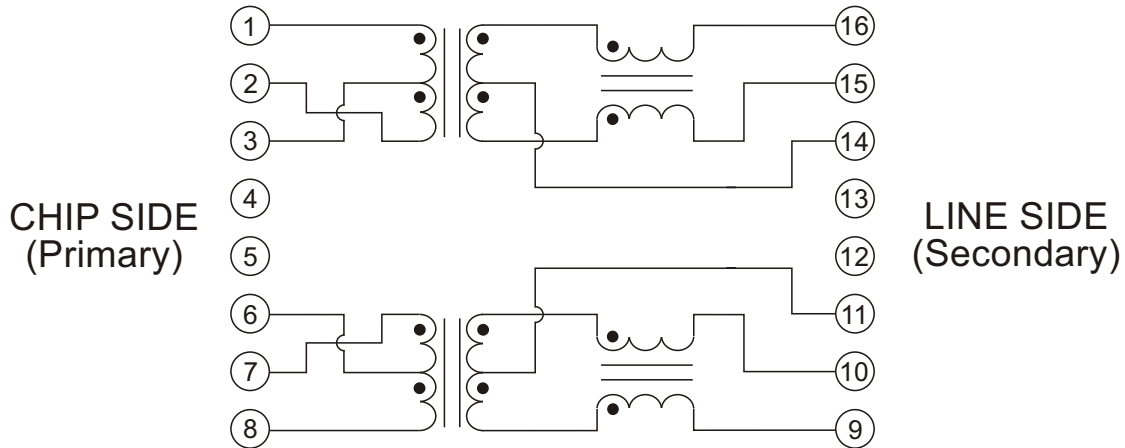
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.25}$ .

Weight (in gram)	: 0.5 typ.
Tape & Reel	: 1400 / reel



**SCHEMATICS**

824-00275F



**FOR MORE INFORMATION, PLEASE CONTACT**

**HEADQUARTER**








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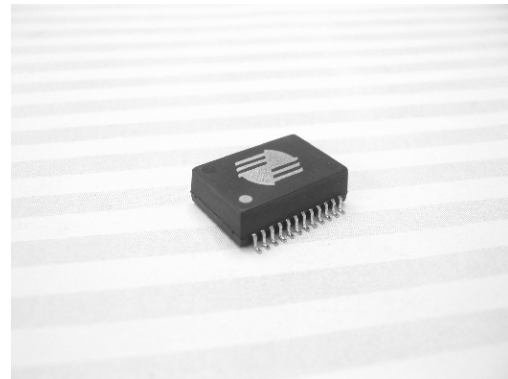
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  Some models are UL60950 recognized
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)	
		.1-100MHz	.5-40MHz	60MHz	80MHz		100MHz	.1-100MHz	30MHz		60MHz
824-M0053R	1.0	18.0	14.5	12.0	10.0	30.0	45.0	40.0	35.0	1500	
824-M0328R <sup>1</sup>	1.0	18.0	14.5	12.0	10.0	33.0	33.0	33.0	33.0	1500	
824-M0330R	1.0	18.0	14.5	12.0	10.0	30.0	43.5	37.5	33.0	1500	
824-M0332R <sup>1</sup>	1.0	18.0	14.5	12.0	10.0	30.0	43.5	37.5	33.0	1500	
		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	.1-100MHz	30MHz	80MHz	100MHz	
824-M0060R	1.0	18.0	14.5	13.1	12.0	35.0	45.0	40.0	35.0	1500	
824-M0160R <sup>1</sup>	1.0	18.0	14.5	13.1	12.0	35.0	45.0	40.0	35.0	1500	

**ELECTRICAL SPECIFICATION @ 25°C**

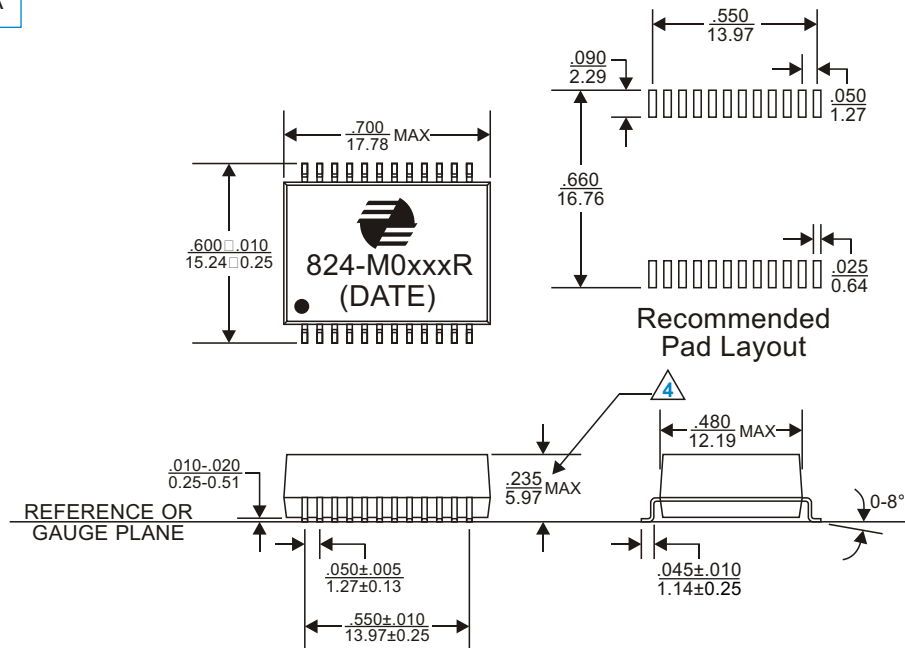
Part Number	Insertion Loss (dB Max)	Return Loss (dB Typ)					Crosstalk (dB Typ)	Hipot (Vrms)
		.1-100MHz	1-40MHz	50MHz	60MHz	80MHz		
824-M0308R	1.0	18.0	16.1	14.5	12.0	10.0	35.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO024A



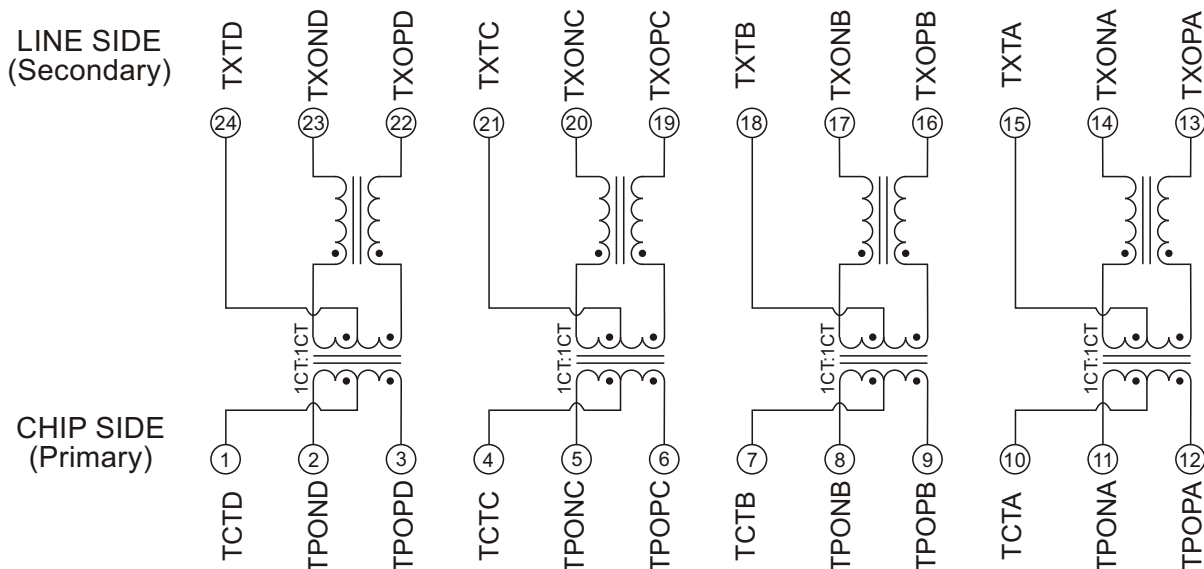
**Notes:**

- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
- For part number 824-M0328R, the height will be .300 inch maximum, instead of .235 inch maximum.

Weight (in gram)	: 2.4 typ.
Tape & Reel	: 450 / reel

**SCHEMATICS**

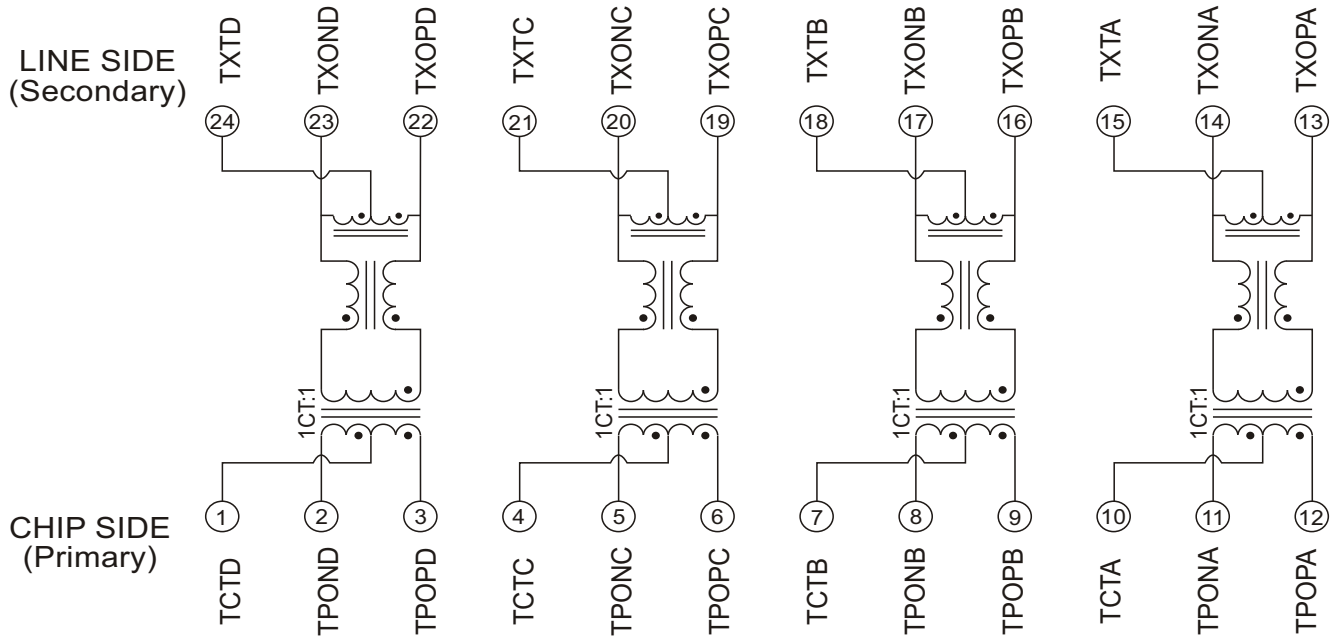
824-M0053R / 824-M0160R





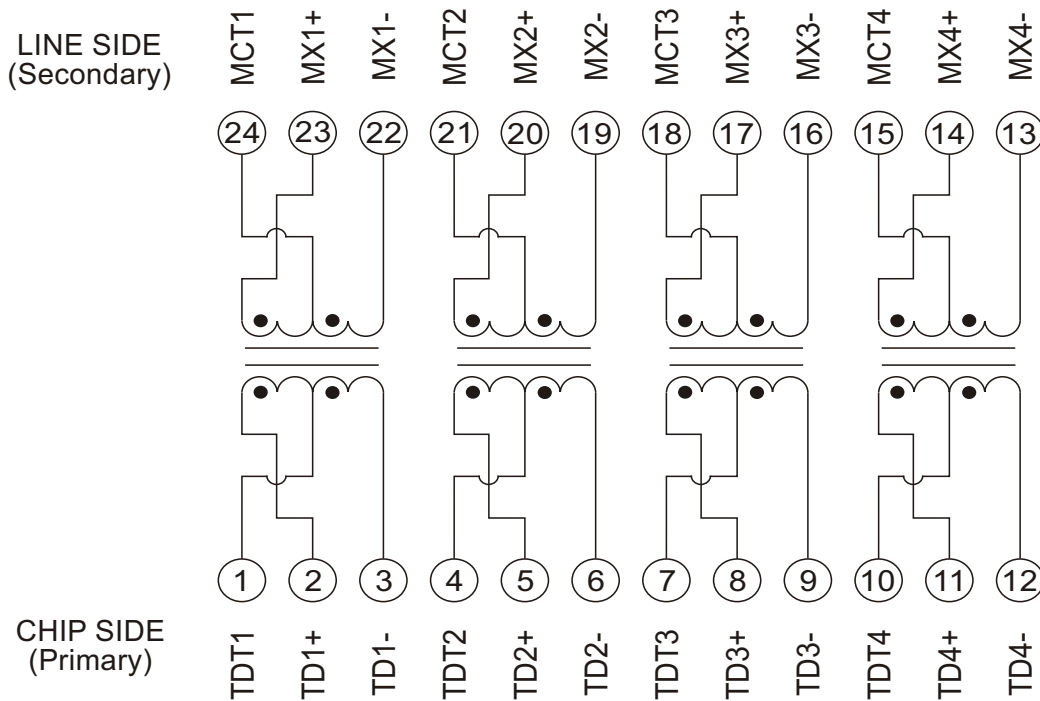
**SCHEMATICS**

824-M0060R / 824-M0328R



**SCHEMATICS**

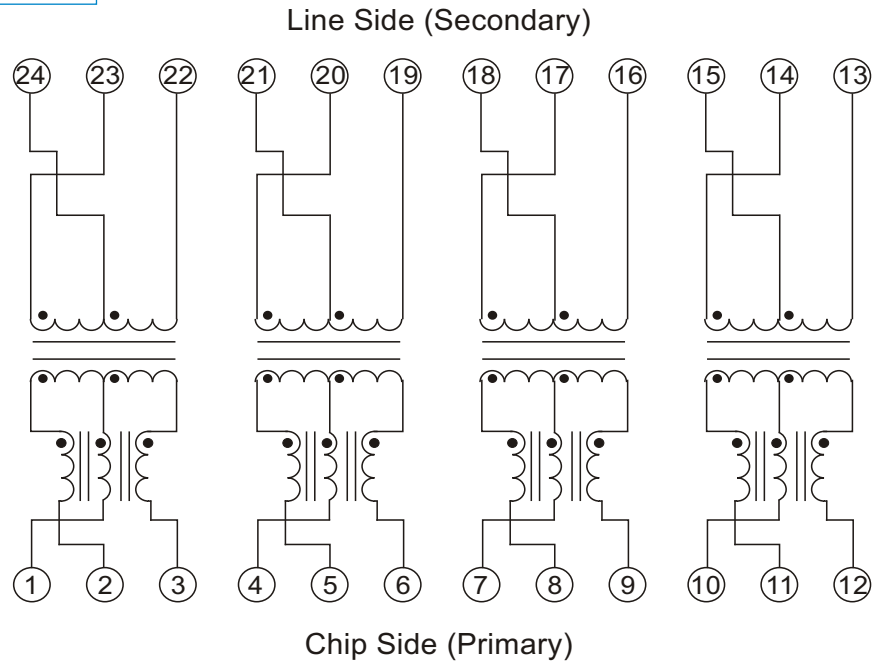
824-M0308R





**SCHEMATICS**

824-M0330R / 824-M0332R



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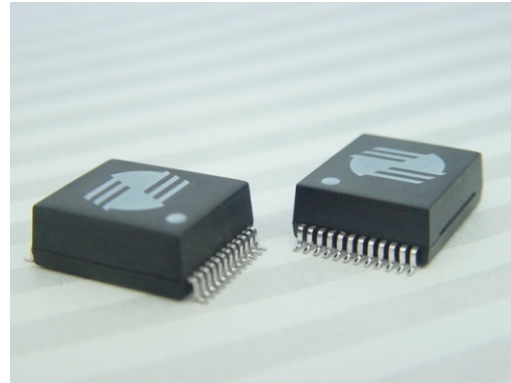
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Package width designed to fit behind RJ-45 connector
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00092R	1.0	18.0	14.5	13.1	12.0	33.0	35.0	1500
824-00093R	1.0	18.0	14.5	13.1	12.0	33.0	35.0	1500
824-00165R <sup>1</sup>	1.0	18.0	14.5	13.1	12.0	33.0	35.0	1500
824-00166F <sup>1</sup>	1.0	18.0	14.5	13.1	12.0	33.0	35.0	1500

**Notes:**

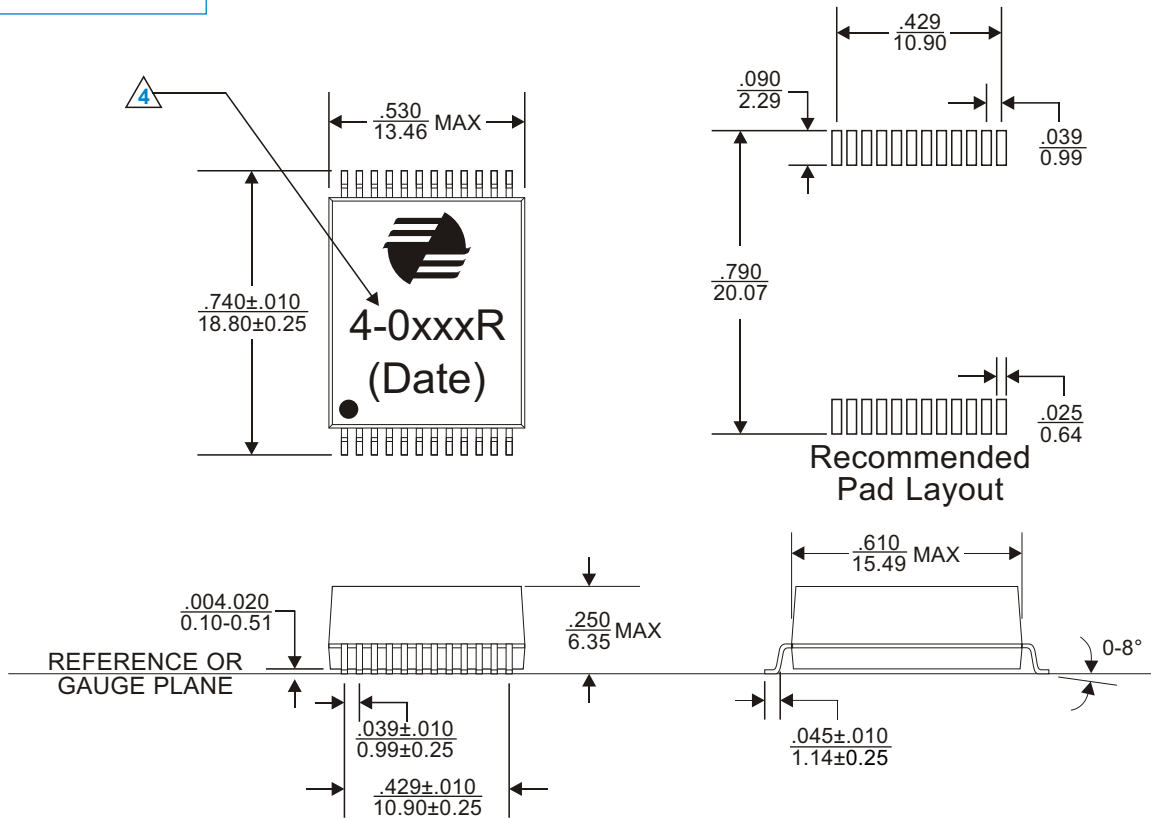
1. Operating temperature -40°C to +85°C.





**MECHANICAL DIMENSIONS**

Package: SO024D / SO024N



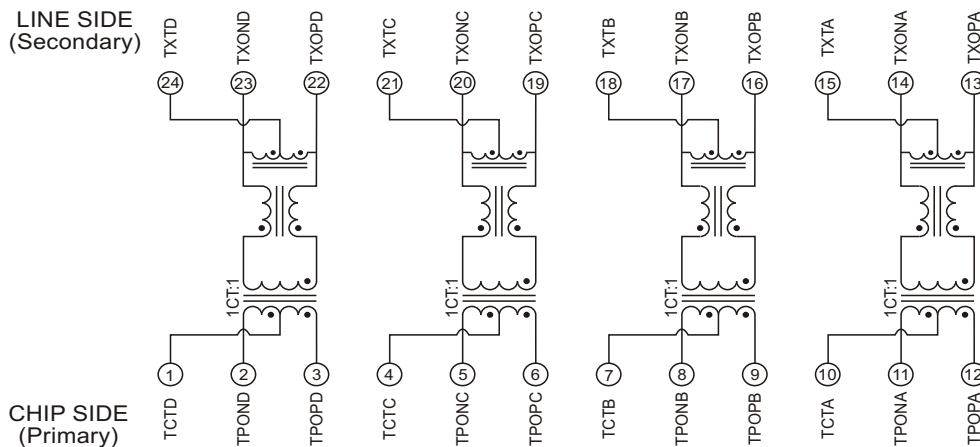
**Notes:**

2. All dimensions are specified in inches with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
4. For 824-00166 RoHS compliant version, the part will be marked with "4-0xxxF", instead of "4-0xxx".

Weight (in gram)	: 2.5 typ.
Tape & Reel	: 450 / reel

**SCHEMATICS**

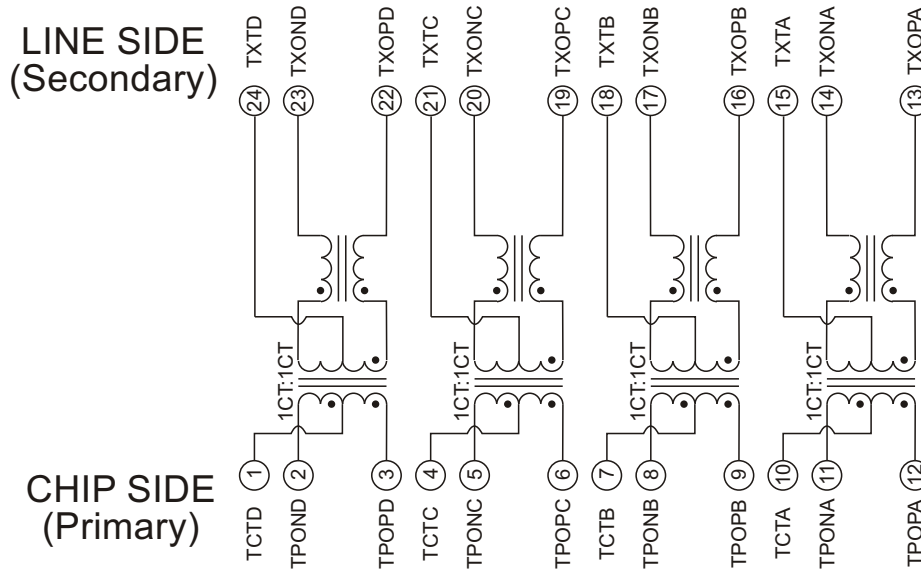
824-00092R / 824-00165R





**SCHEMATICS**

824-00093R / 824-00166F



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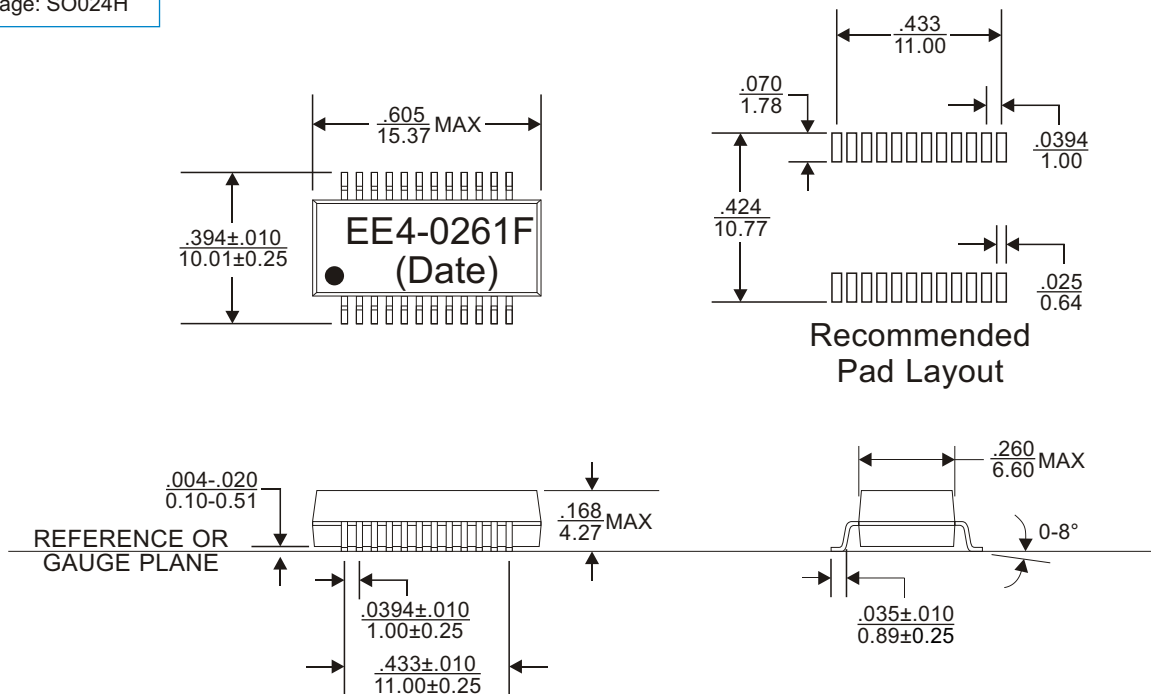
-  Compliant with IEEE802.3 specification
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Designed to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant

**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)					Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-40MHz	50MHz	60MHz	80MHz		
824-00261F	1.0	18.0	16.0	14.5	12.0	10.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SO024H



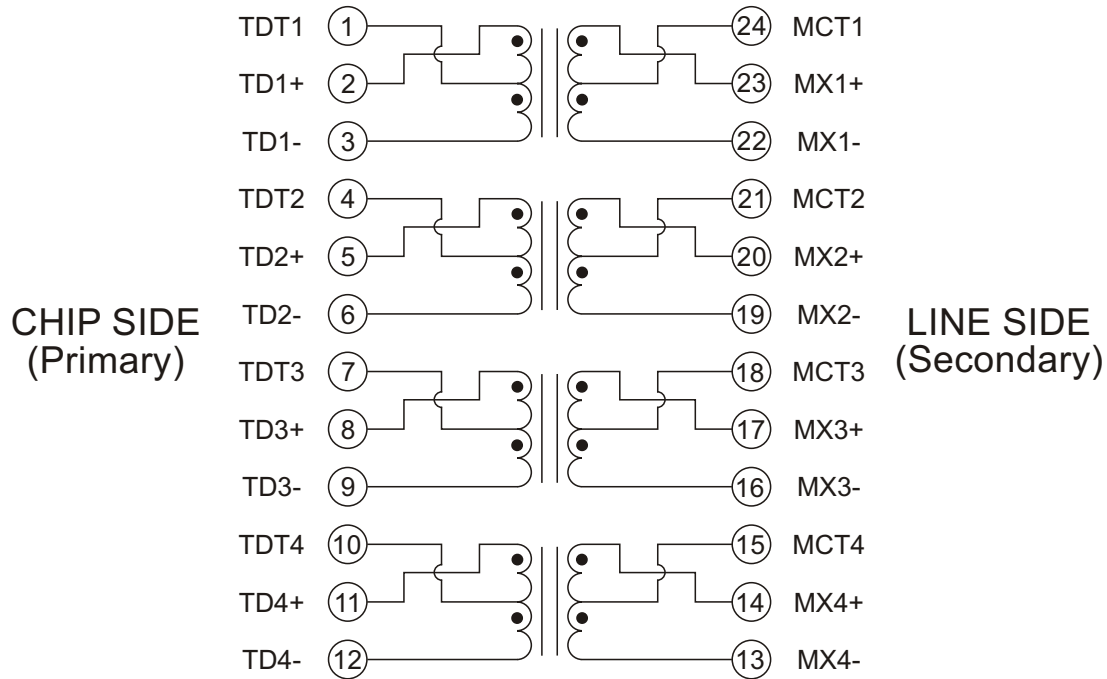
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



**SCHEMATICS**

824-00261



**FOR MORE INFORMATION, PLEASE CONTACT**

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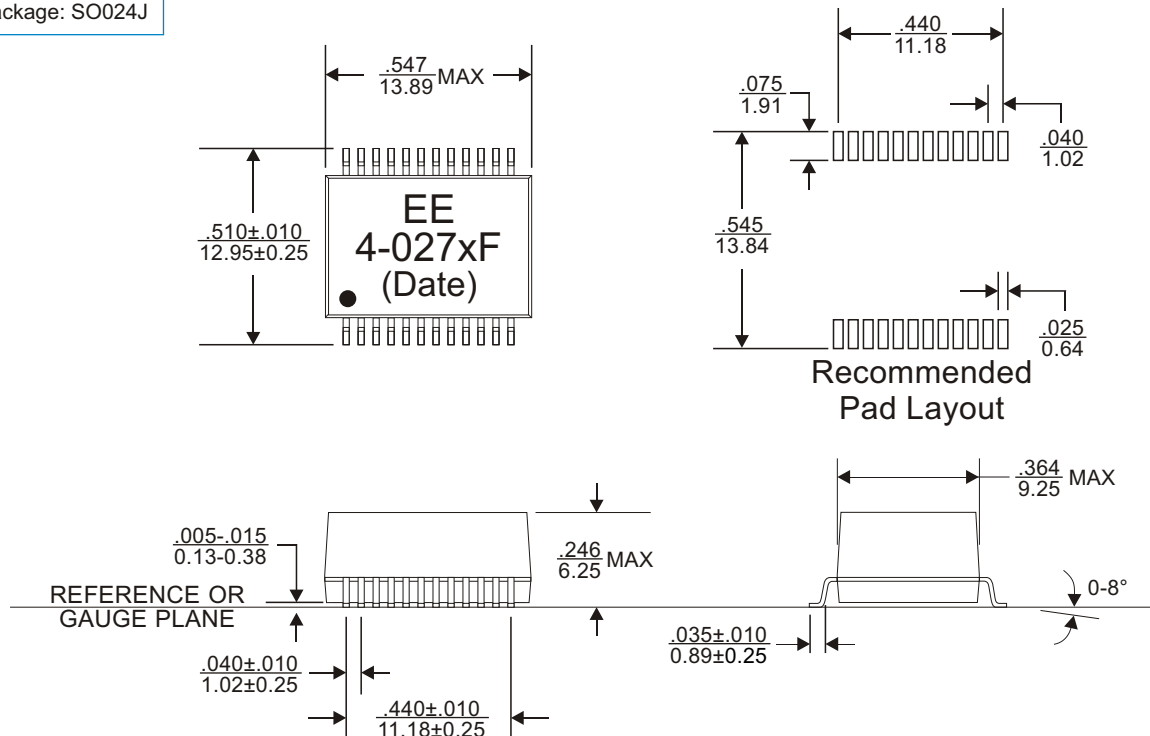
-  Compliant with IEEE802.3 specification
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000 Base-T full duplex applications
-  Designed to withstand IR- Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant

**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)		Return Loss (dB Min)				Crosstalk (dB Min)	Hipot (Vrms)
	.1-100MHz	100-125MHz	1-30MHz	30-40MHz	40-50MHz	50-100MHz	.1-100MHz	
824-00270F	1.0	1.2	16.0	13.5	11.5	10.0	33.0	1500
824-00271F	1.0	1.2	16.0	13.5	11.5	10.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO024J



**Notes:**

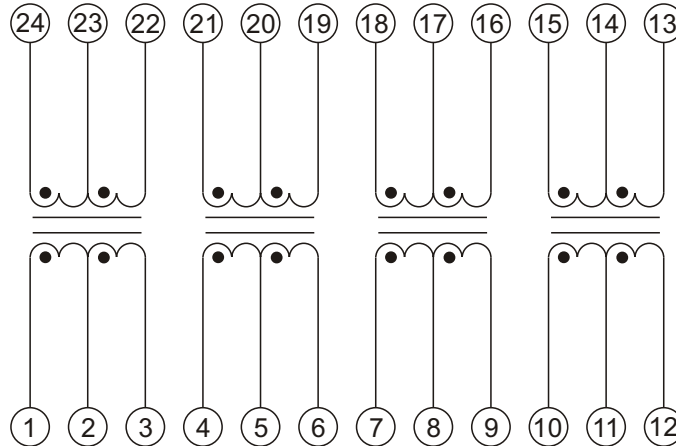
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



SCHEMATICS

824-00270F

LINE SIDE (Secondary)

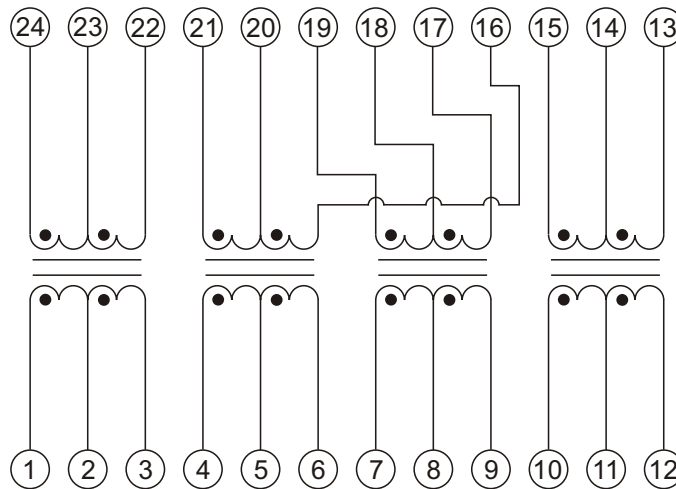


CHIP SIDE (Primary)

SCHEMATICS

824-00271F

LINE SIDE (Secondary)



CHIP SIDE (Primary)

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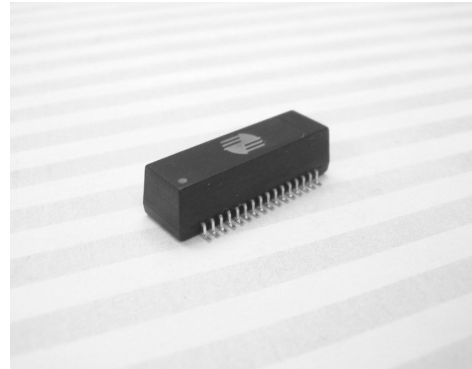
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

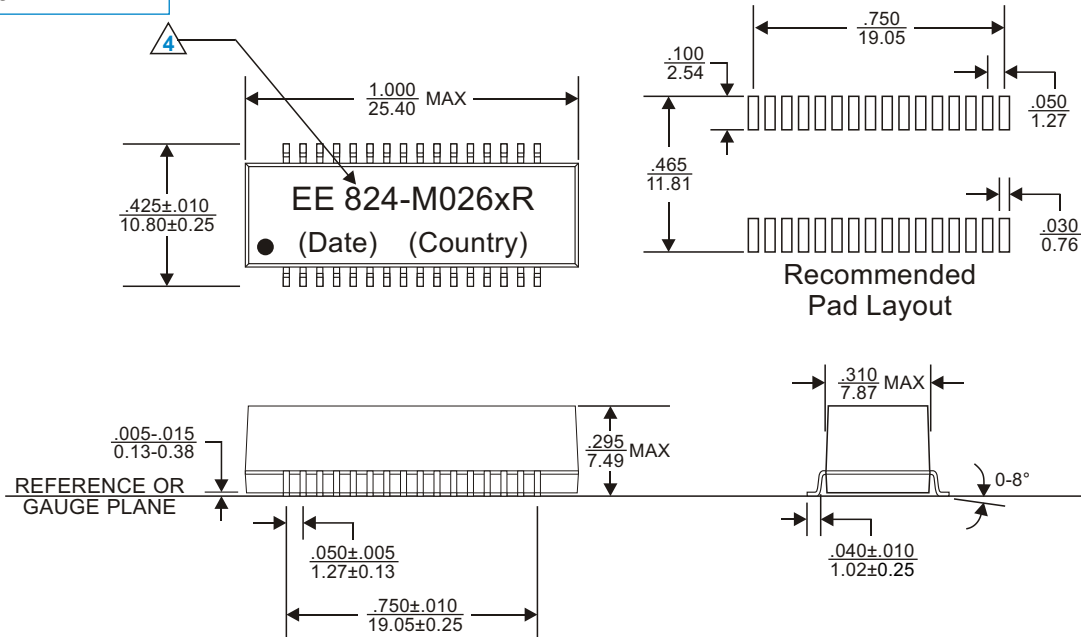
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)					CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
		.1-100MHz	1-40MHz	50MHz	60MHz	80MHz			
824-M0266R	1.1	18.0	16.0	14.5	12.0	10.0	-	40.0	1500
824-M0267R	1.1	18.0	16.0	14.5	12.0	10.0	40.0	40.0	1500
824-M0268R <sup>1</sup>	1.1	18.0	16.0	14.5	12.0	10.0	-	40.0	1500
824-M0269R <sup>1</sup>	1.1	18.0	16.0	14.5	12.0	10.0	40.0	40.0	1500

**Notes:**

- Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO032A



**Notes:**

- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 2.7 typ.
Tape & Reel	: 400 / reel

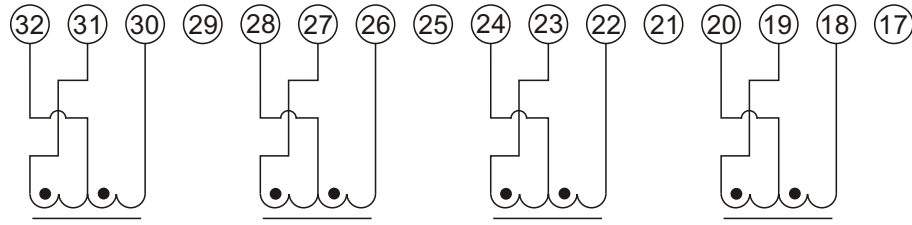




**SCHEMATICS**

824-M0266R / 824-M0268R

**LINE SIDE  
(Secondary)**



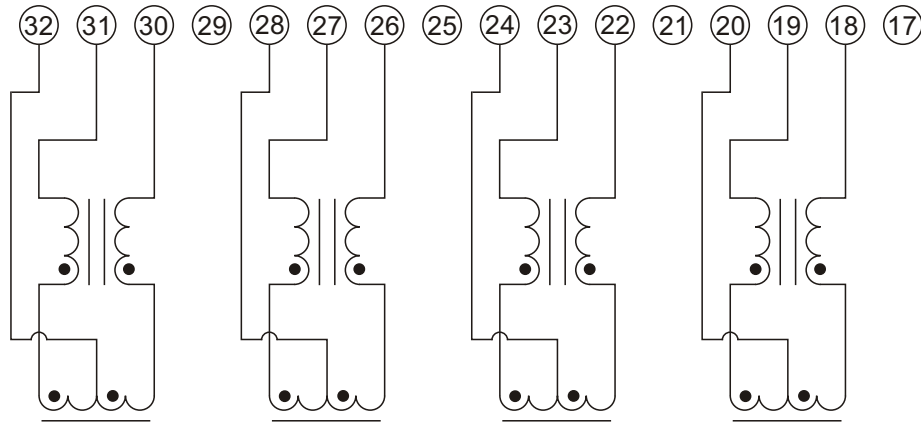
**CHIP SIDE  
(Primary)**



**SCHEMATICS**

824-M0267R / 824-M026R9

**LINE SIDE  
(Secondary)**



**CHIP SIDE  
(Primary)**



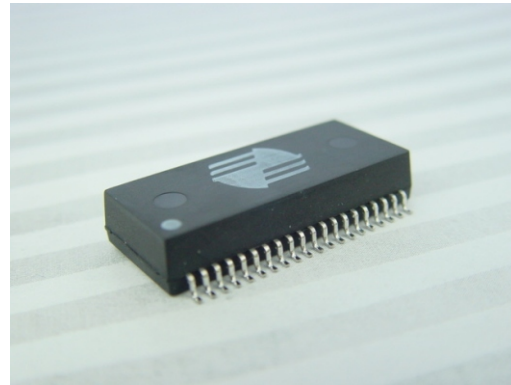
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- Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
- Excellent crosstalk and return loss performance
- Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
- Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
- Operating temperature 0°C to +70°C.
- Some models are UL60950 recognized
- RoHS compliant

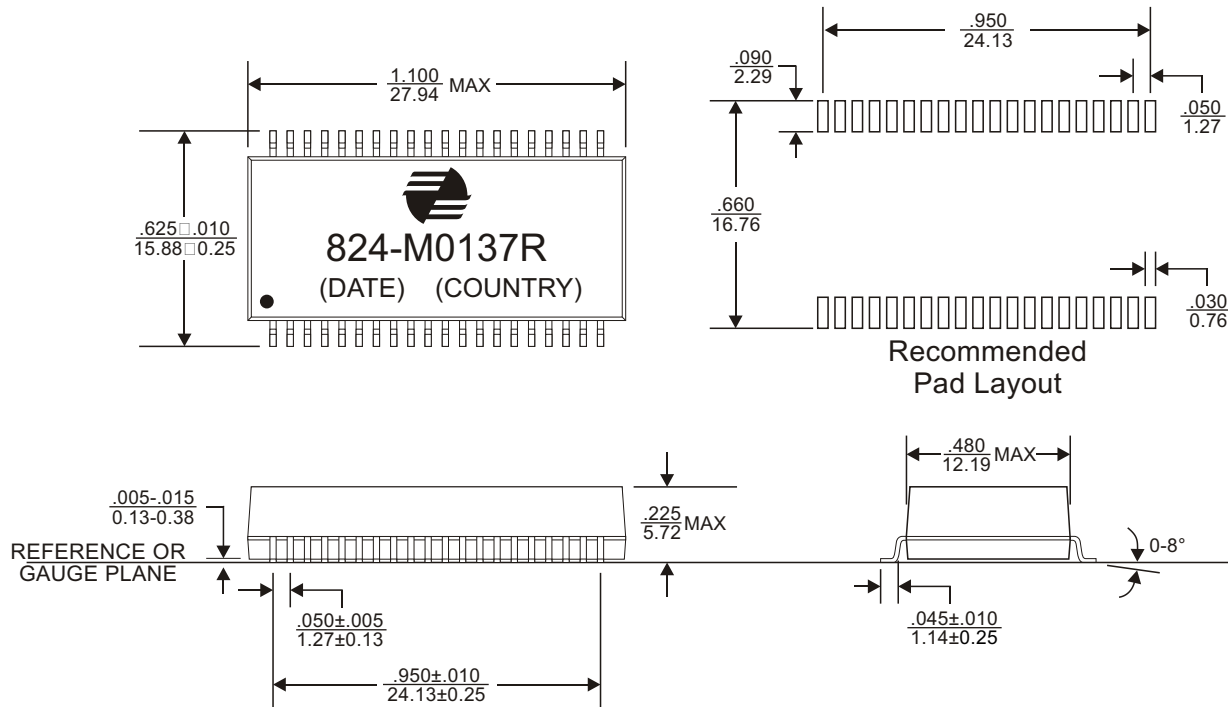


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz		60-80MHz	30MHz	60MHz	
824-M0137R	1.0	18.0	14.5	13.1	12.0	35.0	50.0	45.0	40.0	1500

**MECHANICAL DIMENSIONS**

Package: SO040A



**Notes:**

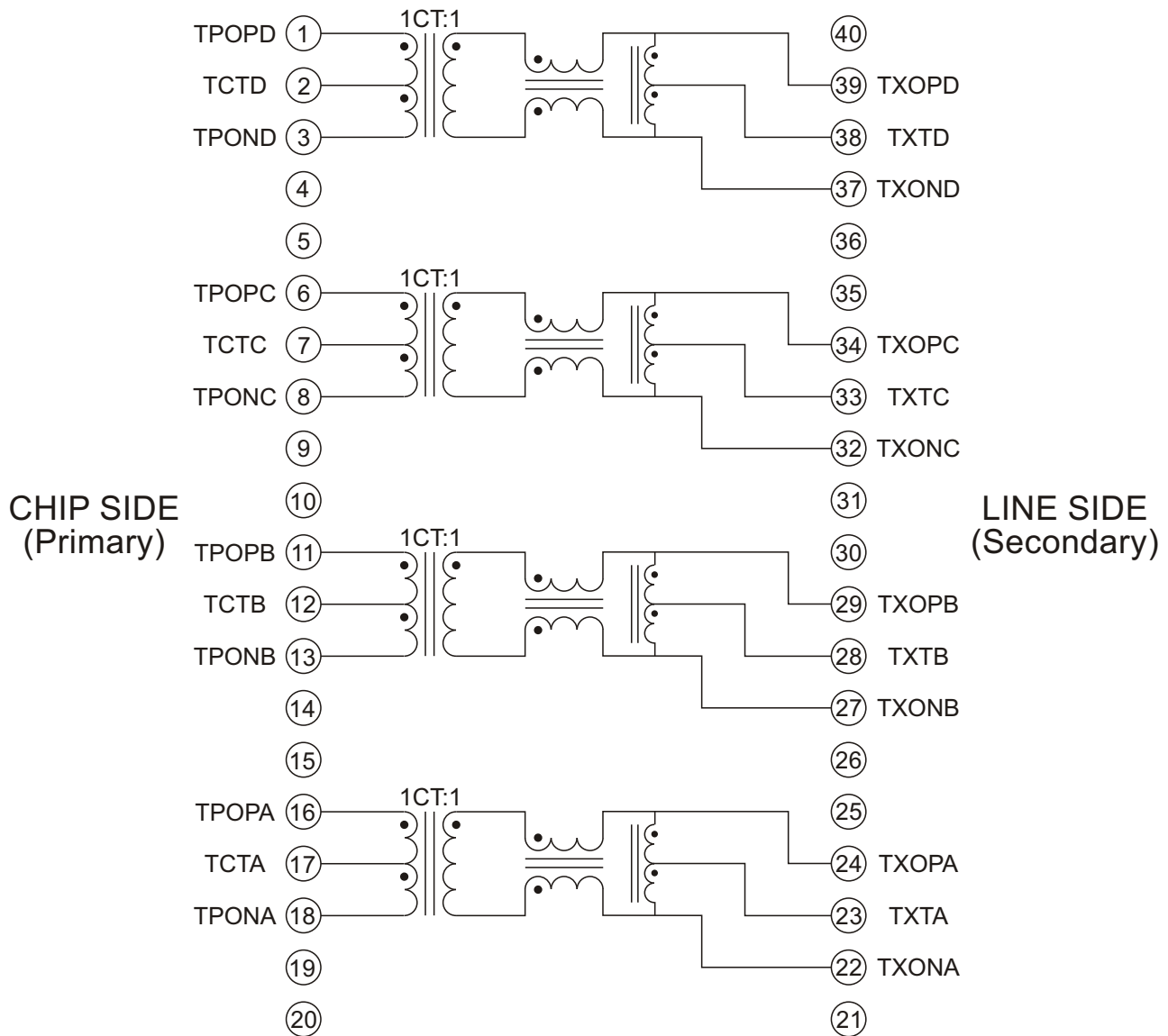
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	4.0 typ.
Tape & Reel	:	350 / reel



**SCHEMATICS**

824-M0137R



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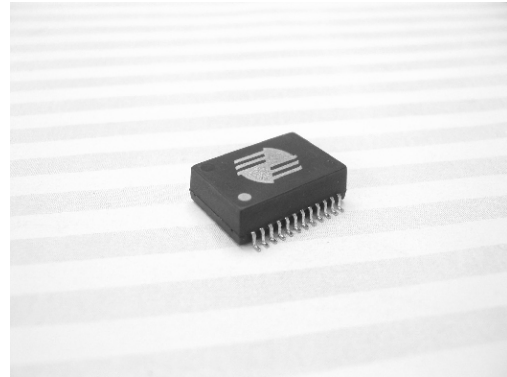
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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC bias
-  350mA balanced DC line current capability
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant

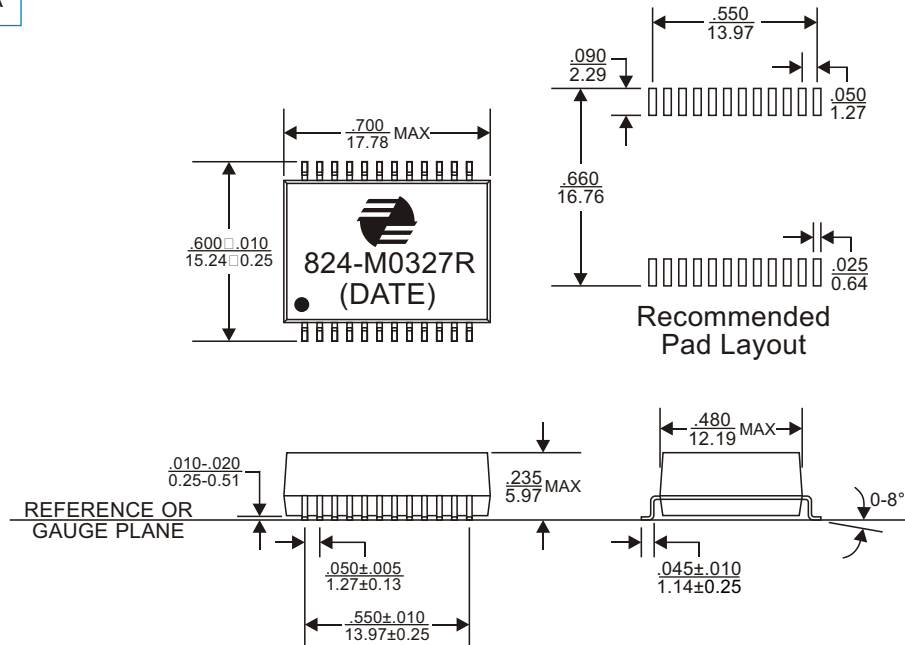


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)		Return Loss (dB Min)				Crosstalk (dB Min)			Hipot (Vrms)
	.1-100MHz	100-125MHz	30MHz	60MHz	80MHz	100MHz	30MHz	60MHz	100MHz	
824-M0327R	1.1	2.0	18.0	12.0	12.0	10.0	43.0	37.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO024A



Weight (in gram)	: 2.4 typ.
Tape & Reel	: 450 / reel

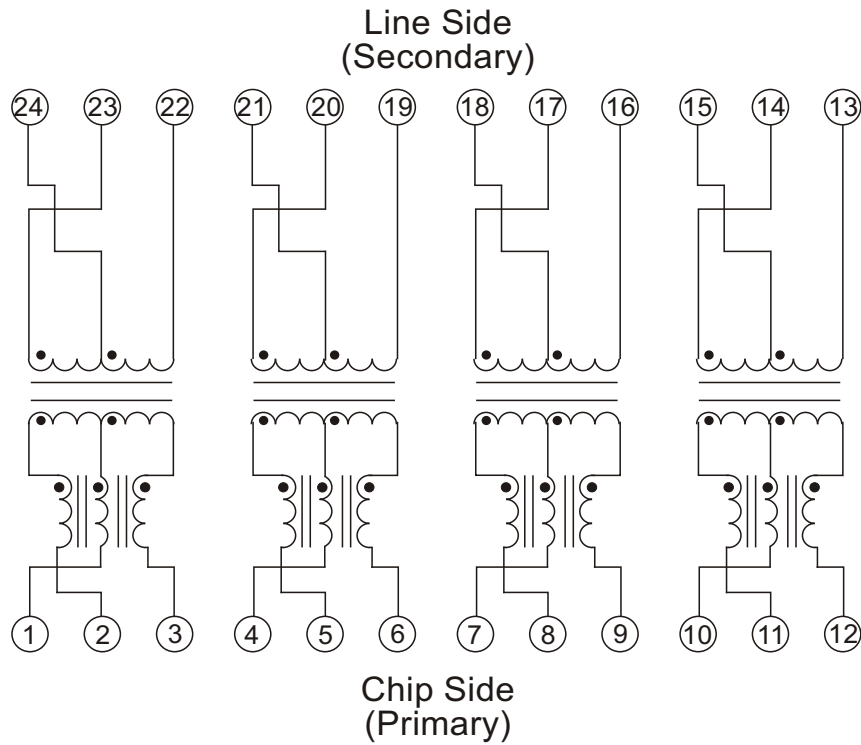
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



**SCHEMATICS**

824-M0327R



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Tel: (852) 2954 3333 • Fax: (852) 2954 3304

-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Enhanced crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

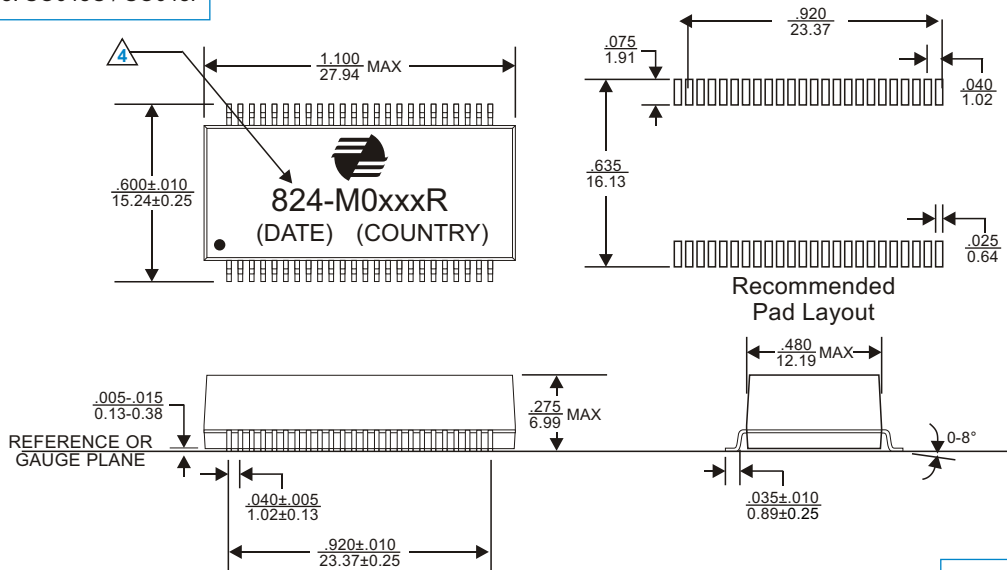
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz		60-80MHz	.1-100MHz	30MHz	
824-00167R	1.0	16.0	14.4	13.1	12.0	35.0	45.0	40.0	35.0	1500
824-M0168R	1.0	16.0	14.4	13.1	12.0	35.0	43.5	37.5	33.0	1500
824-M0265F <sup>1</sup>	1.4	16.0	14.4	13.1	12.0	33.0	33.0	33.0	33.0	1500
824-M0272F <sup>1</sup>	1.0	16.0	14.4	13.1	12.0	-	30.0	30.0	30.0	1500
824-M0329R	1.0	16.0	14.4	13.1	12.0	30.0	43.5	37.5	33.0	1500
824-M0331R <sup>1</sup>	1.0	16.0	14.4	13.1	12.0	30.0	43.5	37.5	33.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO048C / SO048F



**Notes:**

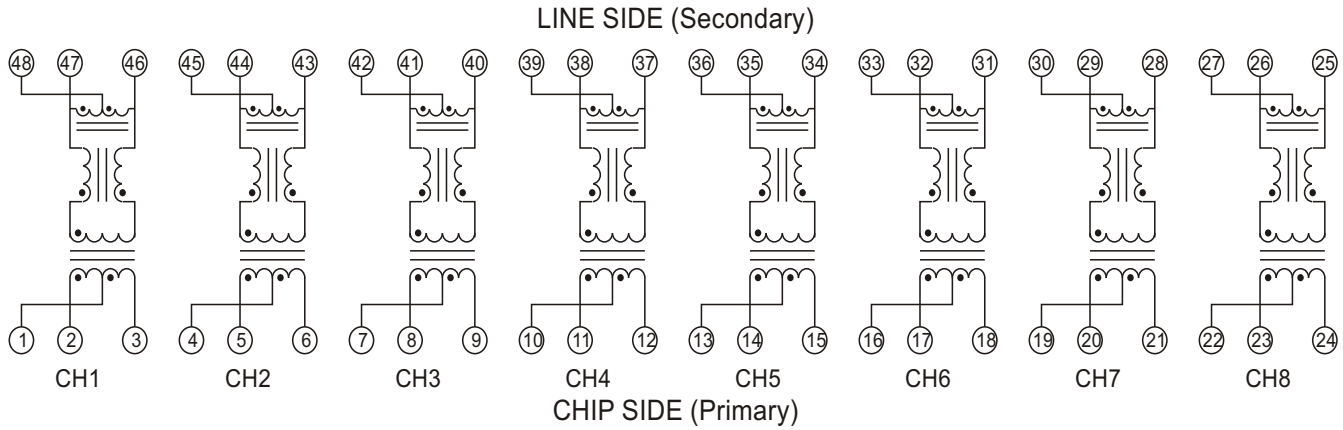
2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
4. For 824-M0265/824-M0272 RoHS versions, the part will be marked with "824-M0xxxF" or "824-00xxxF", Instead of "824-M0xxx".

Weight (in gram)	: 4.6 typ.
Tape & Reel	: 300 / reel



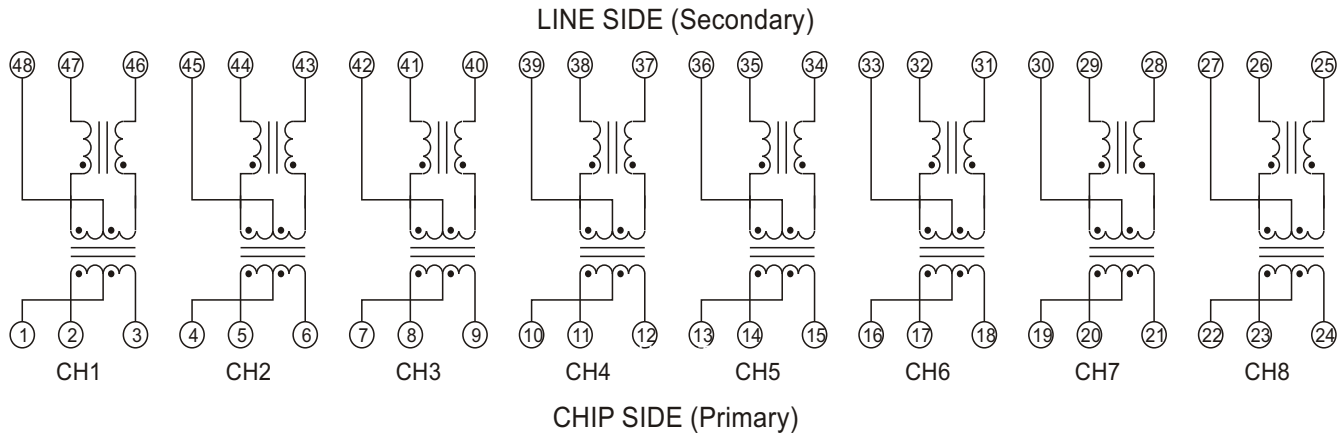
SCHEMATICS

824-M0167R



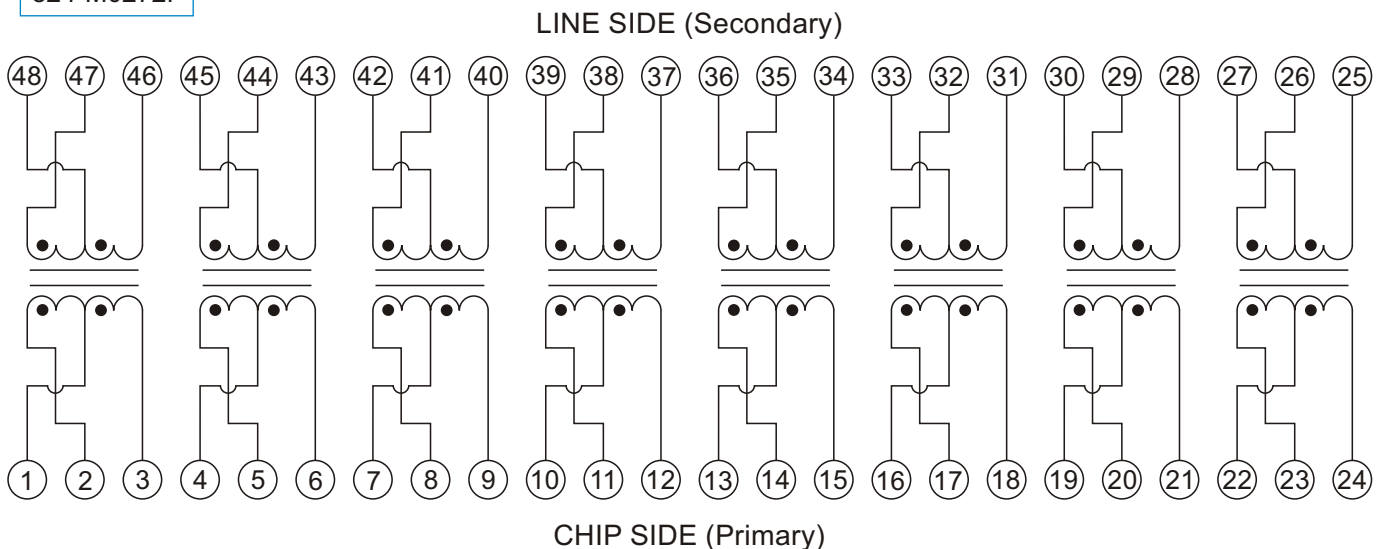
SCHEMATICS

824-M0168R / 824-M0265F



SCHEMATICS

824-M0272F

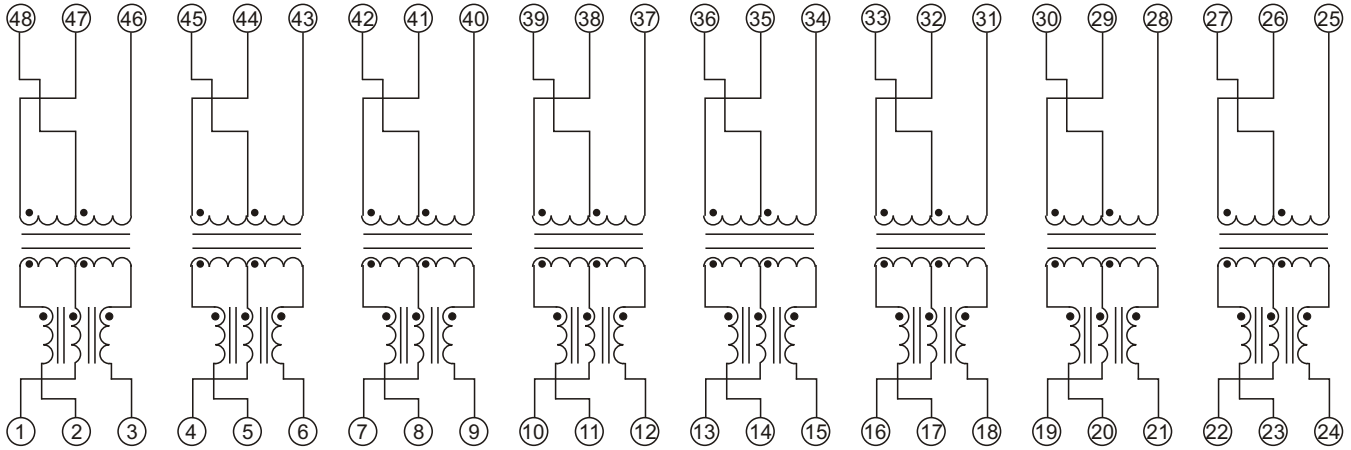




**SCHEMATICS**

824-M0329R / 824-M0331R

Line Side (Secondary)



Chip Side (Primary)

**FOR MORE INFORMATION, PLEASE CONTACT**

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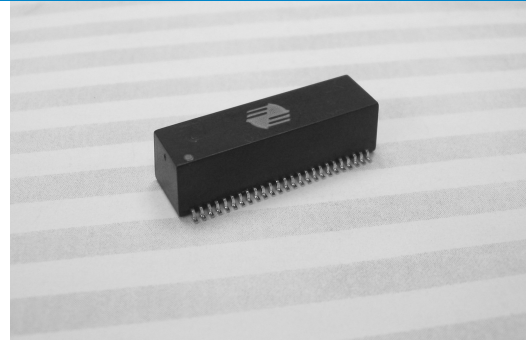




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350uH OCL with 8mA DC bias

-  Excellent crosstalk and return loss performance
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

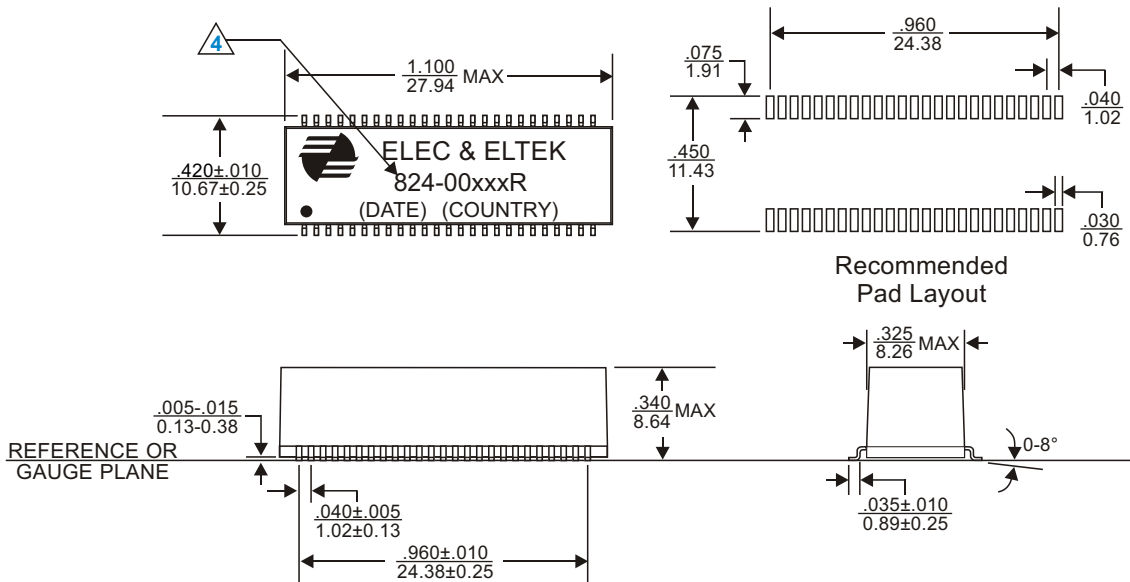
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00182R	1.0	16.0	14.4	13.1	12.0	35.0	35.0	1500
824-00183R	1.0	16.0	14.4	13.1	12.0	35.0	33.0	1500
824-00264F <sup>1</sup>	1.2	16.0	14.4	13.1	12.0	30.0	30.0	1500
824-00305R	1.0	16.0	14.4	13.1	12.0	35.0	33.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO050B

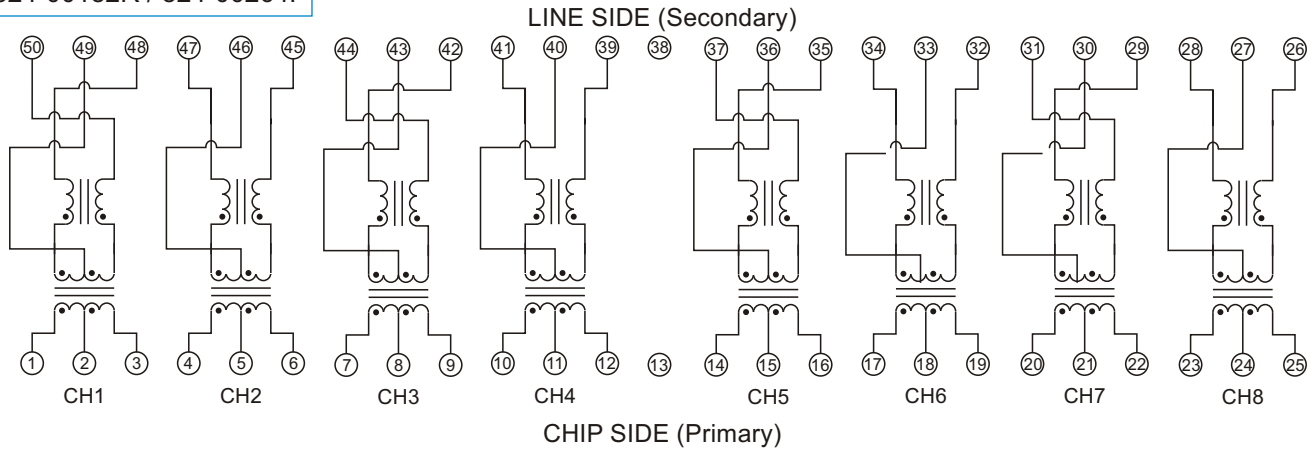


**Notes:**

2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
4. For 824-00624 RoHS version, the part will be marked with "824-00624F, instead of 824-00624".

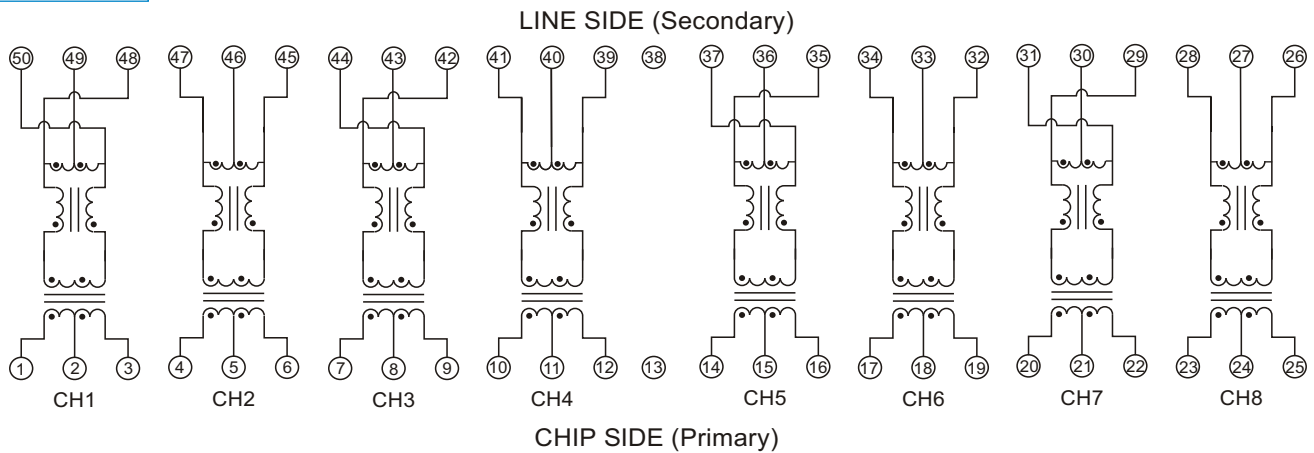


824-00182R / 824-00264F



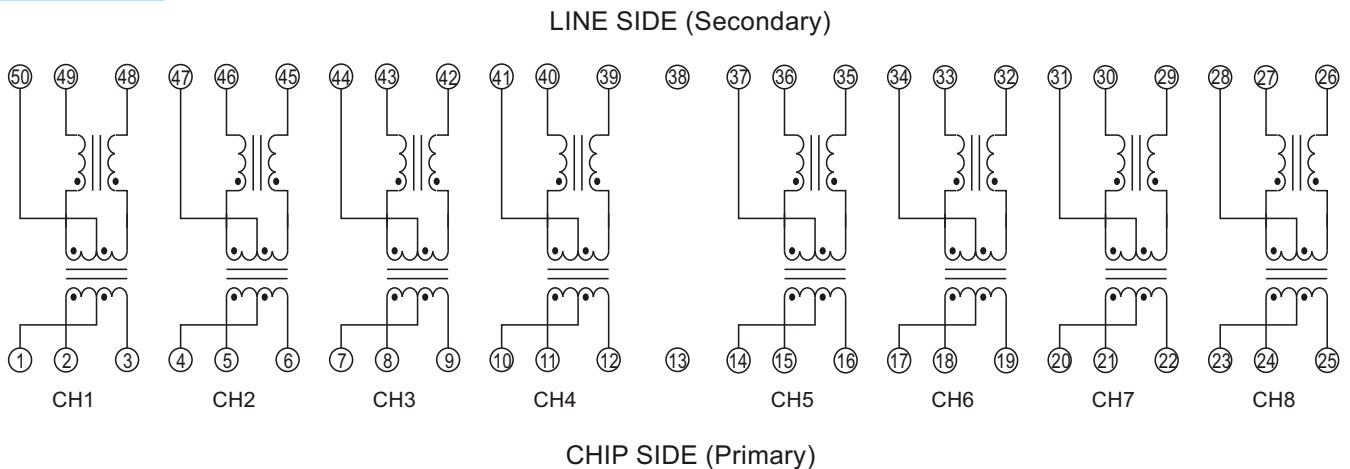
SCHEMATICS

824-00183R



SCHEMATICS

824-00305R





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E & E Magnetic Products Limited

## 1000 Base-T Dual Port Magnetic Module

1:1 Turns Ratios for Different Gigabit Transceivers IC

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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC bias
-  350mA balanced DC line current capability
-  Support 4 pairs of Category 5 UTP cable with 1000Base-T full duplex applications
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  RoHS compliant

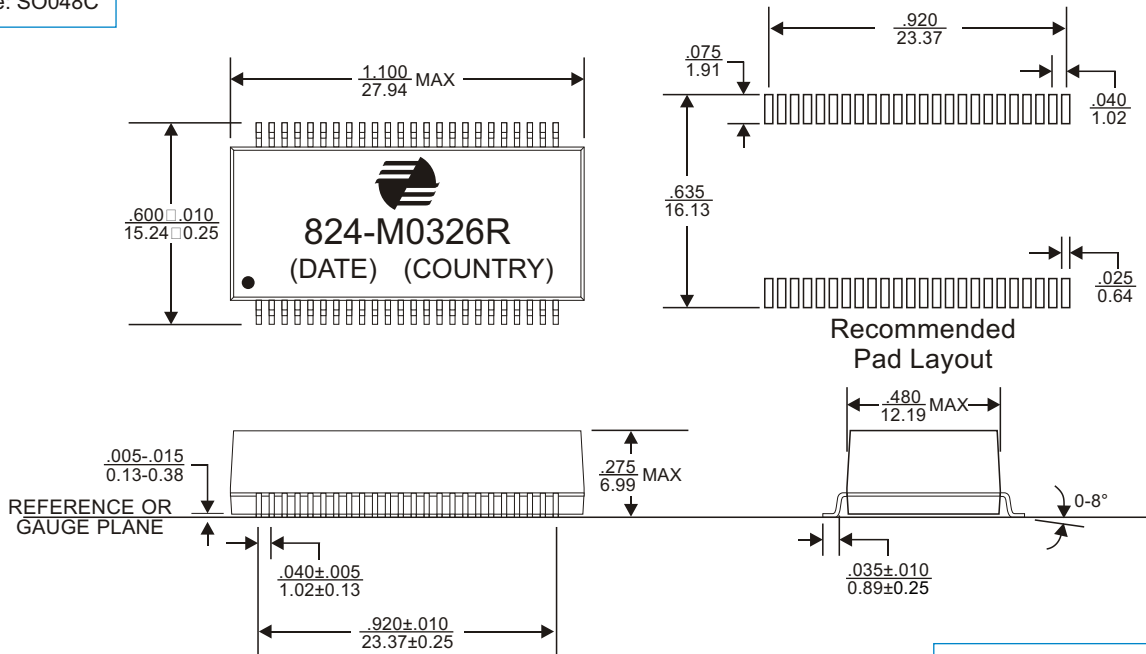


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)		Return Loss (dB Min)				Crosstalk (dB Min)			Hipot (Vrms)
	.1-100MHz	100-125MHz	30MHz	60MHz	80MHz	100MHz	30MHz	60MHz	100MHz	
824-M0326R	1.1	2.0	18.0	12.0	12.0	10.0	43.0	37.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO048C



Weight (in gram)	: 4.6 typ.
Tape & Reel	: 300 / reel

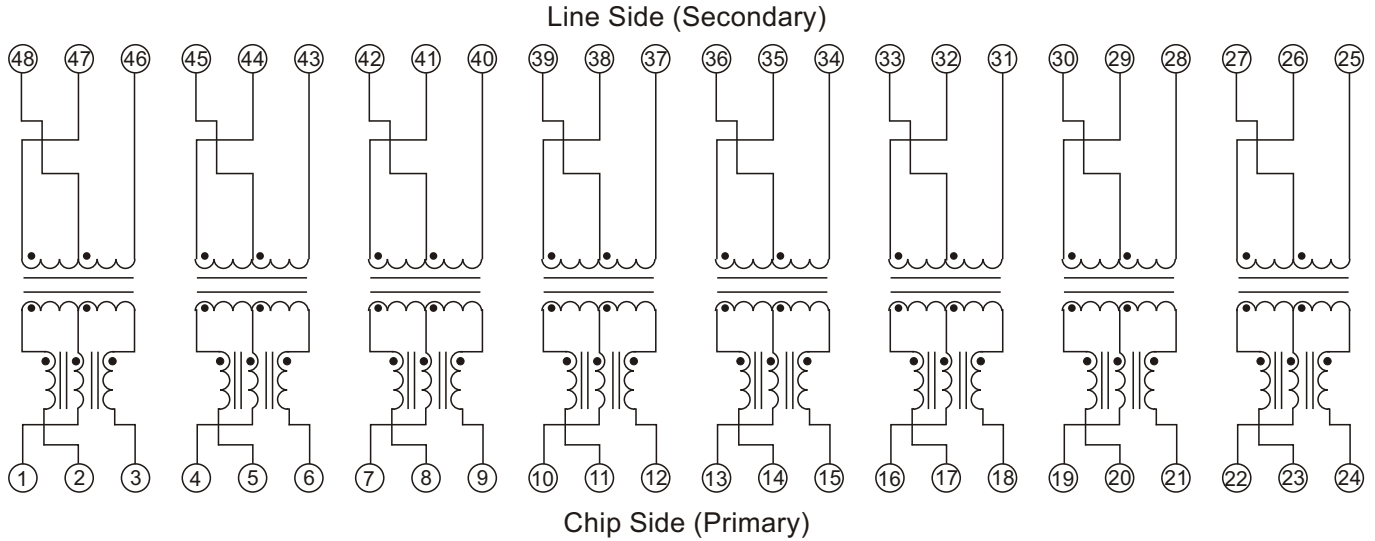
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



SCHEMATICS

824-M0326



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Phase II, Hong Kong Science Park, Shatin, N.T.  
Hong Kong

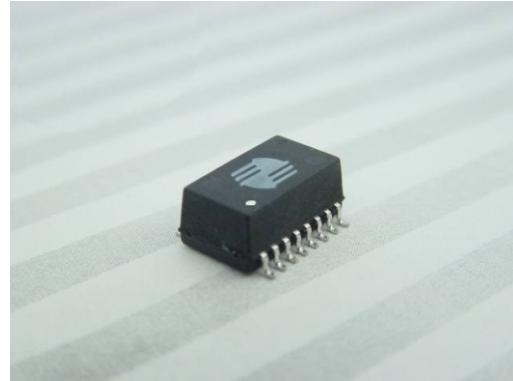
Tel: (852) 2954 3333 Fax: (852) 2954 3304

Email: [eempl@eleceltek.com](mailto:eempl@eleceltek.com)

Website: <http://www.eleceltek.com> / [www.eemagnetic.com](http://www.eemagnetic.com)

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Excellent return loss performance
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Half port design which is suitable for Tx or Rx application
-  Operating temperature 0°C to +70°C
-  RoHS compliant

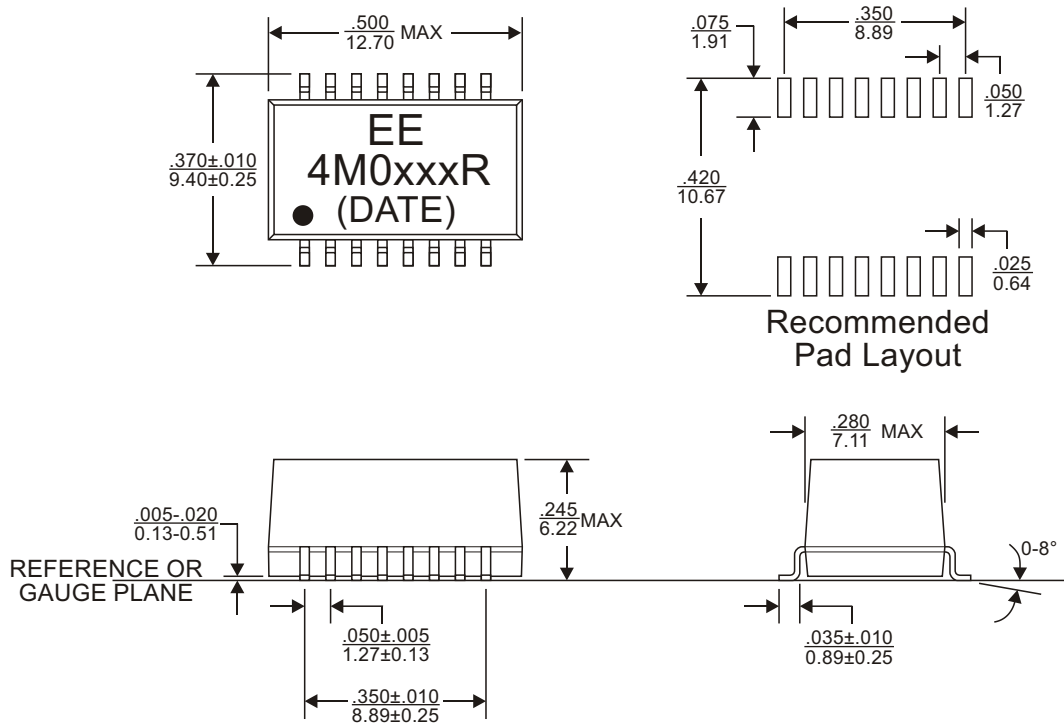


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Hipot (Vrms)
			.1-100MHz	1-30MHz	40MHz	50MHz		
824-M0019R	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	1500
824-M0230R	1CT:1	1.0	16.0	14.0	13.0	12.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO016G



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

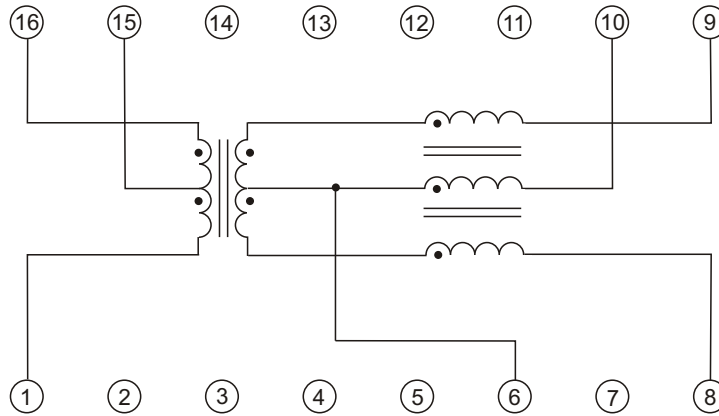
Weight (in gram)	:	1.0 typ.
Tape & Reel	:	600 / reel





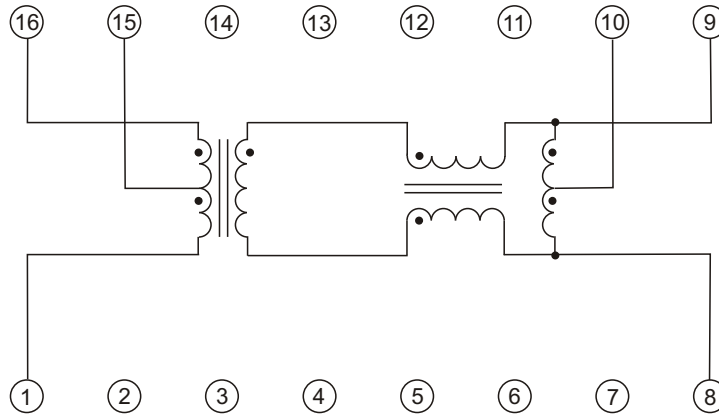
SCHEMATICS

824-M0019R



SCHEMATICS

824-M0230R



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Hong Kong







Tel: (852) 2954 3333 Fax: (852) 2954 3304

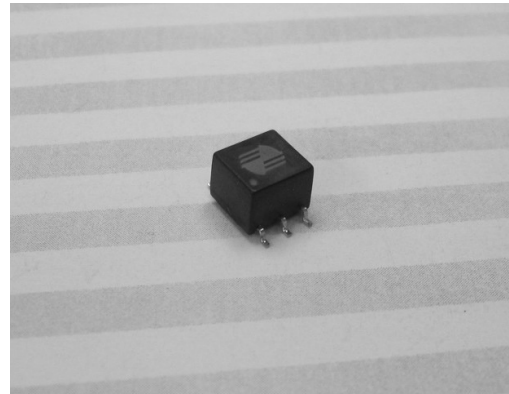
Email: eempl@eleceltek.com

Website: <http://www.eleceltek.com> / [www.eemagnetic.com](http://www.eemagnetic.com)

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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC bias
-  350mA balanced DC line current capability
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Half port design which is suitable for Tx or Rx application
-  Operating temperature 0°C to +70°C.
-  RoHS compliant

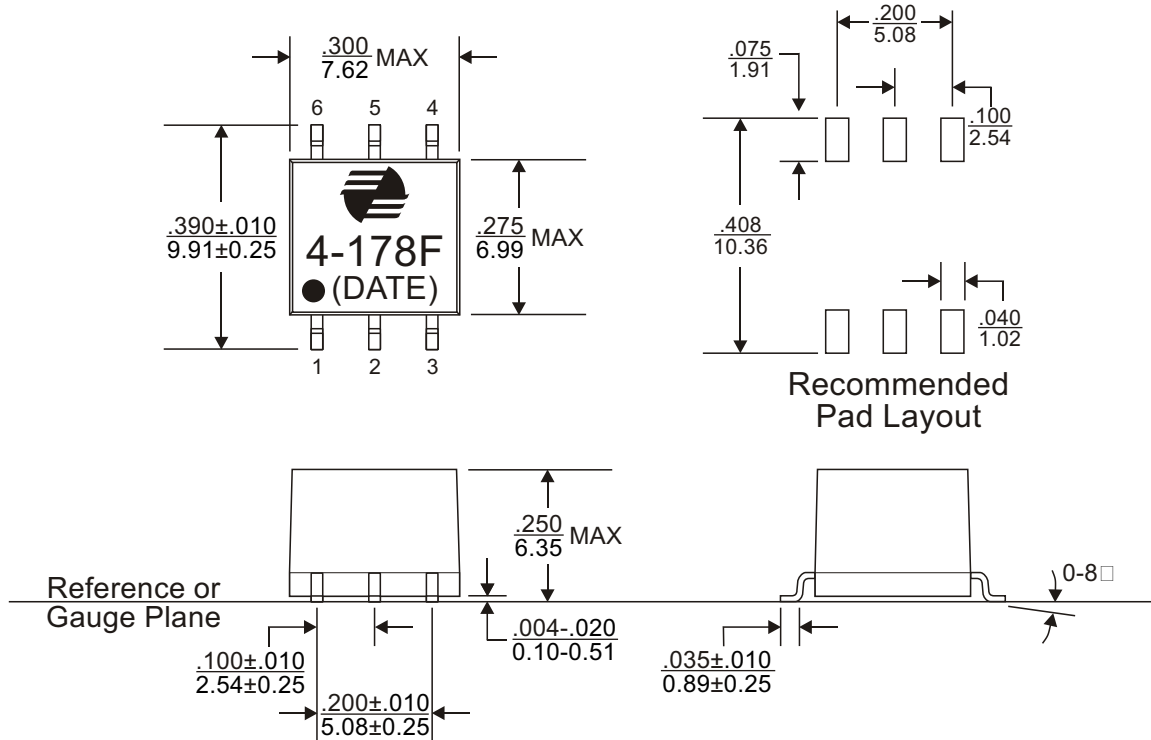


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio	Insertion Loss (dB Typ)	Return Loss (dB Min)				Hipot (Vrms)
			.1-100MHz	1-30MHz	40MHz	50MHz	
824-00178F	1CT:1CT	0.5	16.0	14.0	13.0	12.0	1500

**MECHANICAL DIMENSIONS**

Package: SMD06



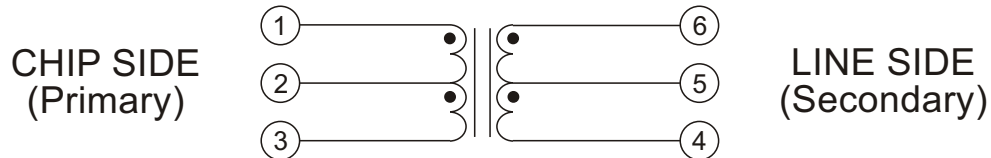
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



SCHEMATICS

824-00178F



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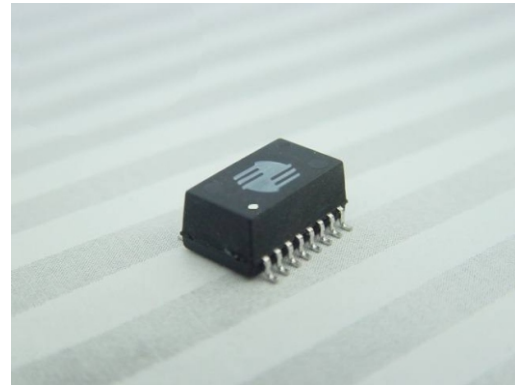
Tel: (852) 2954 3333 Fax: (852) 2954 3304

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact footprint for use in the most space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	.5-30MHz	40MHz	50MHz			
824-M0032R <sup>1</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0036R	1.25CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0037F	1CT:1.41CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0042R	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0051R	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0069R <sup>1</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0085F	2CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0118R <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0135R <sup>1</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0143R <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0155F	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0179F <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0226F <sup>1</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	33.0	1500

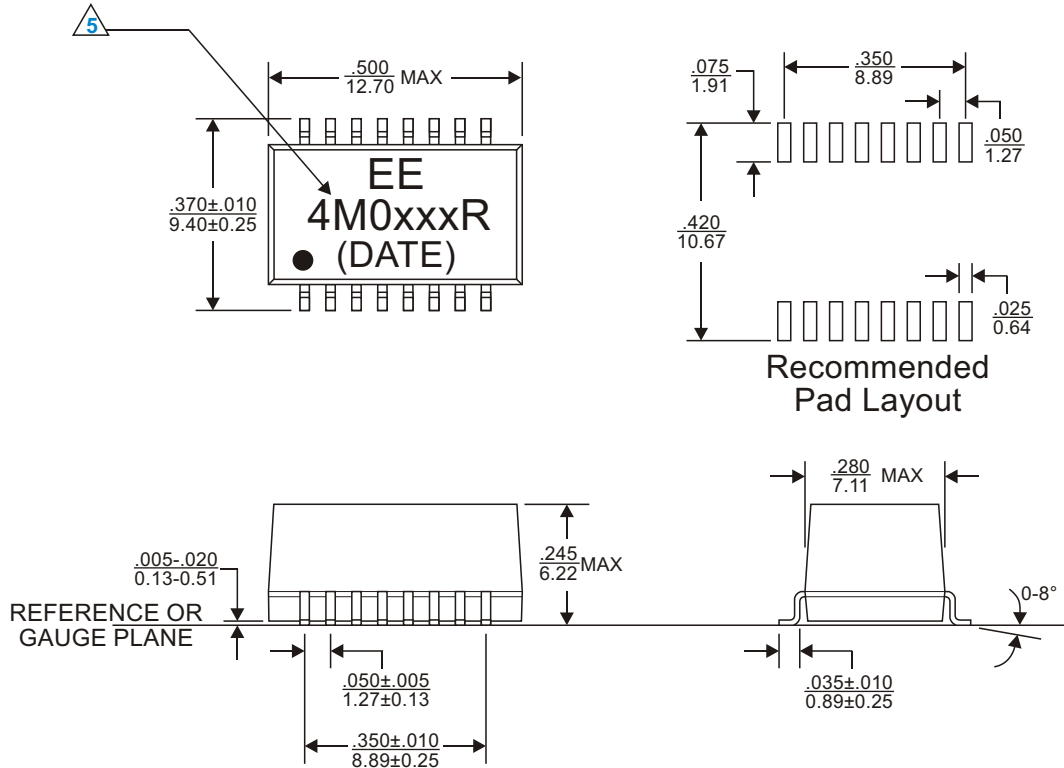
**Notes:**

1. Suitable for Auto MDI/MDIX applications.
2. Operating temperature -40°C to +85°C.



**MECHANICAL DIMENSIONS**

Package: SO016G



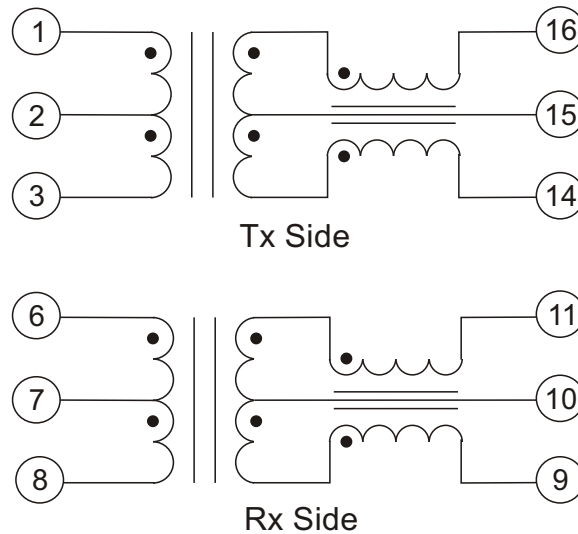
**Notes:**

- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
- For 824-M0037/824-M0085/824-M0155/824-M0179/824-M0226 RoHS versions, the parts will be marked with "4M0xxxF", instead of "4M0xxx".

Weight (in gram)	:	1.0 typ.
Tape & Reel	:	600 / reel

**SCHEMATICS**

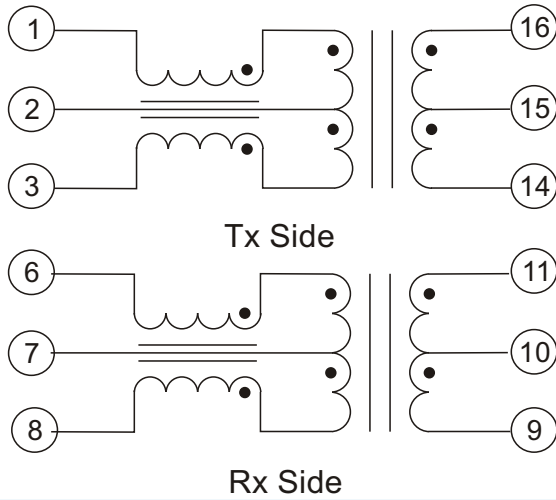
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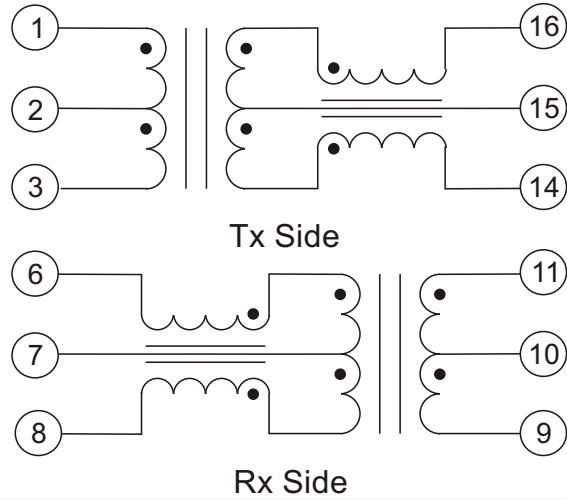


**SCHEMATICS**

824-M0032R/ 824-M0118R

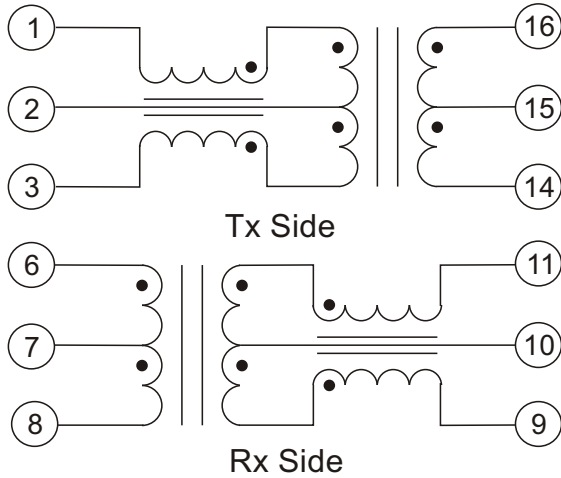


824-M0042R

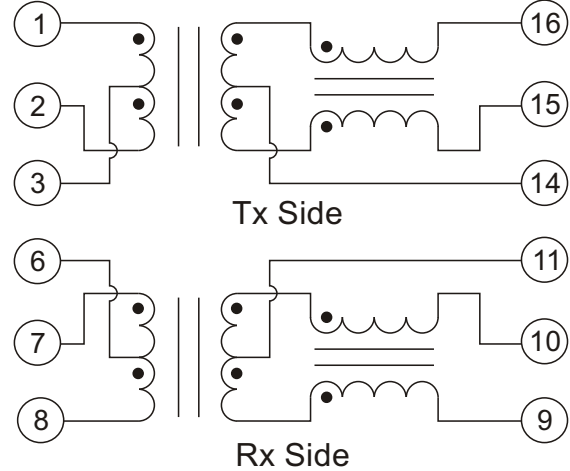


**SCHEMATICS**

824-M0051R

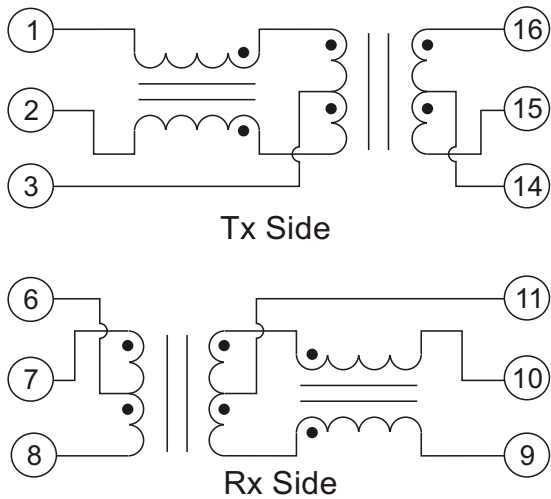


824-M0135R/ 824-M0179F

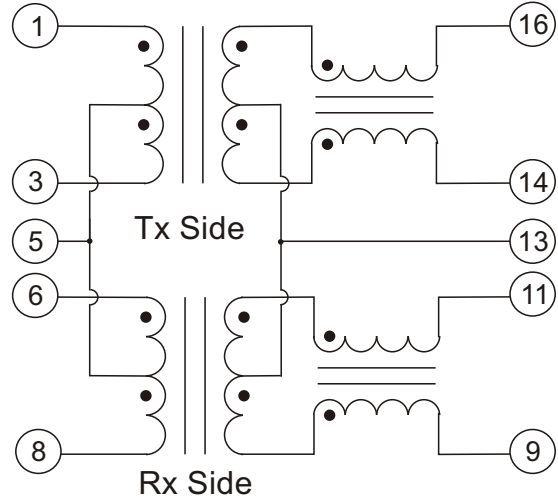


**SCHEMATICS**

824-M0155F



824-M0226F





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**10/100 Base-T Single Port  
Magnetic Module**  
For Transceiver Requiring Various Turns Ratios

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Models with integrated transmit and receiver channels in low profile SMT package
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0014R <sup>1</sup>	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	38.0	1500
824-M0023R	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	38.0	1500
824-M0024R	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	38.0	1500
824-M0070R	1CT:1CT	1CT:1CT	1.0	18.0	15.5	13.5	12.0	35.0	40.0	1500
824-M0113R <sup>2</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	33.0	38.0	1500
824-M0125R <sup>1</sup>	1CT:1	1CT:1CT	1.5	18.0	13.5	11.5	10.0	33.0	40.0	1500
824-M0142R <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.5	18.0	13.5	11.5	10.0	33.0	40.0	1500
824-M0157R <sup>3</sup>	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	38.0	1500
824-M0158R <sup>4</sup>	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	33.0	38.0	1500
824-M0190R	1CT:1	1CT:1CT	1.0	16.0	14.0	13.0	12.0	35.0	35.0	1500
824-M0192R	1CT:1CT	1CT:1CT	1.0	18.0	15.5	13.5	12.0	35.0	35.0	1500
824-M0194R <sup>1,4</sup>	1CT:1	1CT:1CT	1.5	18.0	13.5	11.5	10.0	33.0	40.0	1500
824-M0218R	1CT:1	1CT:1CT	1.0	16.0	15.5	13.5	12.0	33.0	38.0	1500
824-M0219R	1CT:1	1CT:1CT	1.0	16.0	15.5	13.5	12.0	33.0	38.0	1500
824-M0223R	1CT:1CT	1CT:1CT	1.0	18.0	17.0	14.5	12.0	33.0	30.0	1500
824-M0234R <sup>4</sup>	1CT:1	1CT:1CT	1.0	16.0	15.5	13.5	12.0	33.0	38.0	1500
824-M0235R	1CT:1CT	1CT:1CT	1.15	16.0	14.0	13.5	12.0	35.0	35.0	1500
824-M0237R <sup>3</sup>	1CT:1CT	1CT:1CT	1.0	18.0	15.5	13.5	12.0	35.0	38.0	1500
824-M0241R	1CT:1CT	1CT:1CT	1.0	18.0	15.5	13.5	12.0	35.0	33.0	1500
824-M0274R	1CT:1CT	1CT:1CT	1.0	16.0	12.0	12.0	10.5	50.0	38.0	1500

**Notes:**

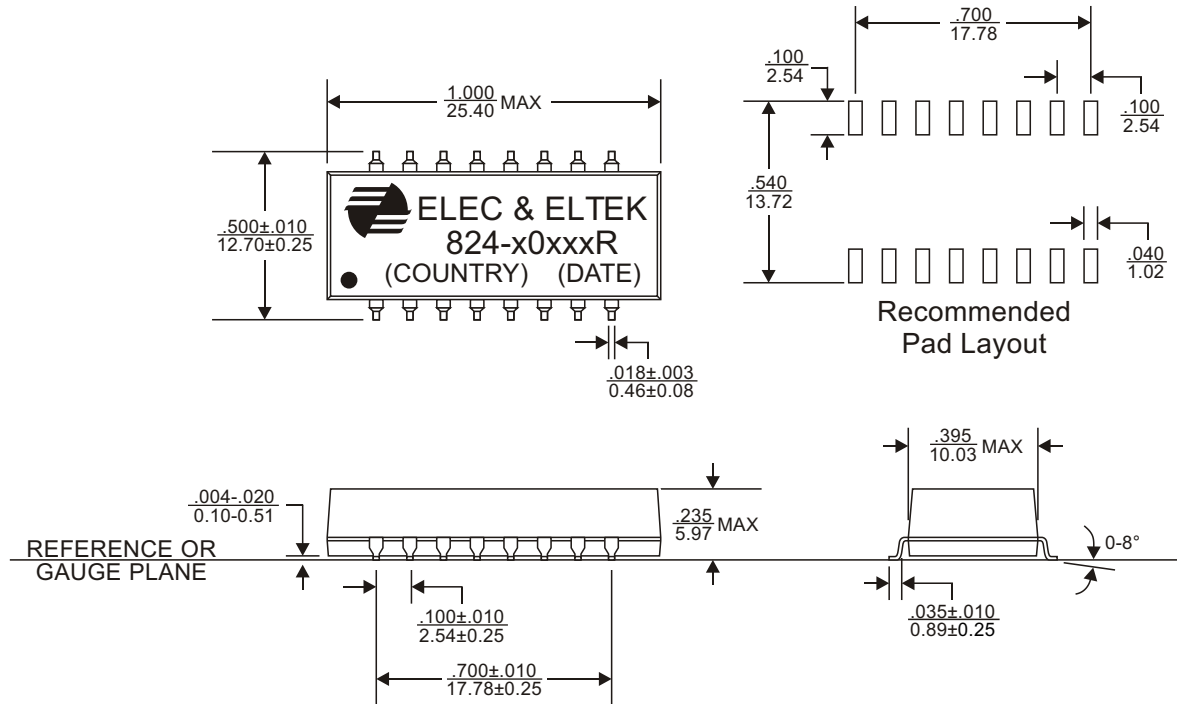
1. Operating temperature -40°C to +85°C.
2. Suitable for Auto MDI/MDIX applications.
3. For 824-M0157R and 824-M0237R, Pin 4 & 13 are removed.
4. For 824-M0158R, 824-M0194R and 824-M0234R, Pin 5 & 12 are removed.





**MECHANICAL DIMENSIONS**

Package: SM016A



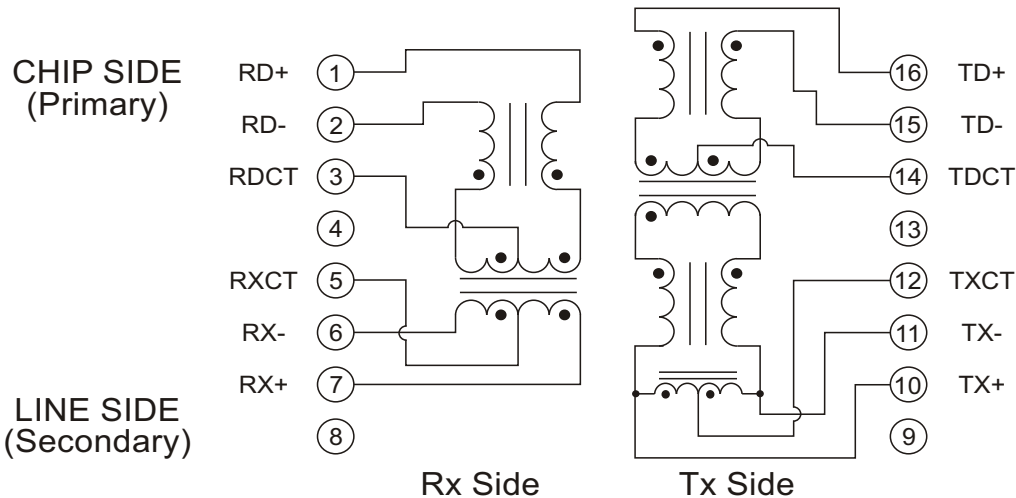
**Notes:**

- 5. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- 6. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 2.7 typ.
Tape & Reel	: 350 / reel

**SCHEMATICS**

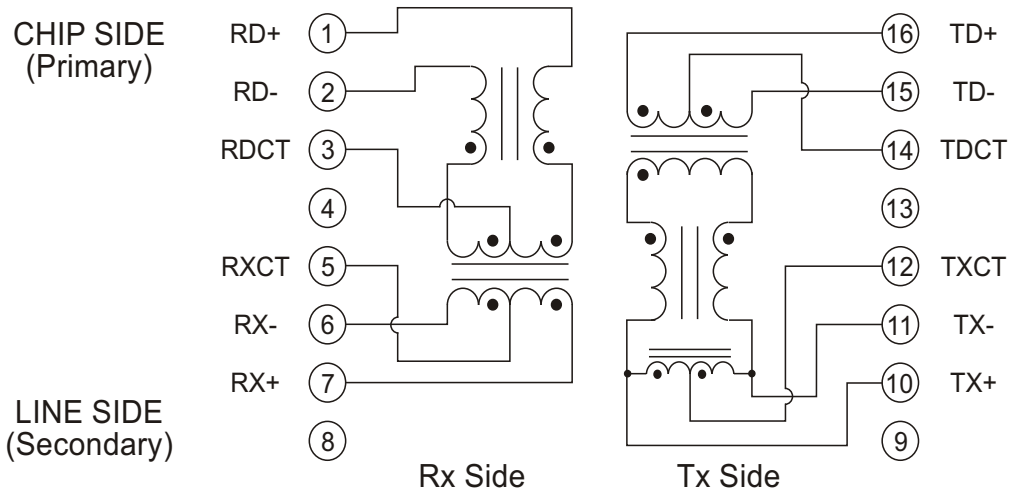
824-M0014R





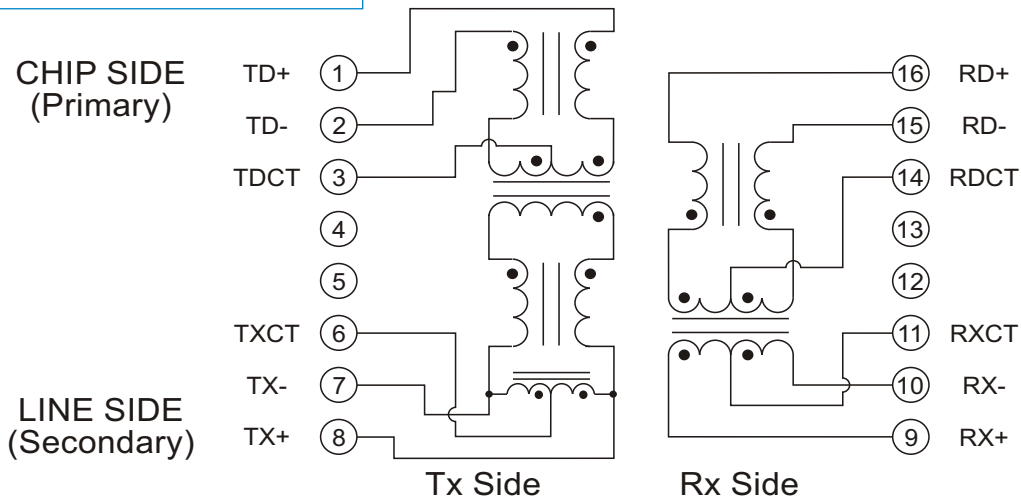
**SCHEMATICS**

824-M0023R/ 824-M0125R/ 824-M0157R



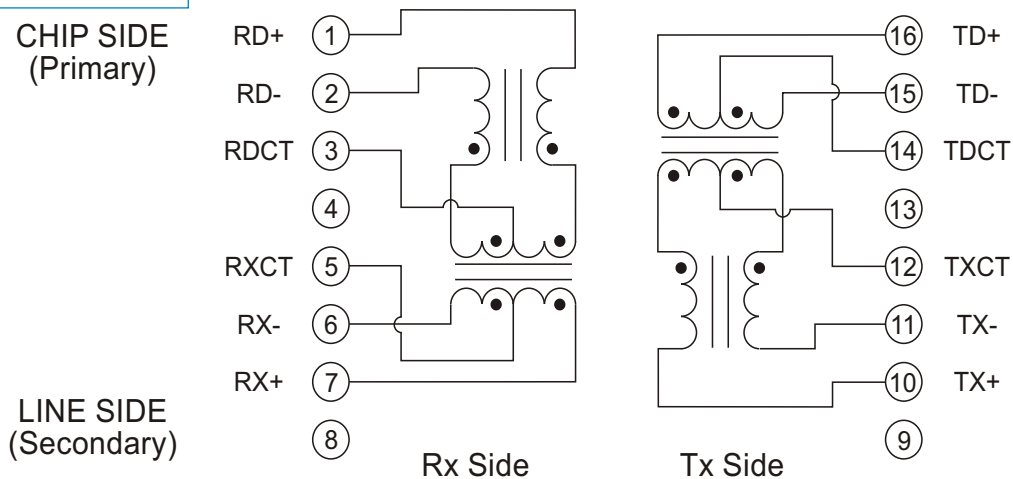
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824-M0024R/ 824-M0158R/ 824-M0194R



**SCHEMATICS**

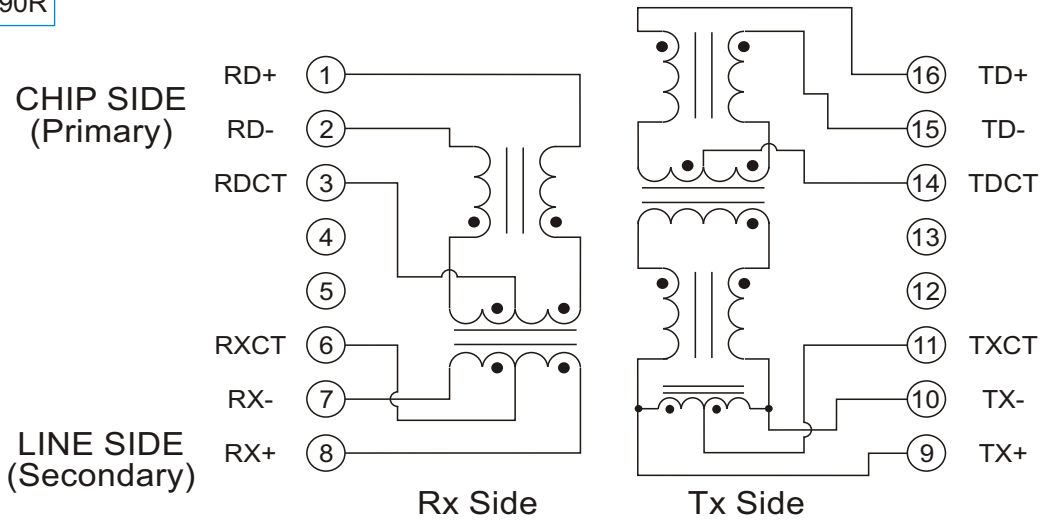
824-M0070R/ 824-M0237R





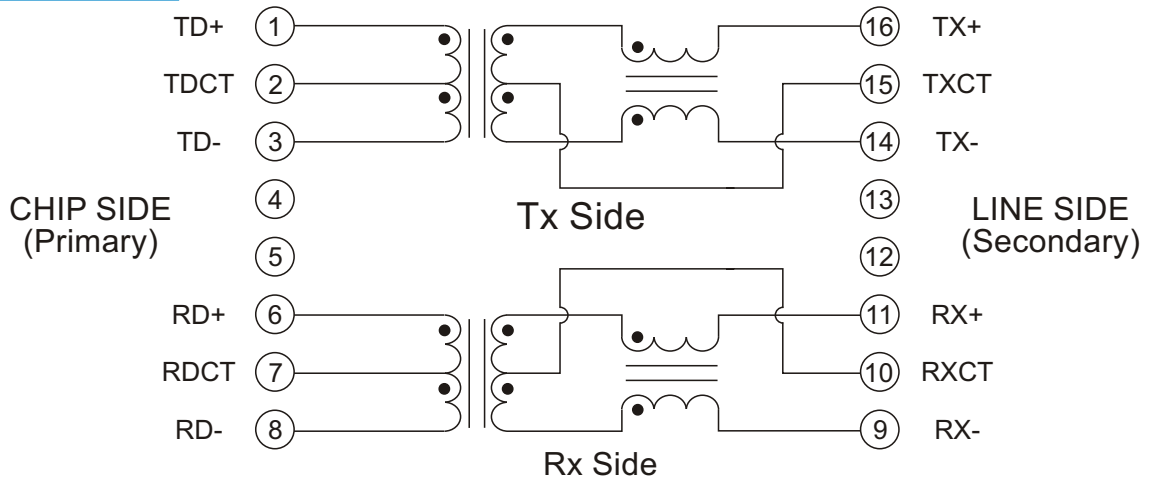
**SCHEMATICS**

824-M0190R



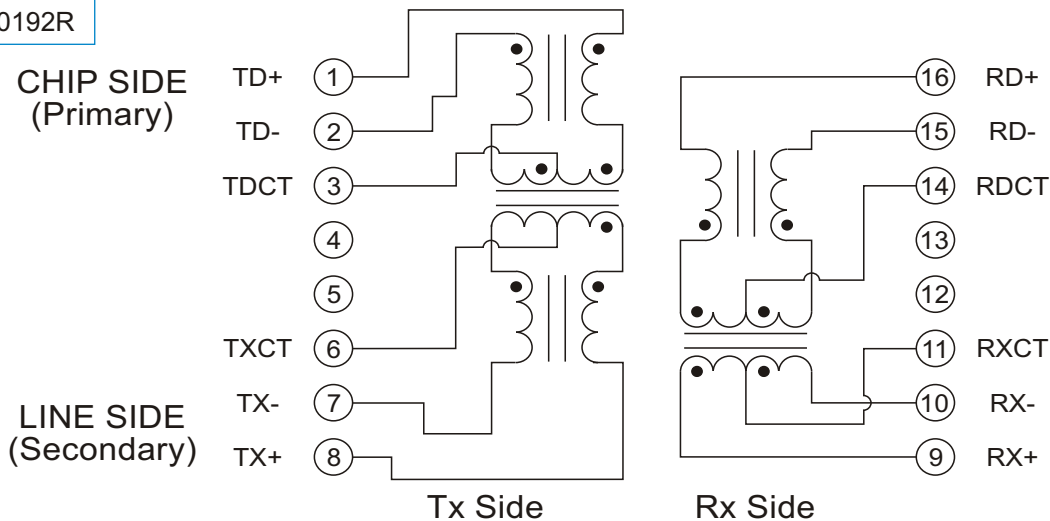
**SCHEMATICS**

824-M0113R/ 824-M0142R



**SCHEMATICS**

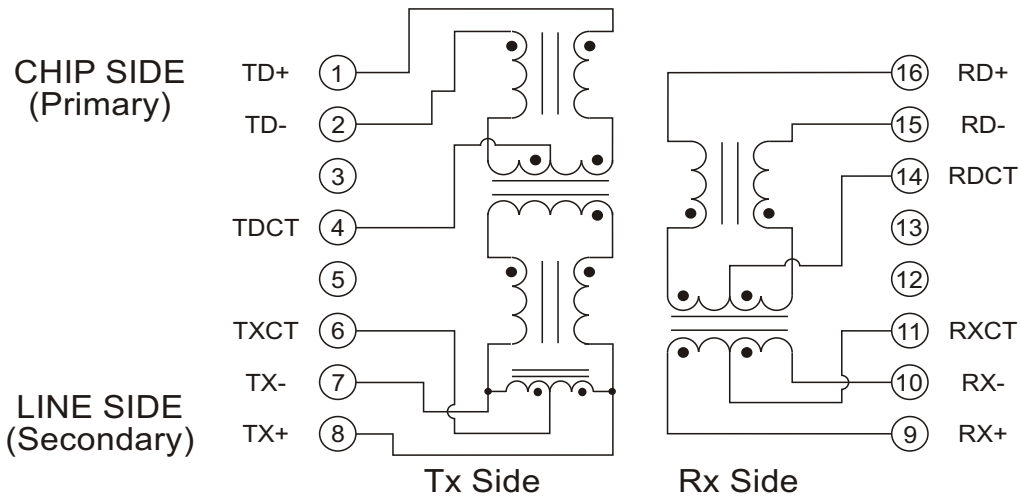
824-M0192R





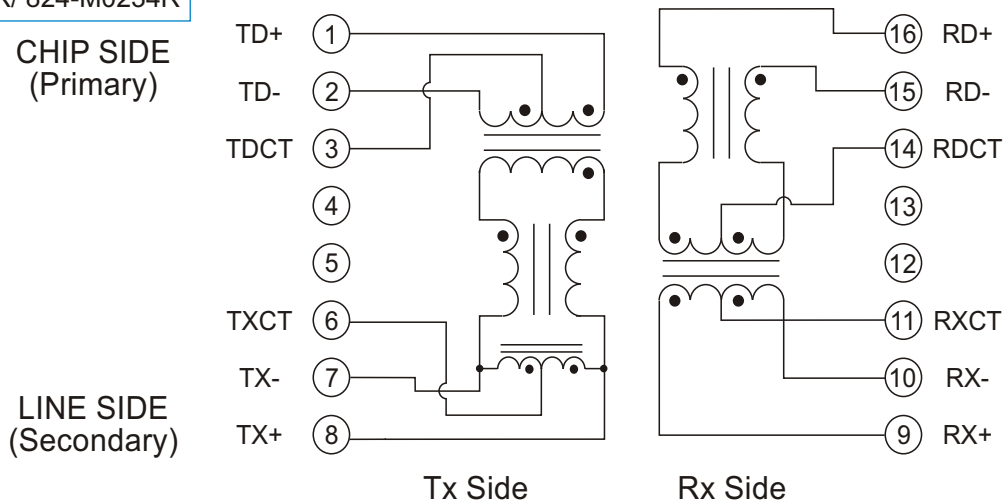
**SCHEMATICS**

824-M0218R



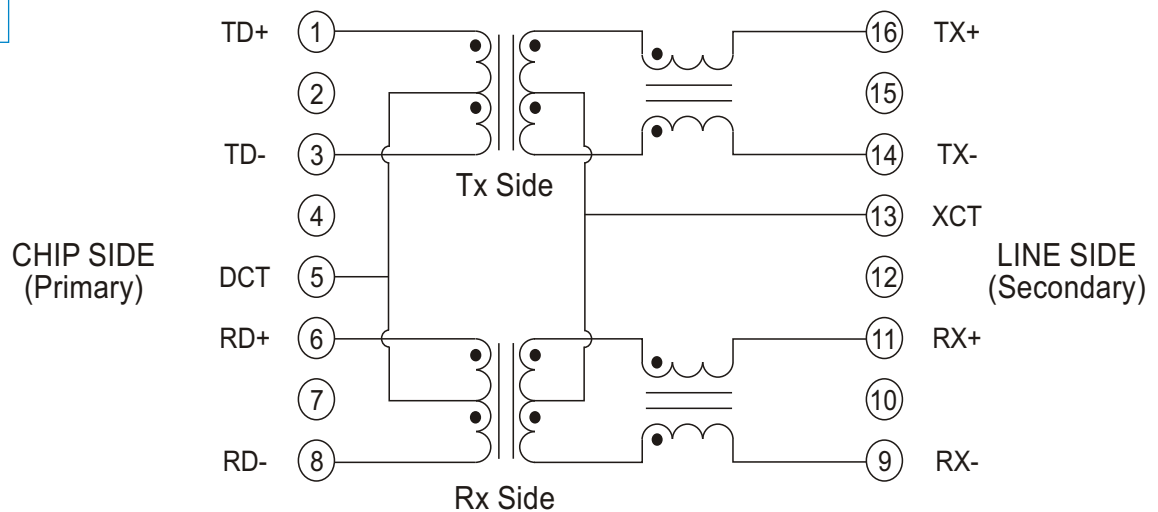
**SCHEMATICS**

824-M0219R/ 824-M0234R



**SCHEMATICS**

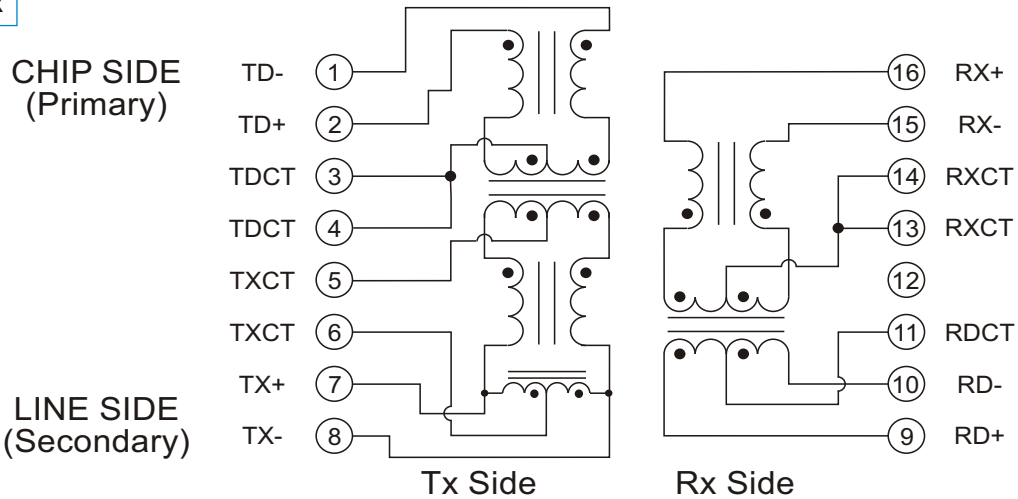
824-M0223R





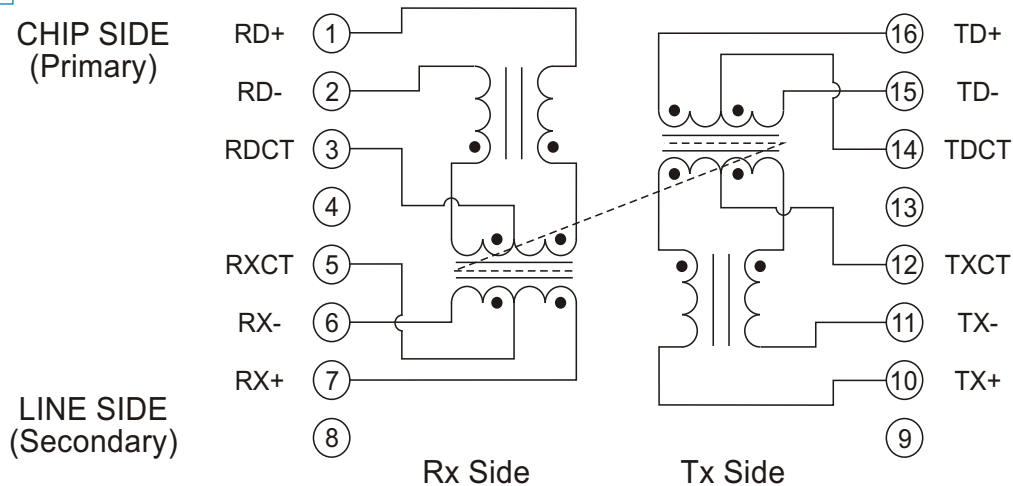
**SCHEMATICS**

824-M0235R



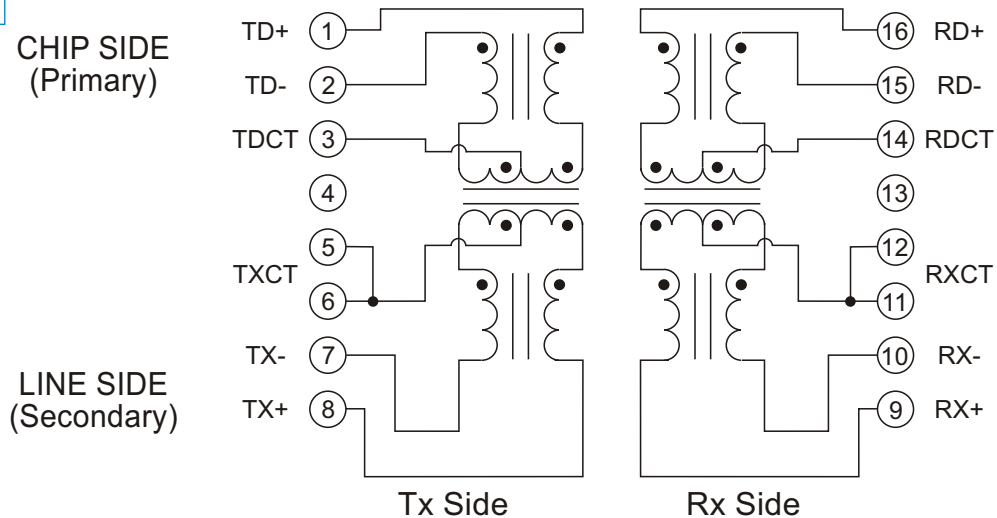
**SCHEMATICS**

824-M0241R



**SCHEMATICS**

824-00274R





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**10/100 Base-T Single Port  
Magnetic Module**  
For Transceiver Requiring 1:1 Transmit Turns Ratios

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Models with integrated transmit and receive channels  
In low profile SMT package
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant

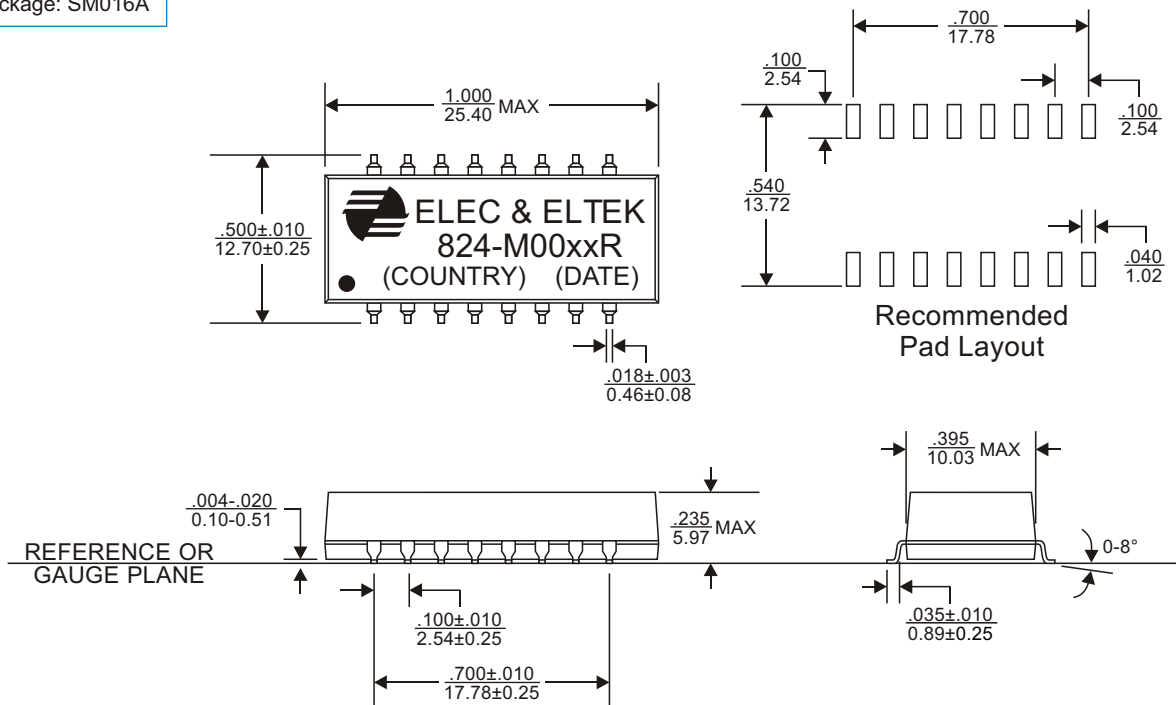


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Typ)	Return Loss (dB Typ)		CMRR (dB Typ)		Crosstalk (dB Typ)		Hipot (Vrms)
	Tx	Rx		.1-100MHz	.1-60MHz	60-100MHz	.1-60MHz	60-100MHz	.1-60MHz	
824-M0074R	2CT:1	1CT:1CT	1.0	16.0	12.0	35.0	32.0	40.0	35.0	1500
824-M0081R	2CT:1CT	1:1:1CT	1.0	16.0	12.0	35.0	32.0	40.0	35.0	1500
824-M0084R	2CT:1	1:1:1CT	1.0	16.0	12.0	35.0	32.0	40.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SM016A



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.25}$ .

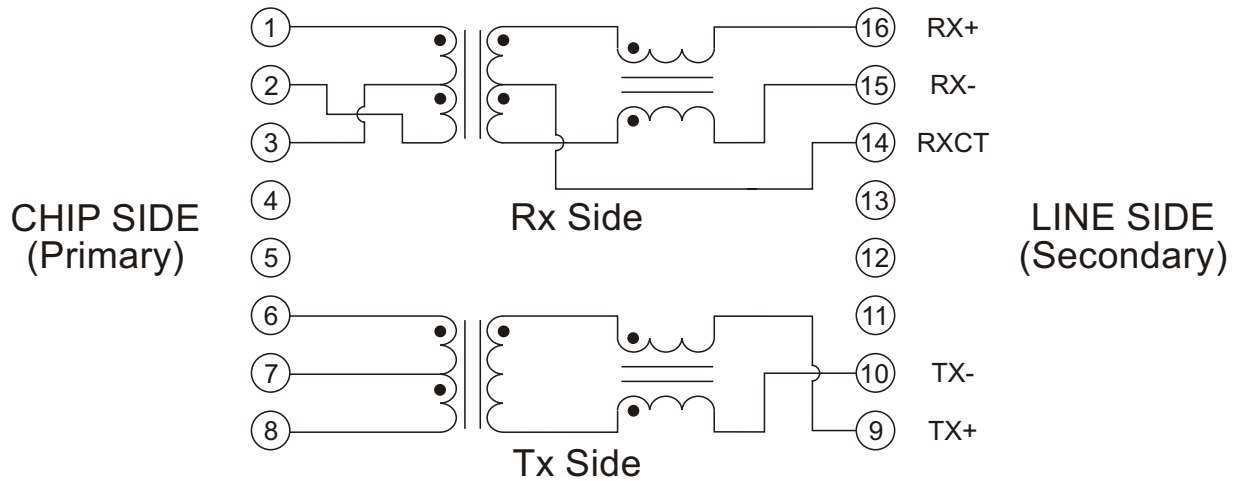
Weight (in gram)	: 2.7 typ.
Tape & Reel	: 350 / reel





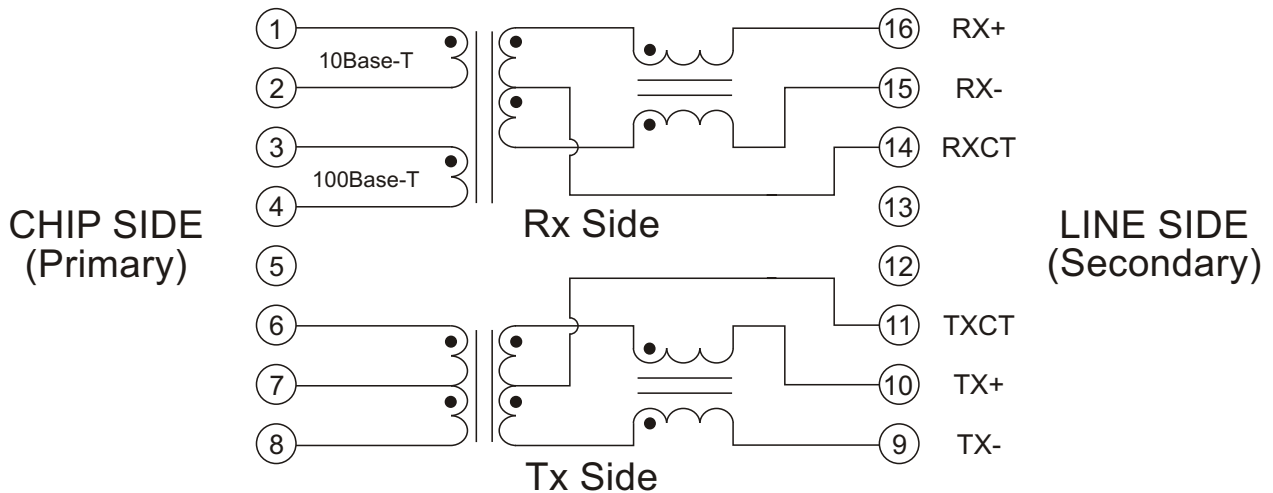
**SCHEMATICS**

824-M0074R



**SCHEMATICS**

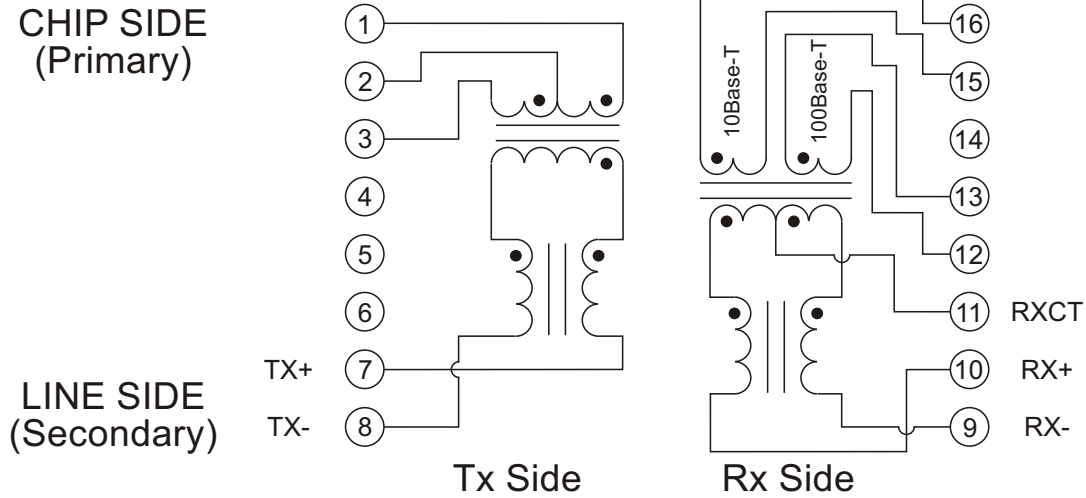
824-M0081R





**SCHEMATICS**

824-M0084R



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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Models with integrated transmit and receive channels in low profile SMT package
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant

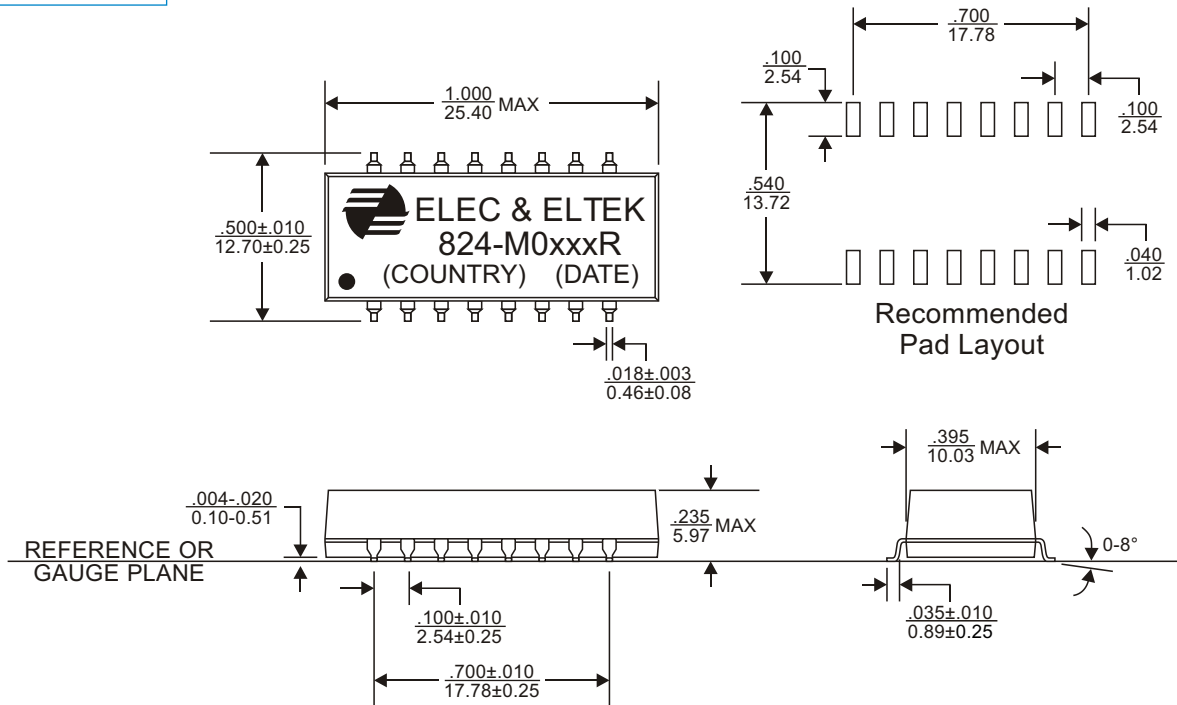


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0004R	1.41CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0073R	1.41CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0075R	1.25CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0080R	1CT:1.41	1CT:1CT	2.0	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0090R	1CT:1.41CT	1CT:1CT	2.0	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0144R	1.41CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	34.0	1500
824-M0220R	1.41CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	34.0	1500

**MECHANICAL DIMENSIONS**

Package: SM016A



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.25}$ .

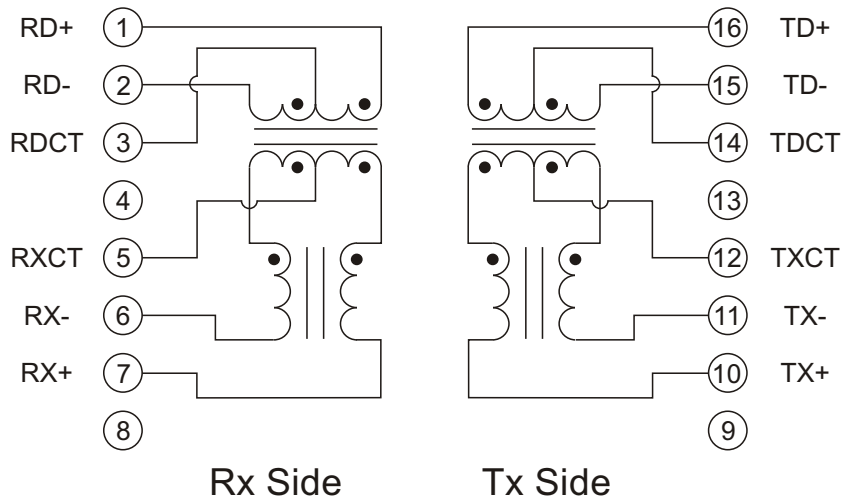
Weight (in gram)	: 2.7 typ.
Tape & Reel	: 350 / reel

**SCHEMATICS**

824-M0004R

**CHIP SIDE  
(Primary)**

**LINE SIDE  
(Secondary)**

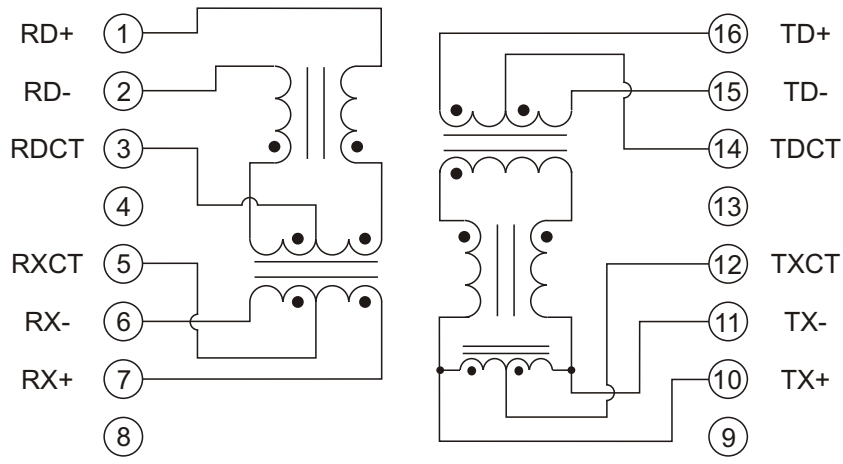




**SCHEMATICS**

824-M0080R

**CHIP SIDE  
(Primary)**



**LINE SIDE  
(Secondary)**

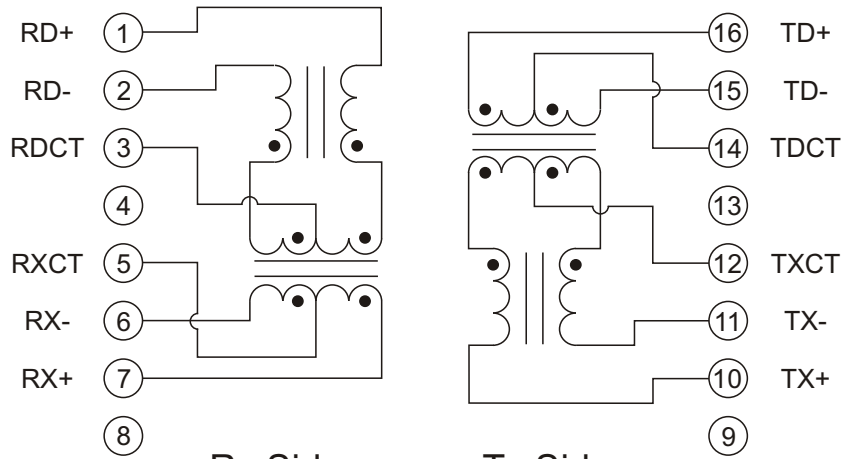
**Rx Side**

**Tx Side**

**SCHEMATICS**

824-M0073R/ 824-M0090R

**CHIP SIDE  
(Primary)**



**LINE SIDE  
(Secondary)**

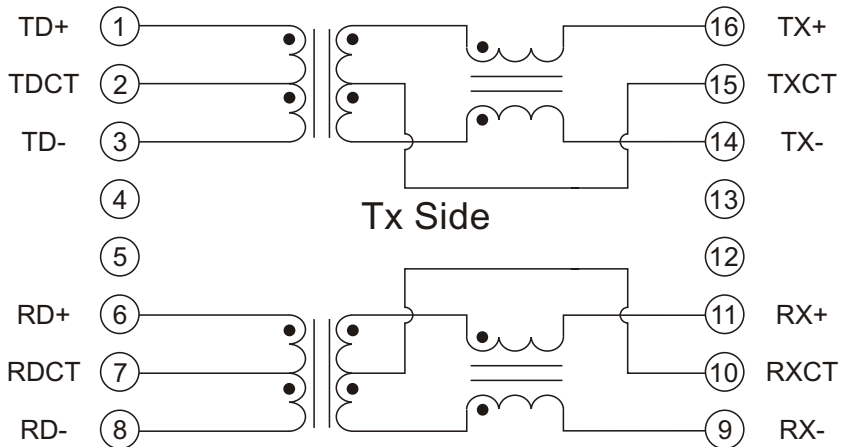
**Rx Side**

**Tx Side**

**SCHEMATICS**

824-M0075R/ 824-M0144R

**CHIP SIDE  
(Primary)**



**LINE SIDE  
(Secondary)**

**Rx Side**

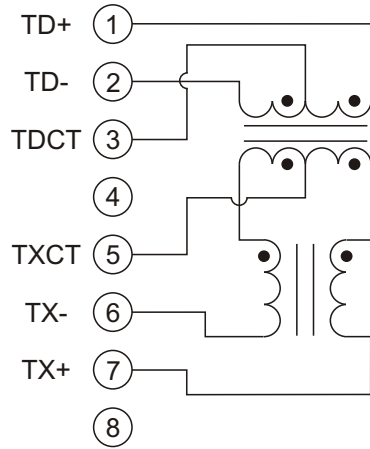


**SCHEMATICS**

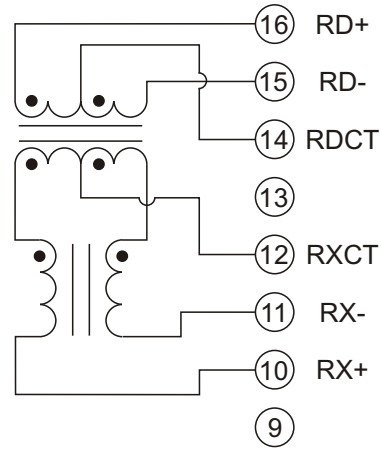
824-M0220R

**CHIP SIDE  
(Primary)**

**LINE SIDE  
(Secondary)**



**Tx Side**



**Rx Side**

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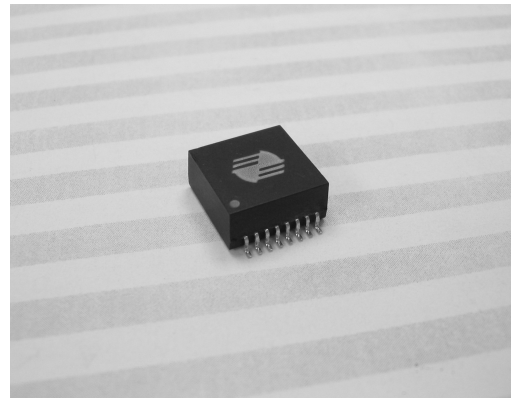
Tel: (852) 2954 3333 Fax: (852) 2954 3304

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Website: <http://www.eleceltek.com> / [www.eemagnetic.com](http://www.eemagnetic.com)

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Excellent crosstalk and return loss performance
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
-  RoHS compliant

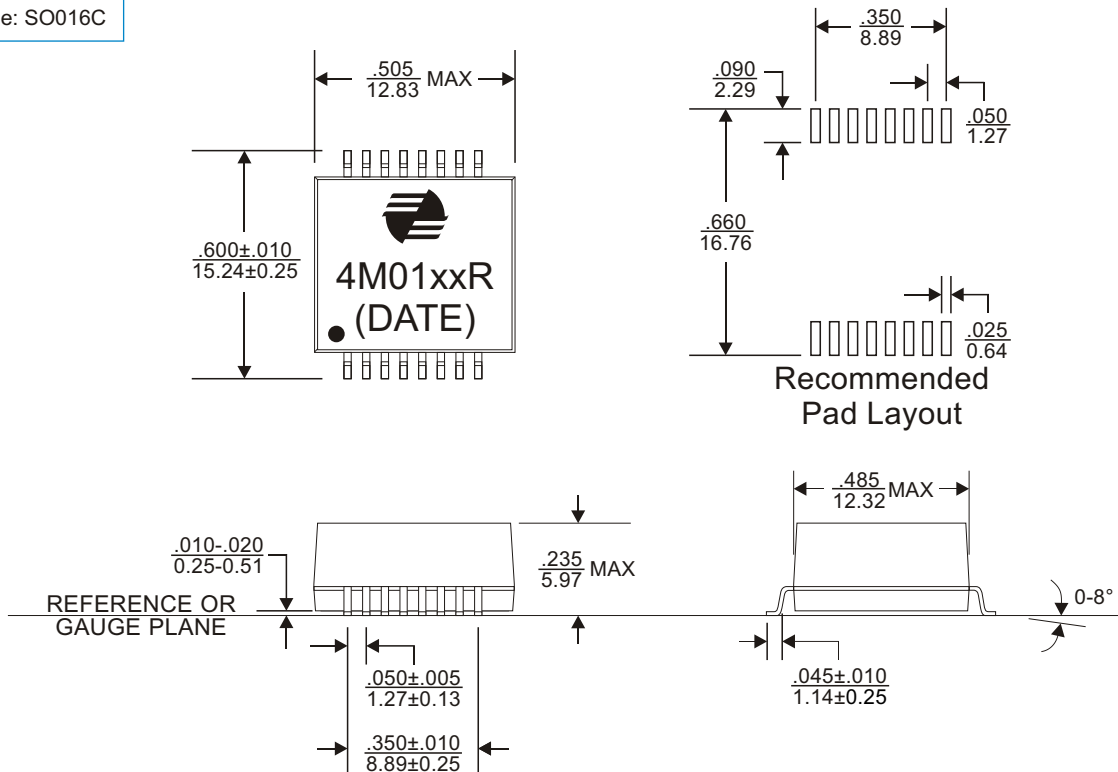


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				DM-CM Rejection (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)
		.1-100MHz	2-30MHz	40MHz	50MHz		60-80MHz	1-200MHz	30MHz	
824-M0117R	1.0	18.0	14.4	13.1	12.0	35.0	50.0	40.0	35.0	1500
824-M0136R	1.0	18.0	14.4	13.1	12.0	35.0	50.0	40.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SO016C



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm .010$  /  $0.25$ .

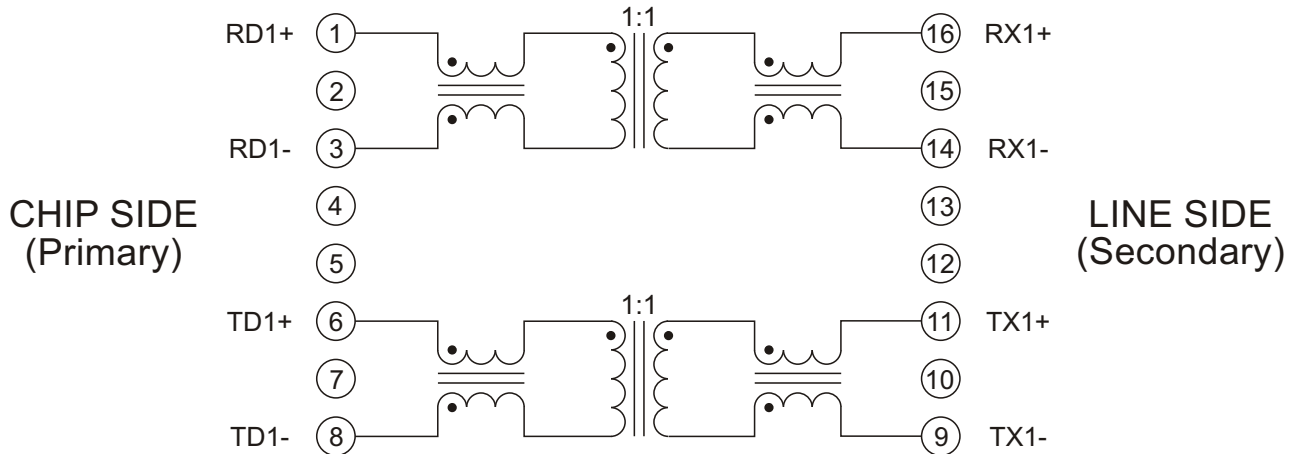
Weight (in gram)	:	2.4 typ.
Tape & Reel	:	450 / reel





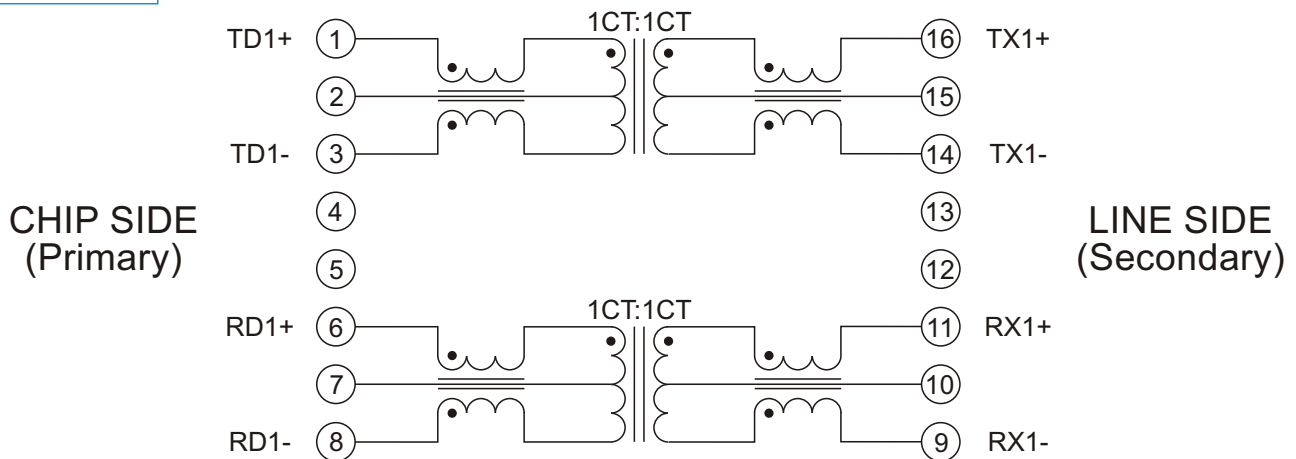
**SCHEMATICS**

824-M0117R



**SCHEMATICS**

824-M0136R



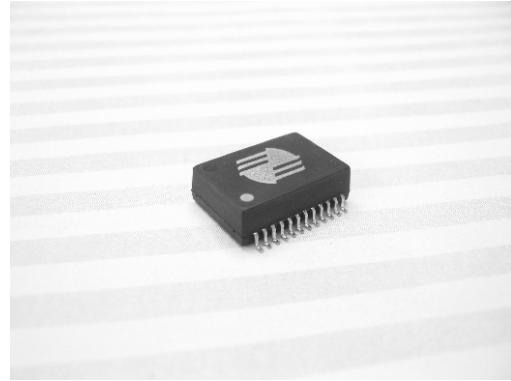
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- Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
- Excellent crosstalk and return loss performance
- Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
- Operating temperature 0°C to +70°C
- Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
- RoHS compliant

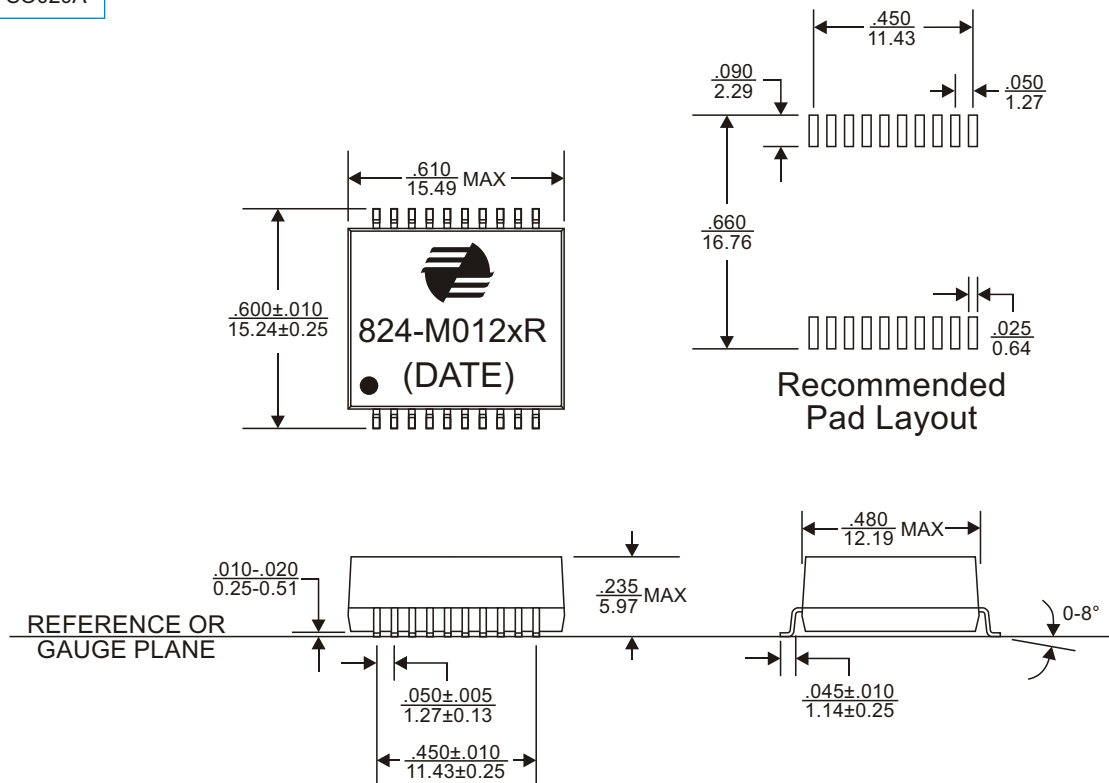


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz		60-80MHz	.1-100MHz	30MHz	
824-M0127R	1.0	18.0	15.5	13.6	12.0	35.0	50.0	40.0	35.0	1500
824-M0128R	1.0	18.0	15.5	13.6	12.0	35.0	50.0	40.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SO020A



**Notes:**

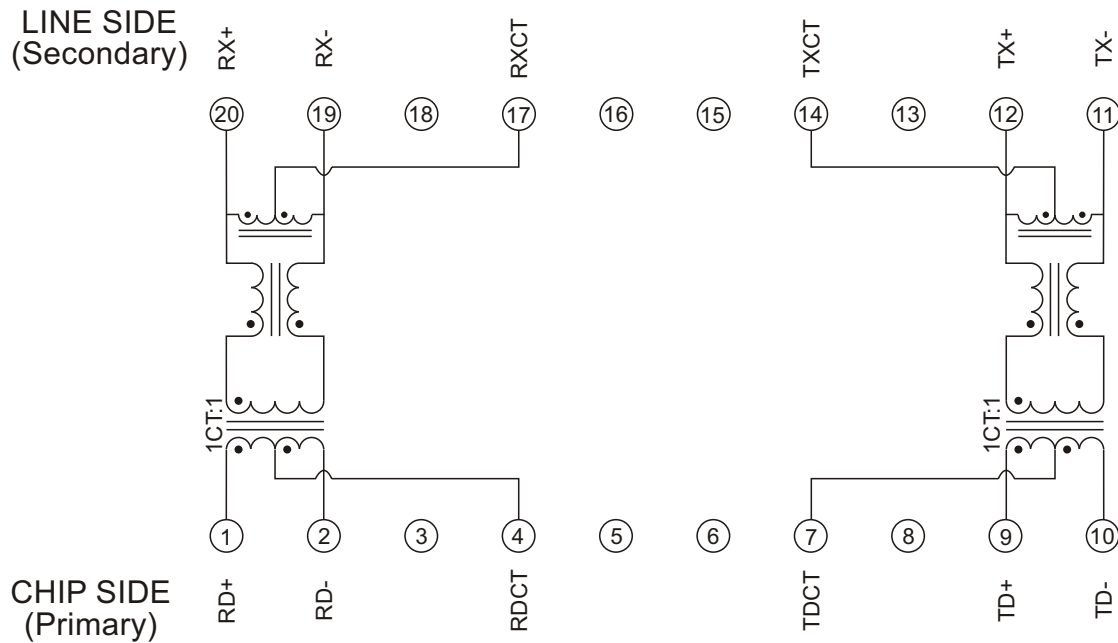
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm .010$  /  $0.25$ .

Weight (in gram)	:	2.2 typ.
Tape & Reel	:	450 / reel



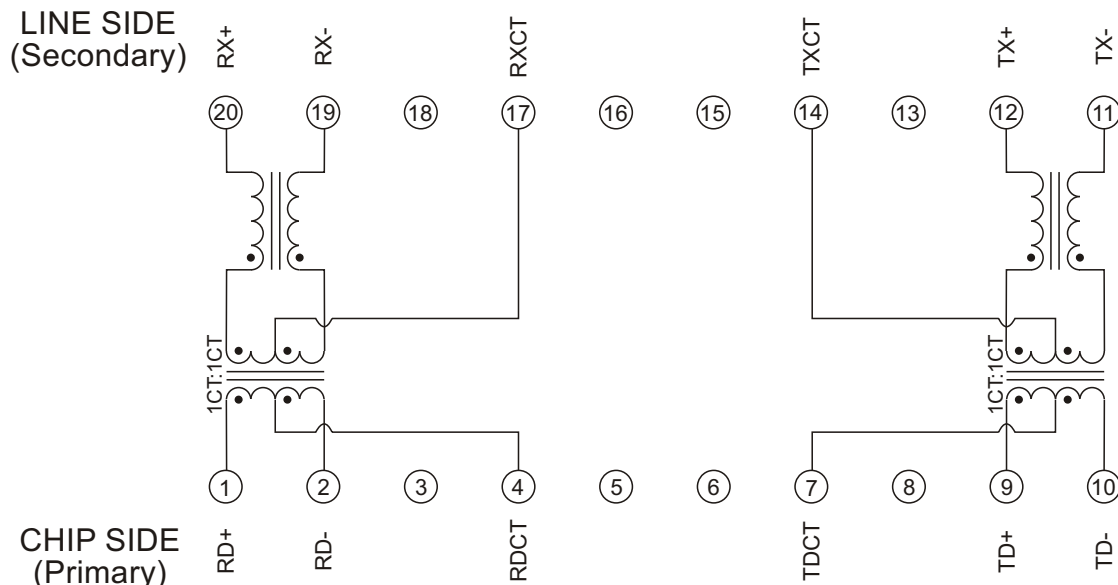
SCHEMATICS

824-M0127R



SCHEMATICS

824-M0128R



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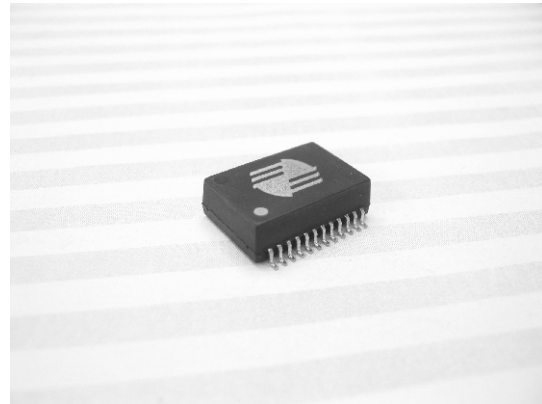
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Enhanced crosstalk and return loss performance
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Allow migration to Gigabit 1000Base-T without changing circuit board layout
-  Operating temperature 0°C to +70°C
-  Some models are UL60950 recognized
-  RoHS compliant

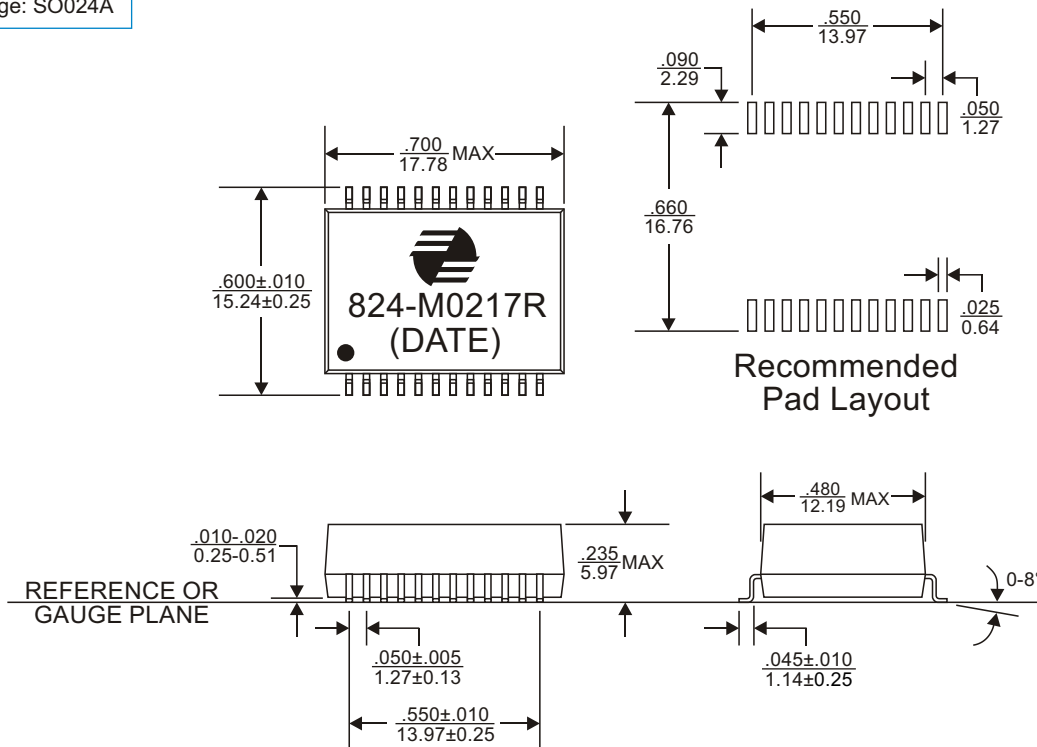


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0217R	1.0	18.0	15.5	13.5	12.0	35.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SO024A



**Notes:**

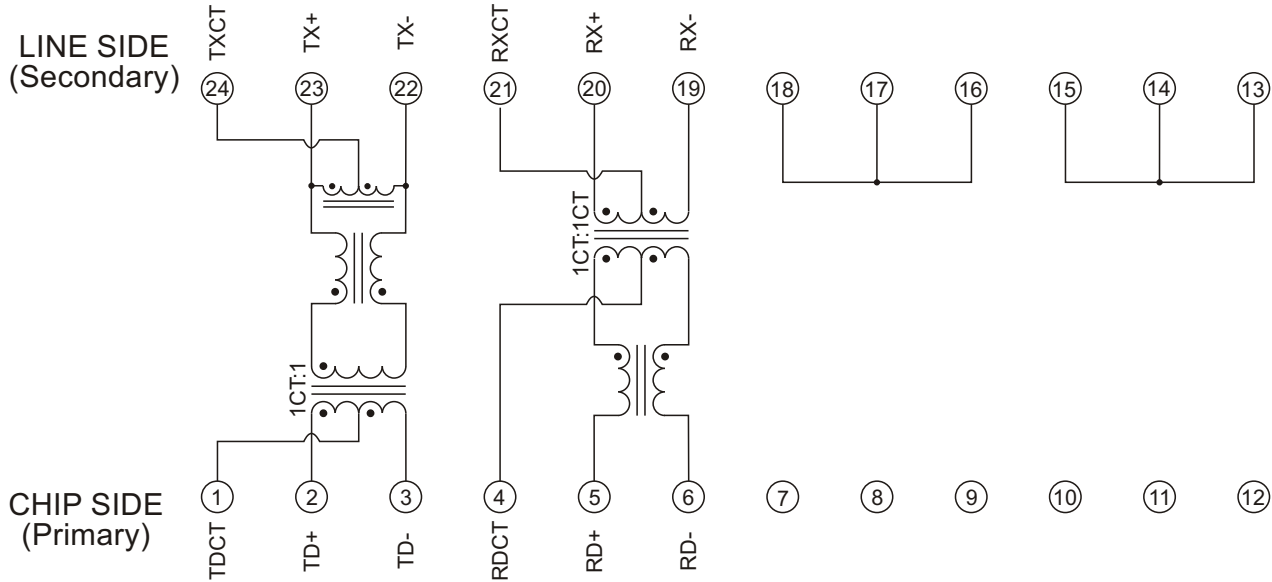
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	2.4 typ.
Tape & Reel	:	450 / reel



SCHEMATICS

824-M0217R



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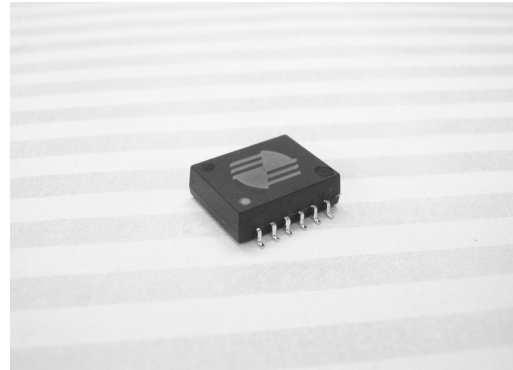
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Compact and symmetrical surface mount package design
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant versions are available

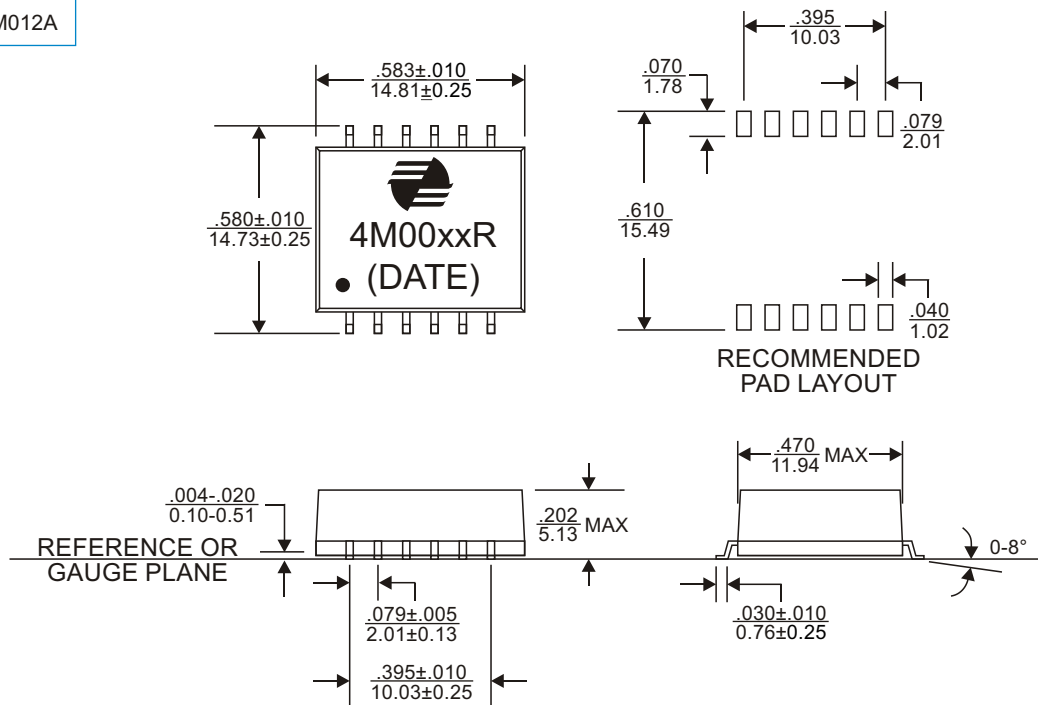


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Typ)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0052R	1CT:1	1CT:1CT	0.5	16.0	15.5	13.5	12.0	33.0	35.0	1500
824-M0062R	1CT:1CT	1CT:1CT	0.5	16.0	15.5	13.5	12.0	33.0	35.0	1500
824-M0064R	1CT:1.41	1CT:1CT	0.5	16.0	15.5	13.5	12.0	33.0	35.0	1500
824-M0065R	1CT:1.41CT	1CT:1CT	0.5	16.0	15.5	13.5	12.0	33.0	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SM012A



**Notes:**

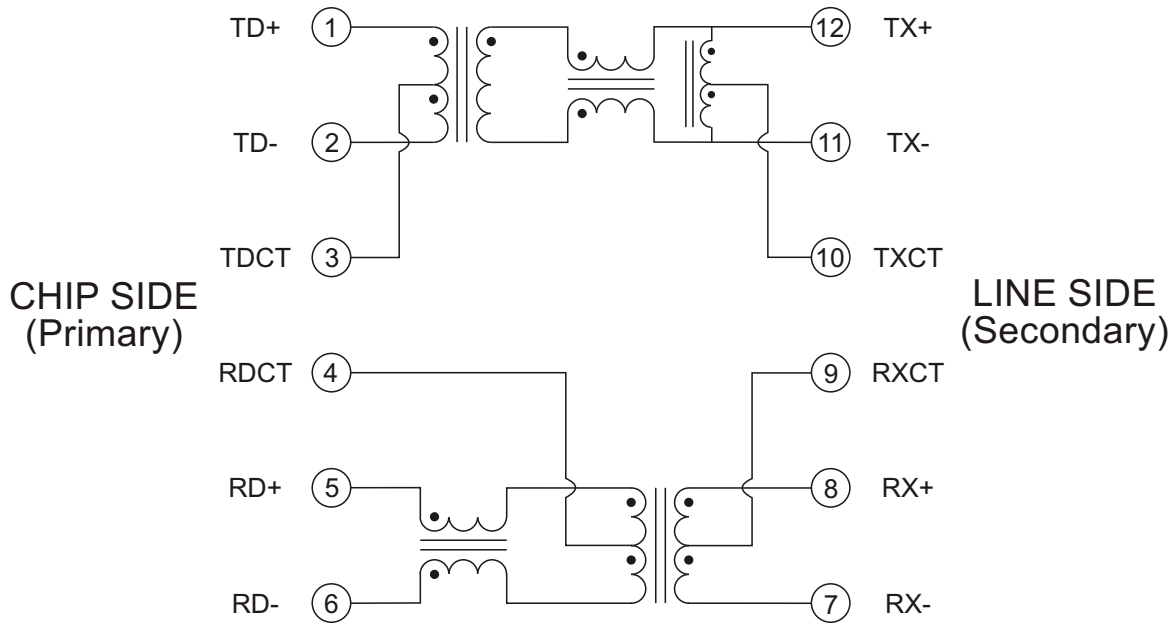
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	2.0 typ.
Tape & Reel	:	450 / reel



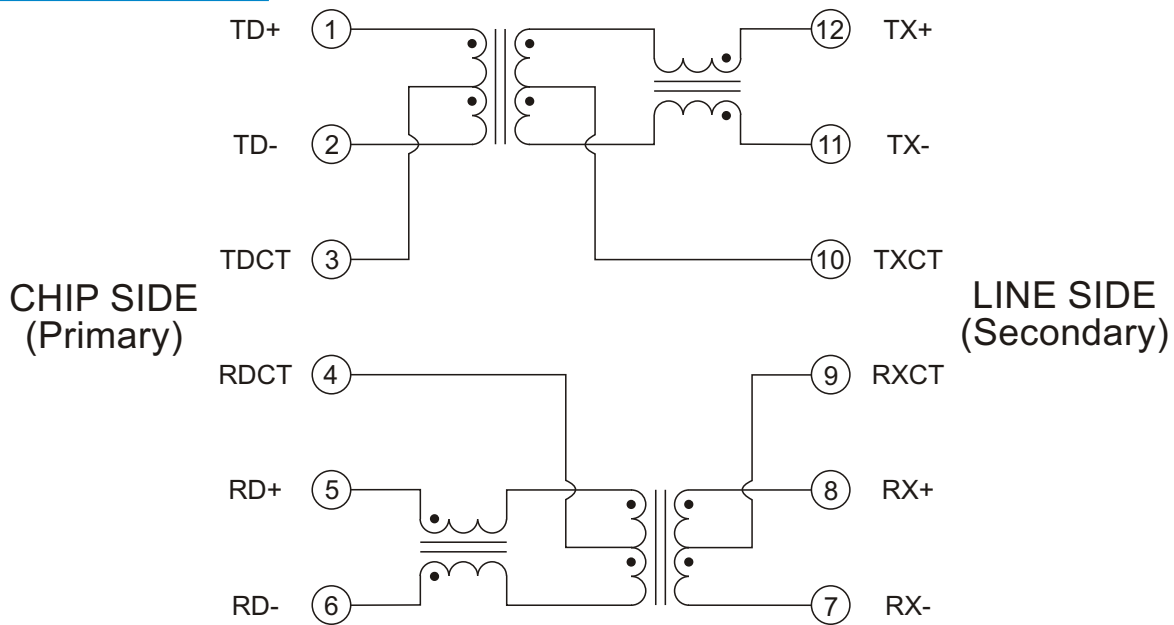
**SCHEMATICS**

824-M0052R / 824-M0064R



**SCHEMATICS**

824-M0062R / 824-M0065R



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Hong Kong

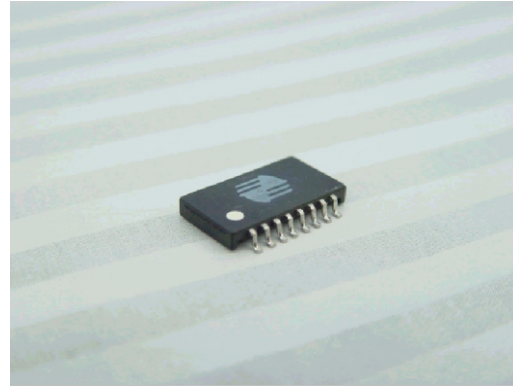
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-  Compliant with IEEE802.3 standard
-  Models with integrated transmit and receive channels in ultra-low profile SMT package of 0.078" (1.98mm) thickness
-  Designed for automatic pick and place process
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

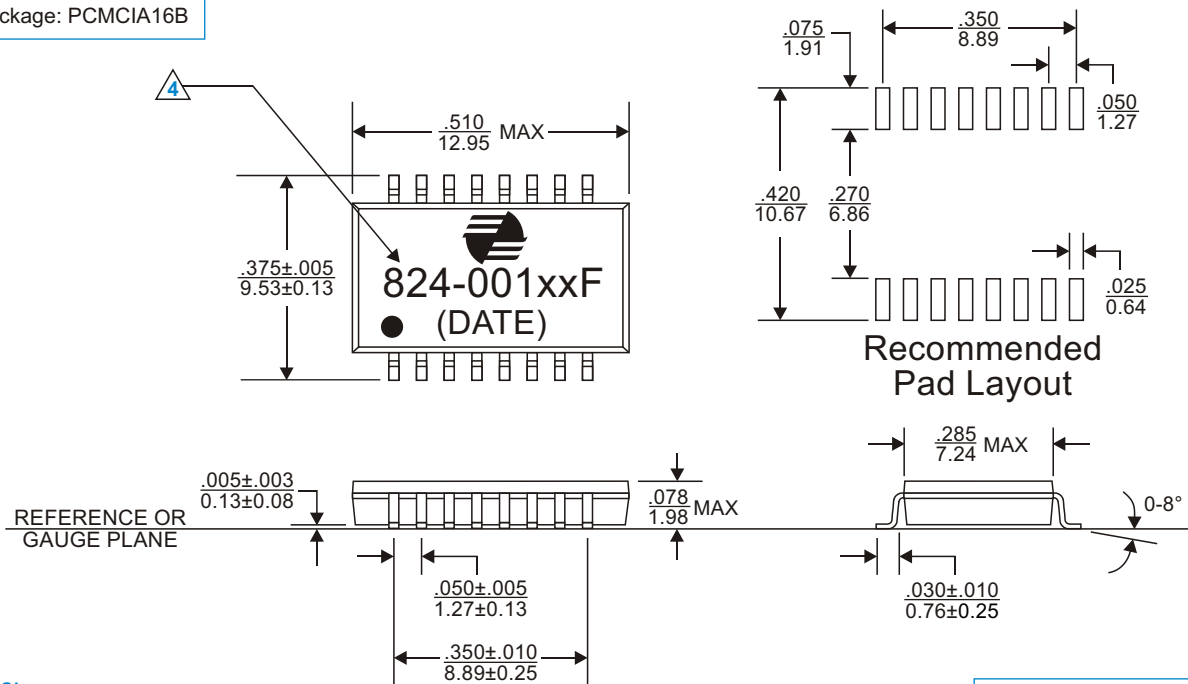
Part Number	Turns Ratio		Insertion Loss (dB Typ)	Return Loss (dB Typ)					CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz			
824-00119F	1CT:1CT	1CT:1CT	0.9	18.0	15.5	13.5	12.0	30.0	35.0	1500	
824-00150R <sup>1</sup>	1CT:1CT		1.1	18.0	15.5	13.5	12.0	30.0	-	1500	
824-00195F	1CT:1CT	1.41CT:1CT	1.5	18.0	15.5	13.5	10.0	30.0	35.0	1500	

**Notes:**

1. Can be used for either transmit or receive channel.

**MECHANICAL DIMENSIONS**

Package: PCMCIA16B



**Notes:**

2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm .010$  /  $0.25$ .
4. For 824-00150 RoHS versions, the part will be marked with "824-00150R", instead of "824-00150".

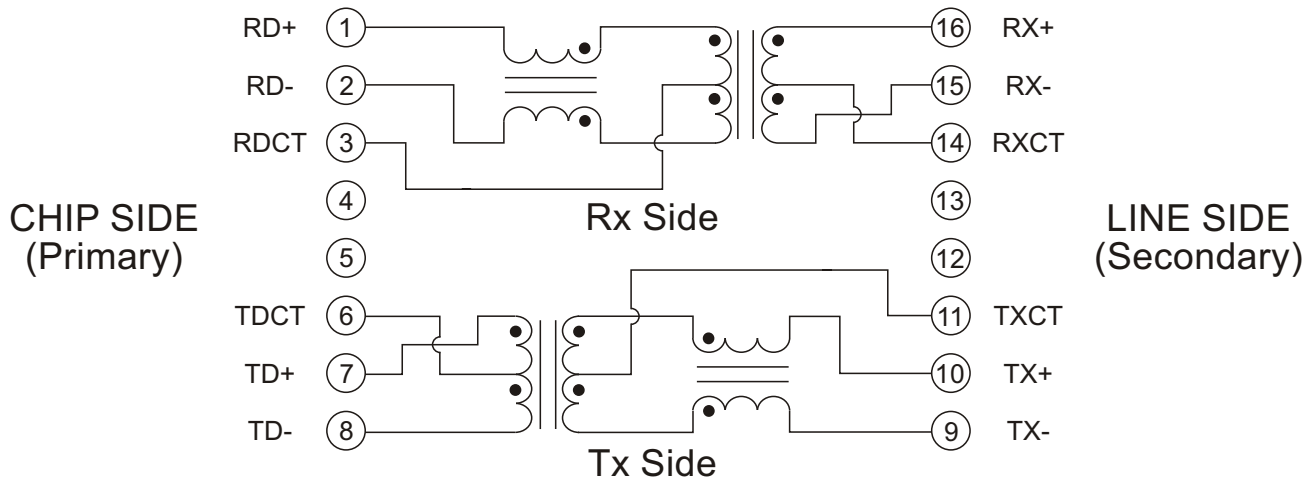
Weight (in gram)	: 0.5 typ.
Tape & Reel	: 1400 / reel





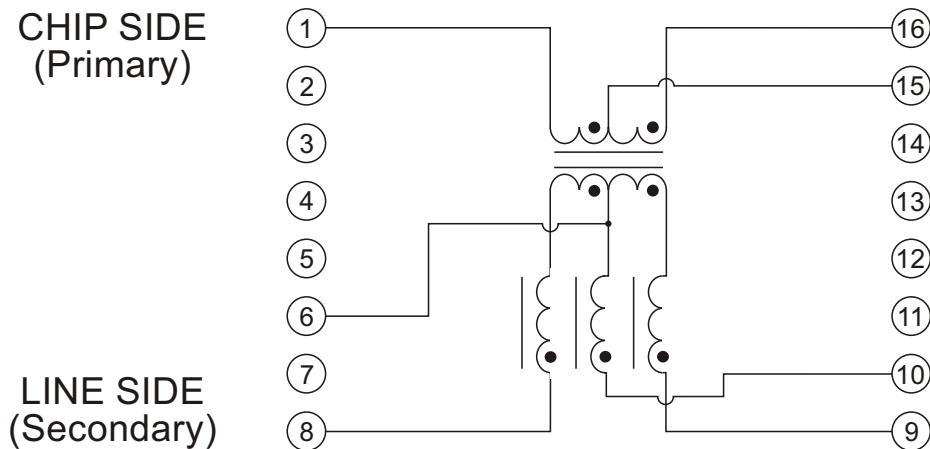
SCHMATICS

824-00119F



SCHMATICS

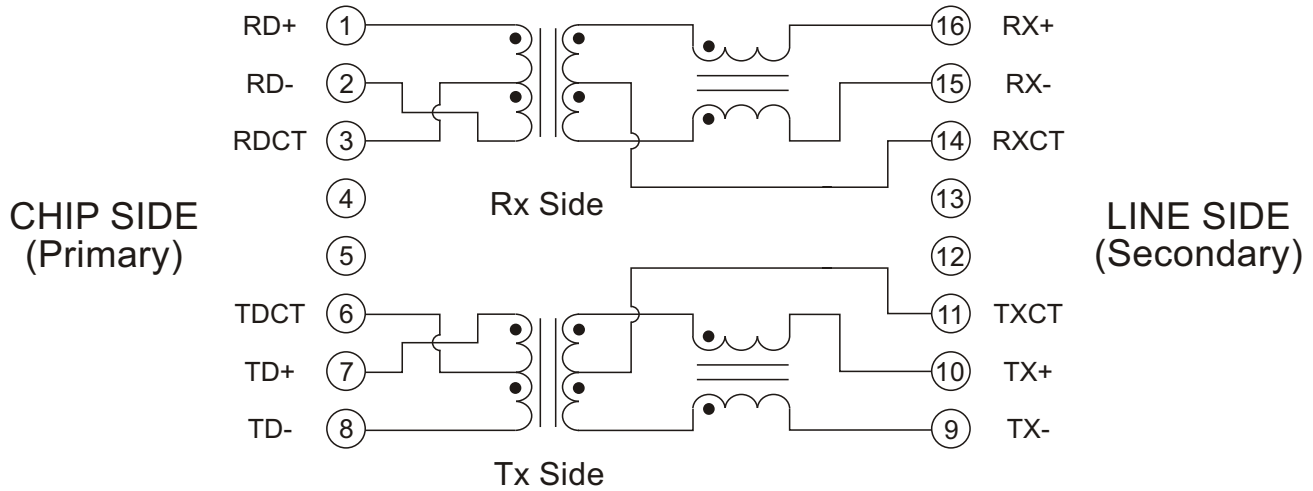
824-00150R





SCHMATICS

824-00195F



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-  Compliant with IEEE802.3 standard
-  Models with integrated transmit and receive channels in ultra-low profile SMT package of 0.085" (2.16mm)
-  Designed to withstand IR-reflow with peak Temperature per IPC/JEDEC J-STD-020C
-  Designed for automatic pick and place process
-  Operating temperature 0°C to +70°C
-  RoHS compliant

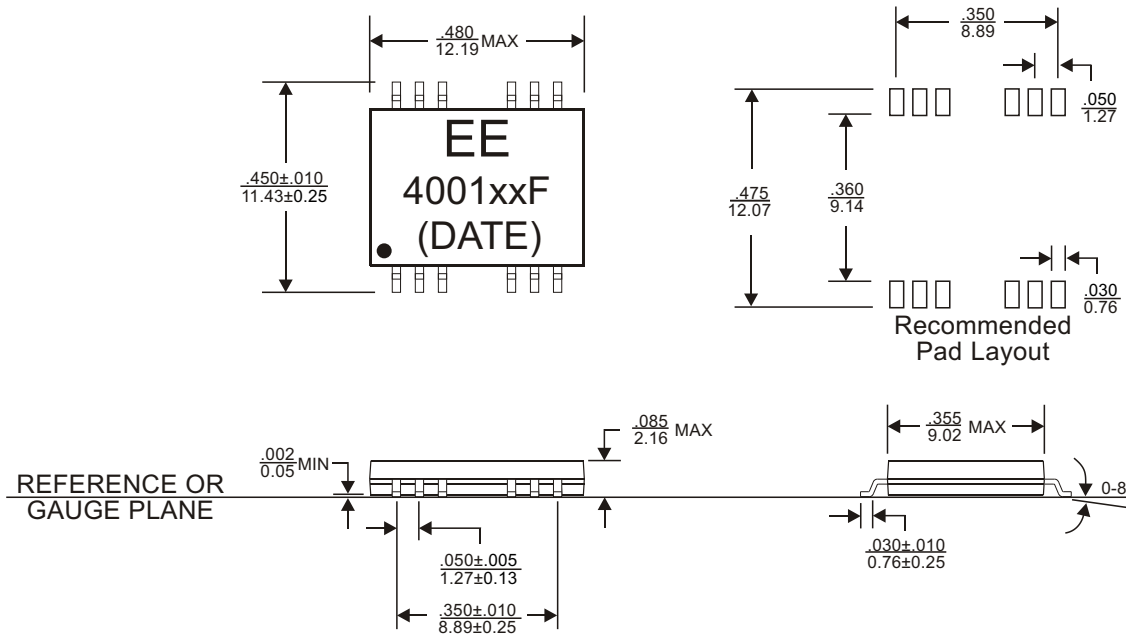


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)			CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	30MHz	60MHz			
824-00115F	1CT:1	1CT:1CT	2.0	18.0	14.0	12.0	30.0	40.0	1500
824-00153F	1CT:1CT	1CT:1CT	2.0	18.0	12.0	12.0	30.0	37.0	1500

**MECHANICAL DIMENSIONS**

Package: SO012A



Weight (in gram)	: 0.7 typ.
Tape & Reel	: 1300 / reel

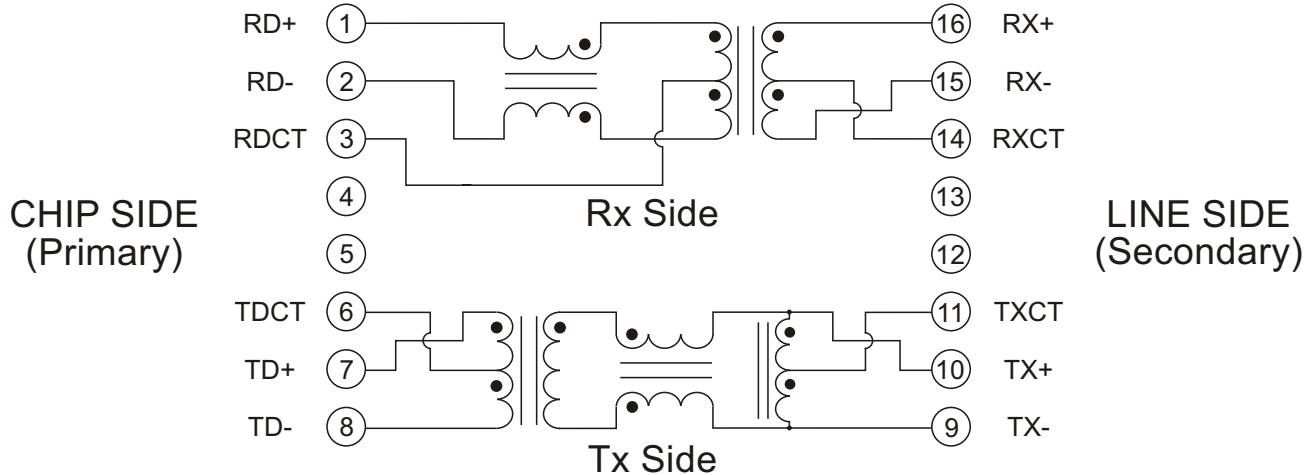
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



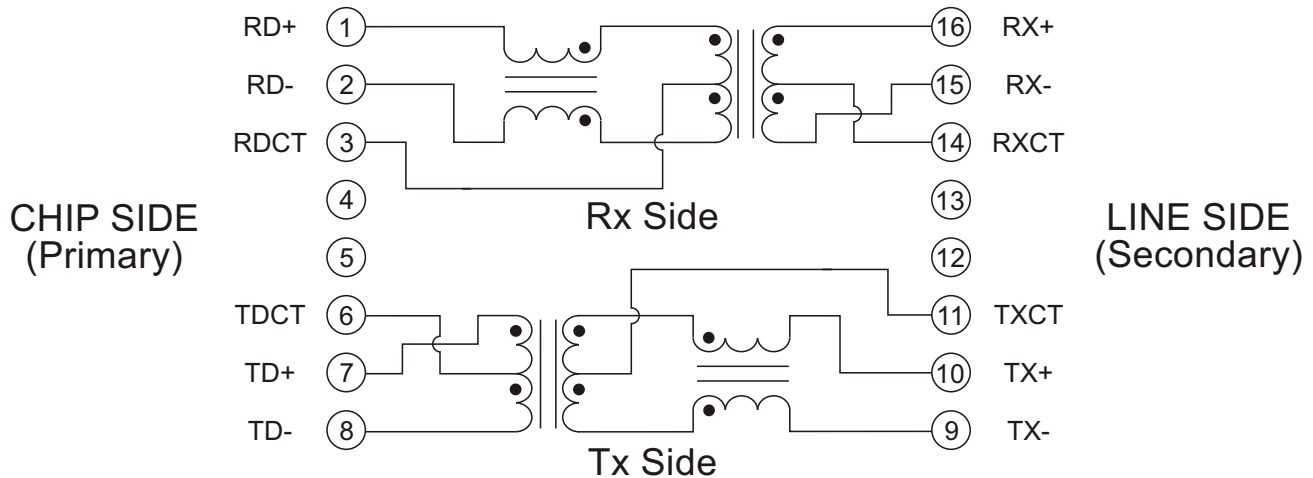
**SCHEMATICS**

824-00115F



**SCHEMATICS**

824-00153F



**FOR MORE INFORMATION, PLEASE CONTACT**

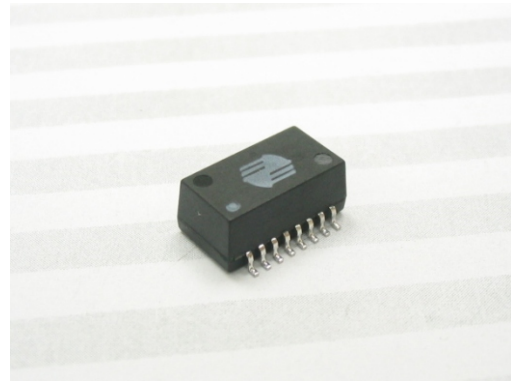
**HEADQUARTER**  
1/F., Harbour View 1, No.12 Science Park East Avenue,  
Phase II, Hong Kong Science Park, Shatin, N.T.  
Hong Kong  
Tel: (852) 2954 3333 Fax: (852) 2954 3304  
Email: eempl@eleceltek.com  
Website: <http://www.eleceltek.com> / [www.eemagnetic.com](http://www.eemagnetic.com)

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- Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC bias
- Designed for IP phone and IP switch applications
- 350mA balanced DC line current capability
- Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
- Compact footprint for use in the most space-restrictive applications
- Operating temperature 0°C to +70°C.
- Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
- RoHS compliant

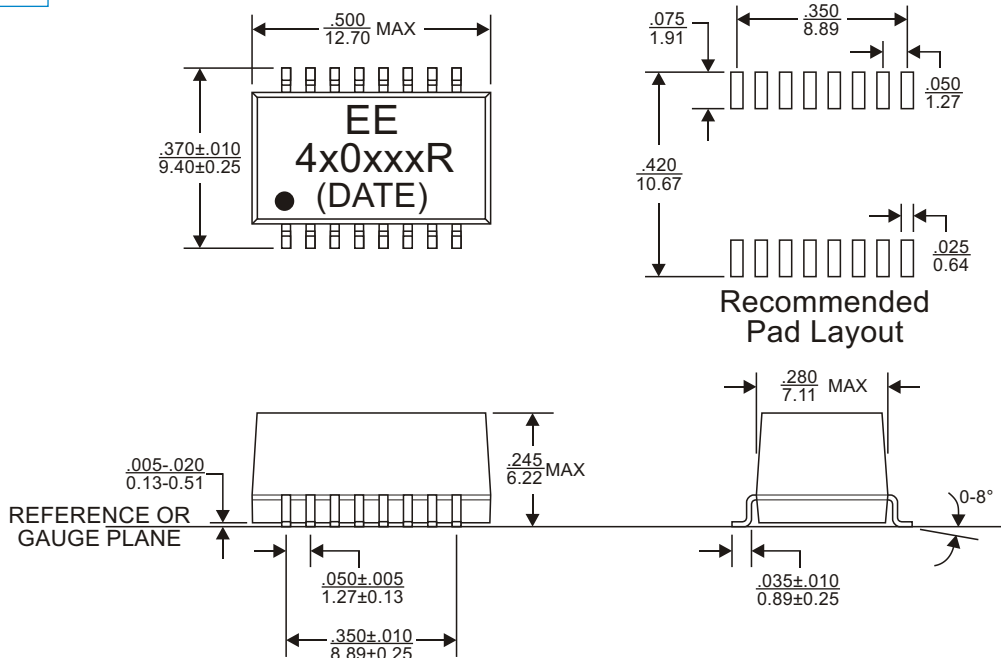


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0145R	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	33.0	33.0	1500
824-M0286R	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	-	35.0	1500

**MECHANICAL DIMENSIONS**

Package: SO016G



**Notes:**

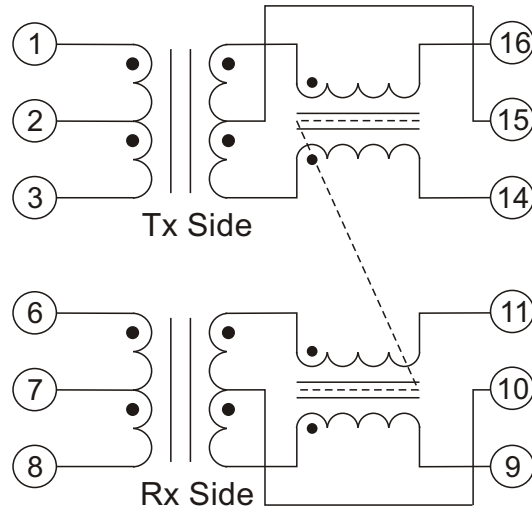
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	1.1 typ.
Tape & Reel	:	600 / reel



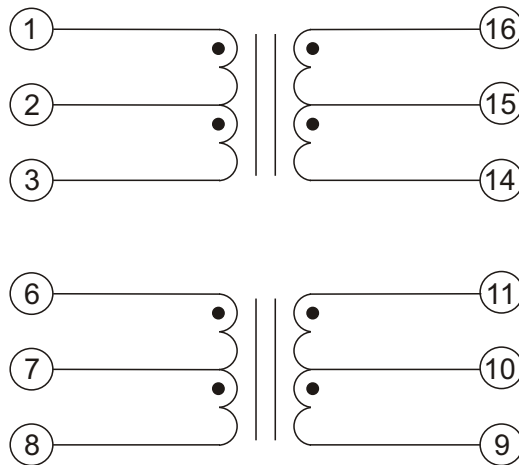
SCHEMATICS

824-M0145R



SCHEMATICS

824-M0286R



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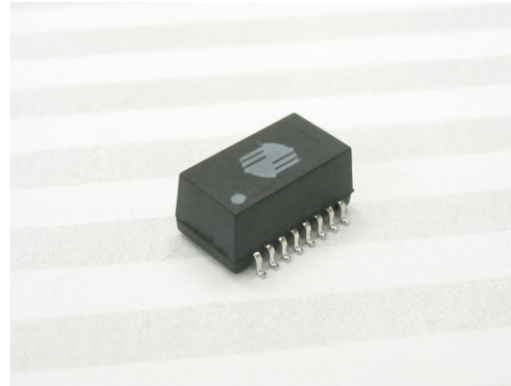
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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC bias
-  Designed for IP phone and IP switch applications
-  350mA balanced DC line current capability
-  Designed to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact footprint for use in the most space-restrictive applications
-  Operating temperature -40°C to +85°C.
-  Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00229F	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	38.0	38.0	1500
824-00232F	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	38.0	38.0	1500
824-00247F <sup>1</sup>	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	-	38.0	1500

**Notes:**

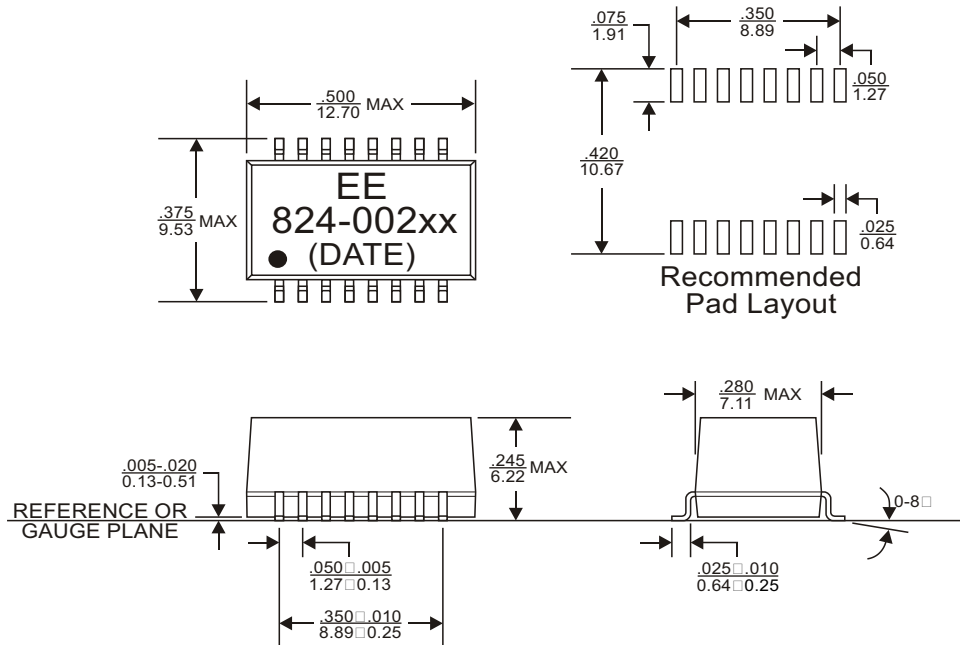
1. For mid-span PoE application





**MECHANICAL DIMENSIONS**

Package: SO016E



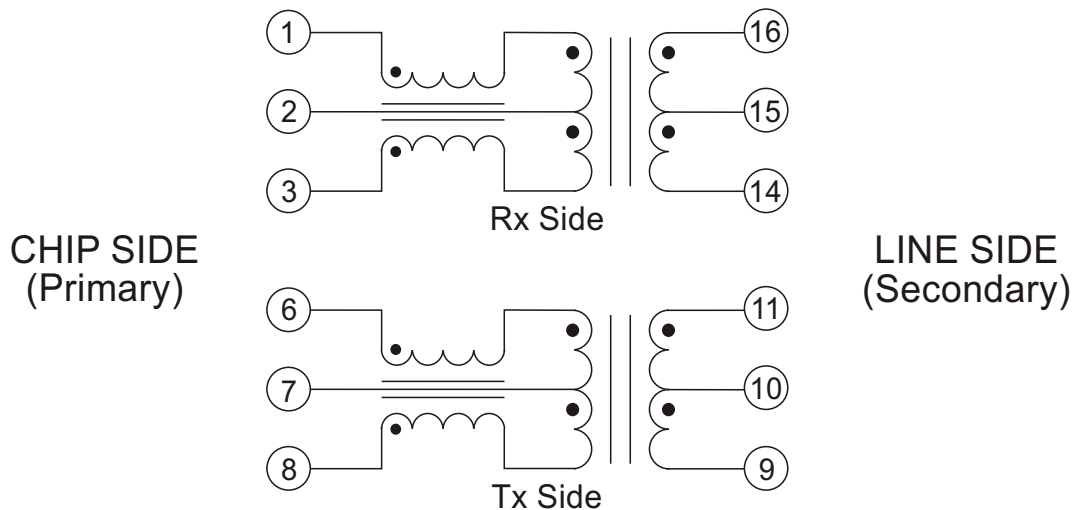
**Notes:**

- All dimensions are specified in inches with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 1.0 typ.
Tape & Reel	: 600 / reel

**SCHEMATICS**

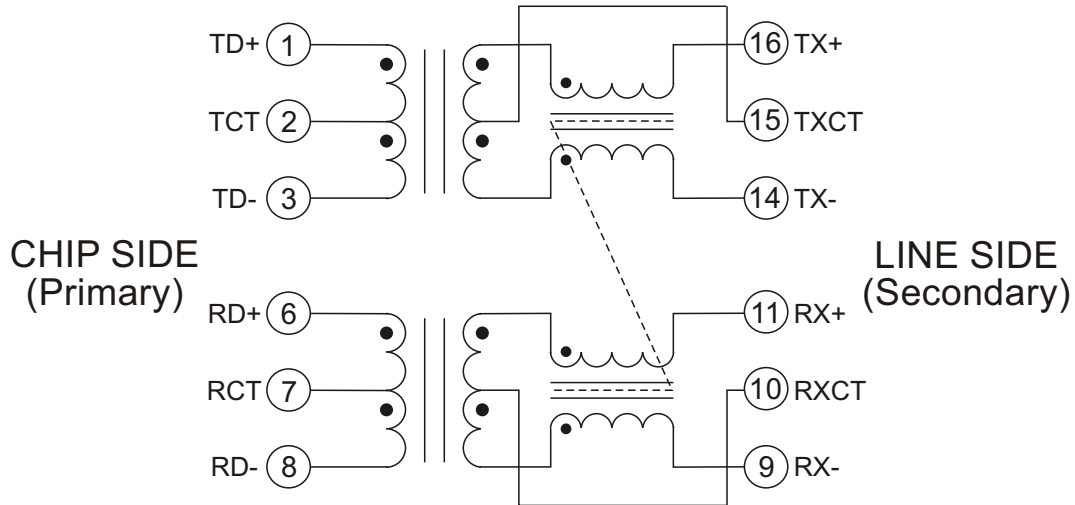
824-00229F





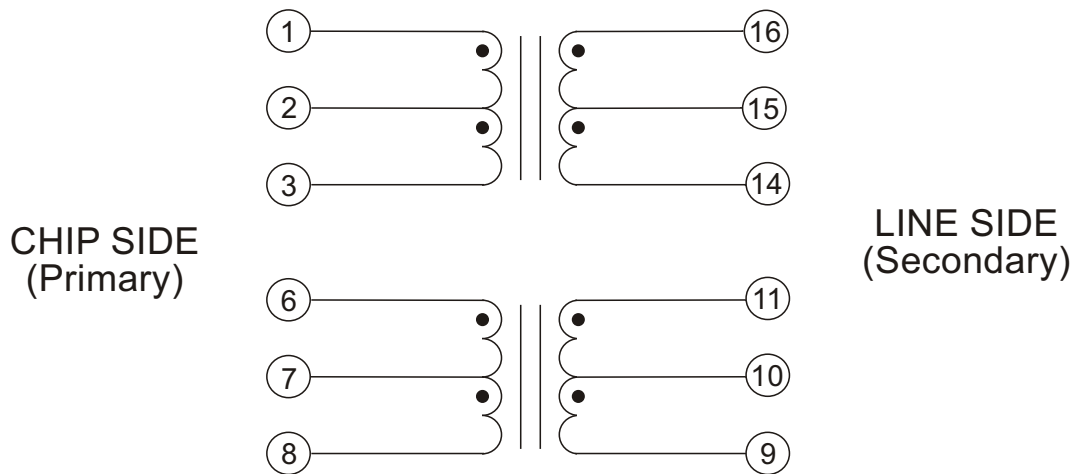
**SCHEMATICS**

824-00232F



**SCHEMATICS**

824-00247F



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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Enhanced crosstalk and return loss performance
-  Design to withstand IR-reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Allow migration of Gigabit 1000 Base-T without changing circuit board layout
-  Operating temperature -40°C to +85°C.
-  RoHS compliant

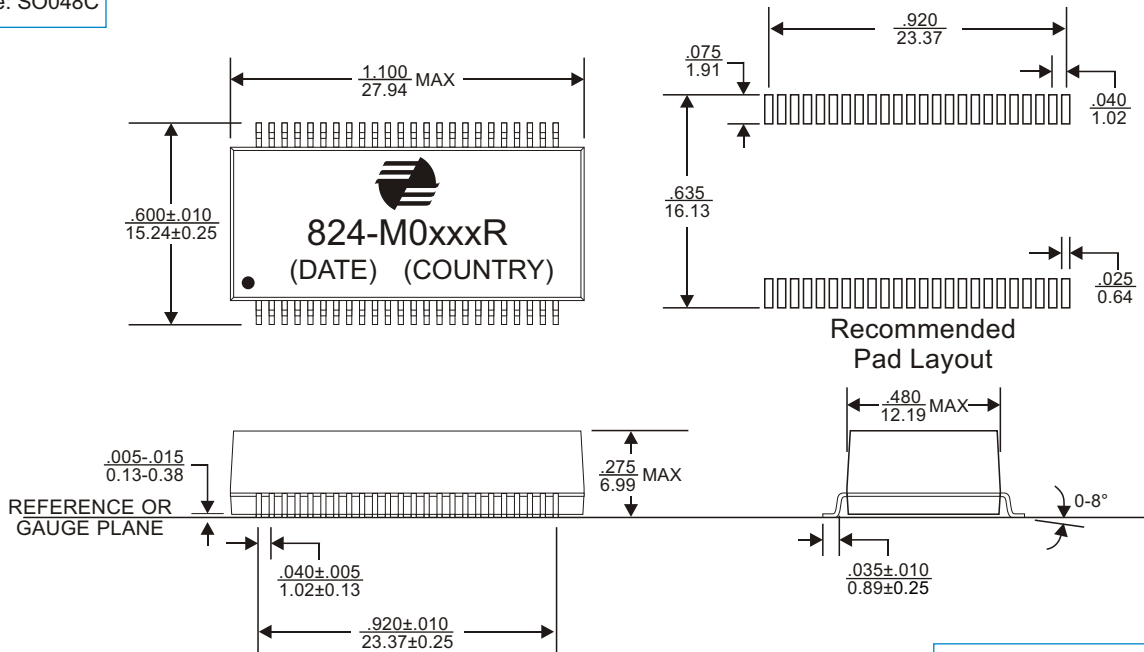


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)					CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz			
824-M0278R	1.4	16.0	14.4	13.1	12.0	10.0	33.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO048C



Weight (in gram)	: 4.6 typ.
Tape & Reel	: 300 / reel

**Notes:**

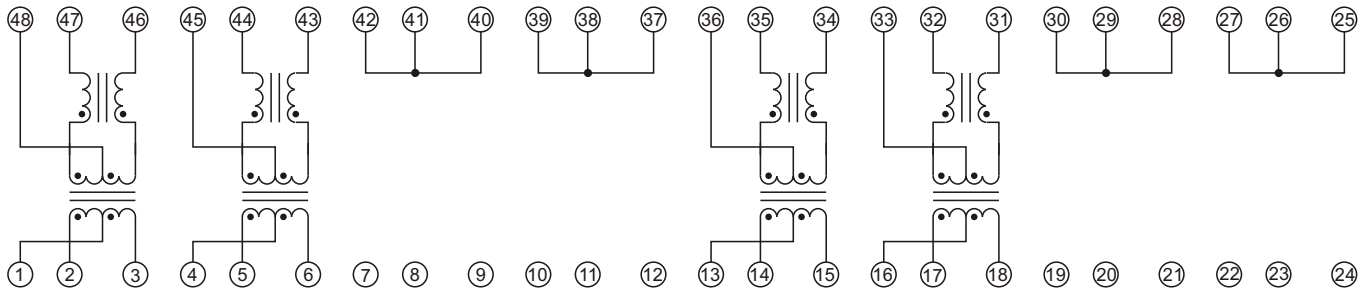
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.025}$ .



**SCHEMATICS**

824-M0278R

LINE SIDE  
(Secondary)



CHIP SIDE  
(Primary)

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Some models are UL60950 recognized
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0010R	1CT:1	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500
824-M0011R	1CT:1	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500
824-M0015R	2CT:1	1CT:1CT	0.5 Typ	18.0	14.4	13.5	12.0	30.0	32.0	1500
824-M0018R	2CT:1CT	1CT:1CT	0.5 Typ	18.0	14.4	13.5	12.0	35.0	32.0	1500
824-M0020R	1CT:1	1CT:1CT	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500
824-M0021R	1CT:1	1CT:1CT	1.0	18.0	14.4	13.5	12.0	33.0	35.0	1500
824-M0071R	1CT:1	1CT:1CT	1.1	18.0	15.5	13.5	12.0	35.0	32.0	1500
824-M0129R <sup>1</sup>	1CT:1CT	1CT:1CT	1.0	18.0	14.4	13.5	12.0	33.0	35.0	1500
824-M0169R <sup>1</sup>	1CT:1CT	1CT:1CT	1.0	18.0	14.4	13.5	12.0	33.0	35.0	1500
824-M0257R	1CT:1CT	1CT:1CT	1.0	18.0	15.5	13.5	12.0	33.0	35.0	1500

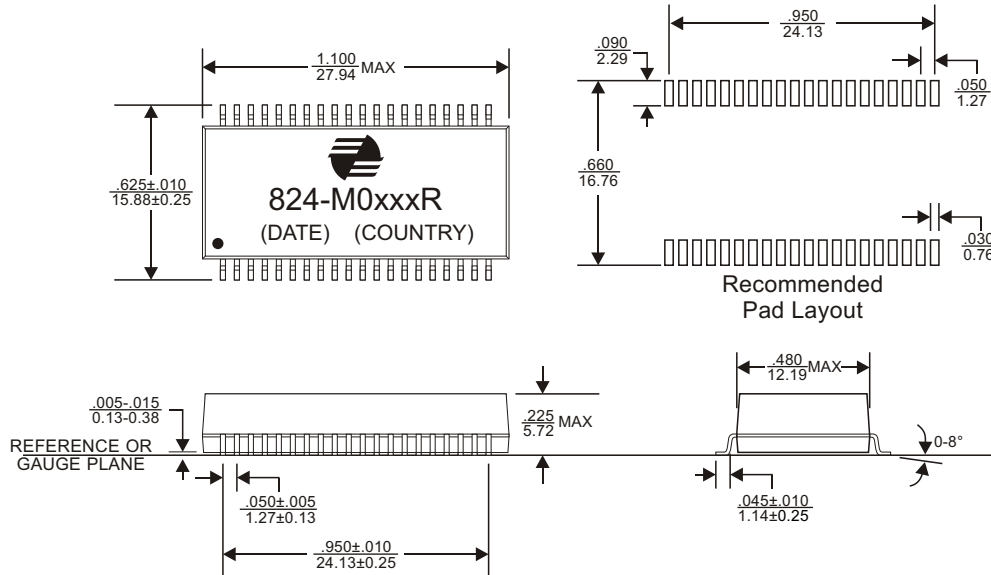
**Notes:**

1. Suitable for Auto MDI/MDIX applications.



**MECHANICAL DIMENSIONS**

Package: SO040A



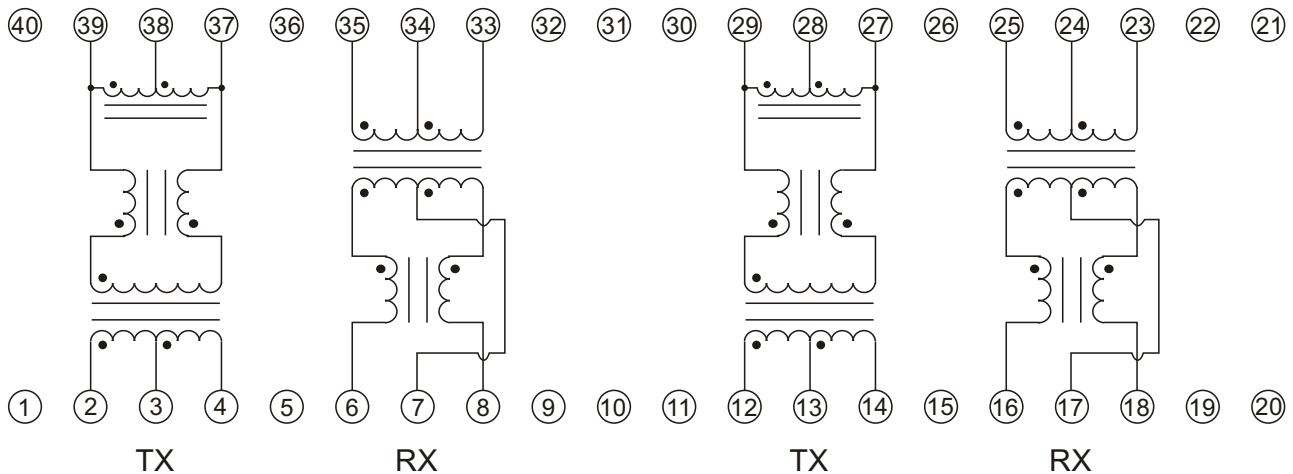
**Notes:**

- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 4.0 typ.
Tape & Reel	: 350 / reel

**SCHEMATICS**

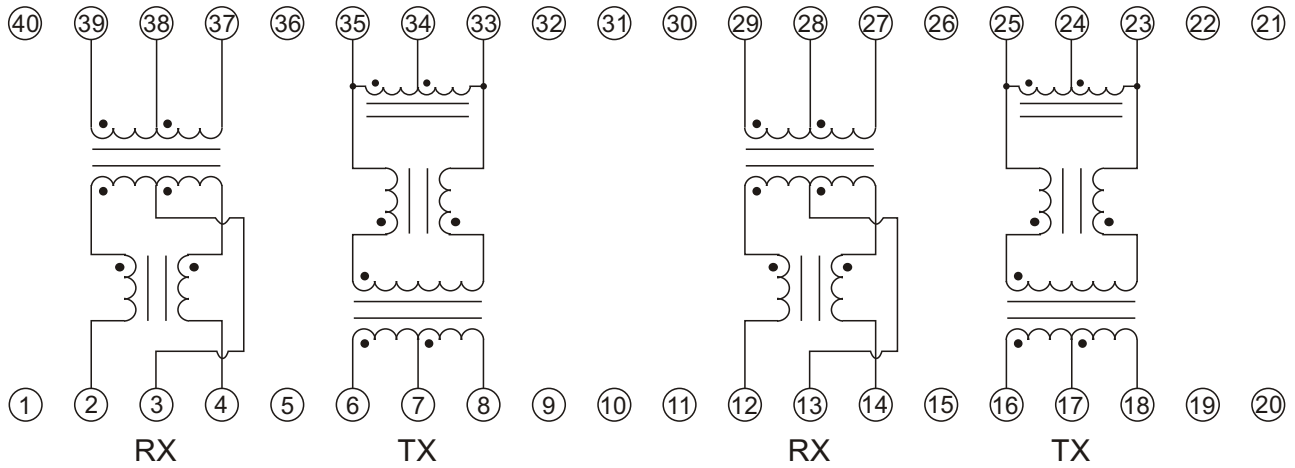
824-M0010R/ 824-M0015R





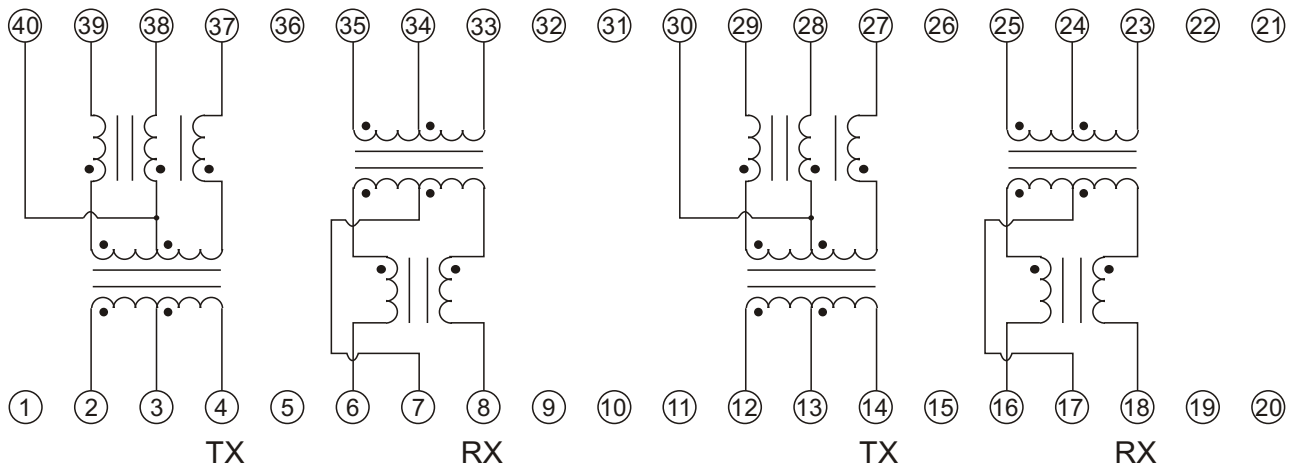
SCHEMATICS

824-M0011R



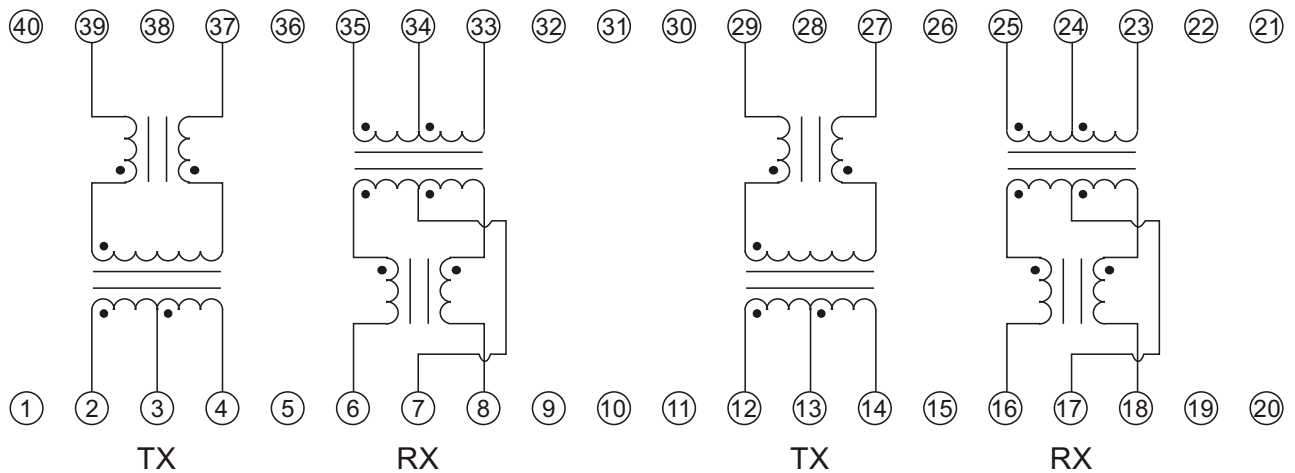
SCHEMATICS

824-M0018R



SCHEMATICS

824-M0021R

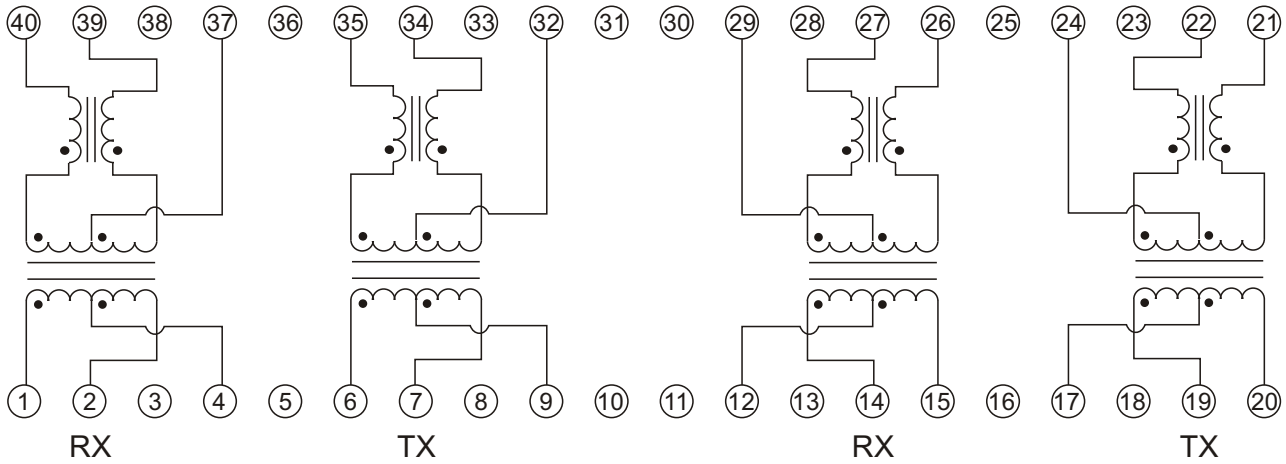






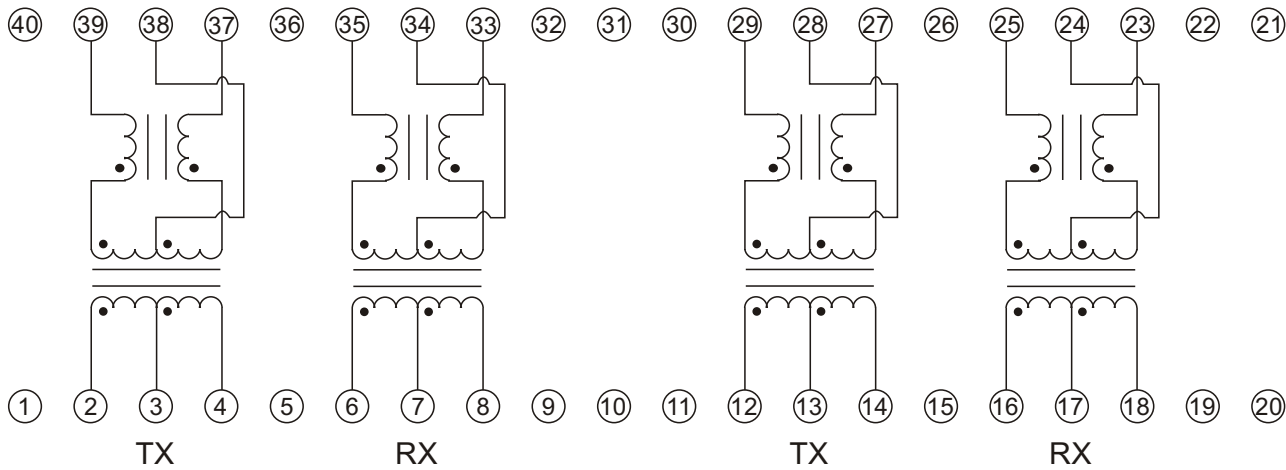
**SCHEMATICS**

824-M0129R



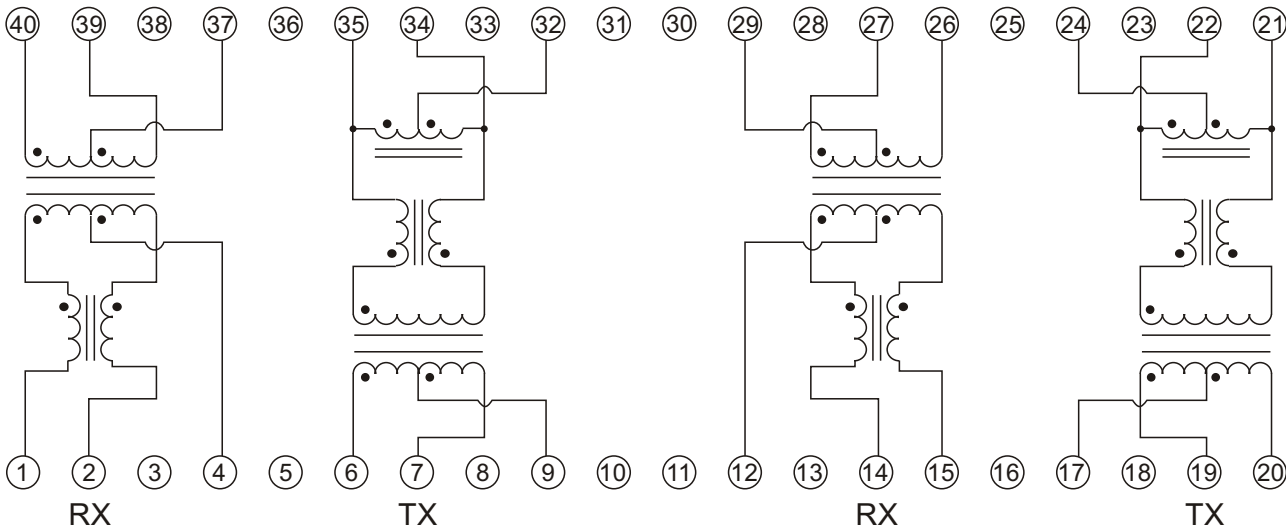
**SCHEMATICS**

824-M0169R



**SCHEMATICS**

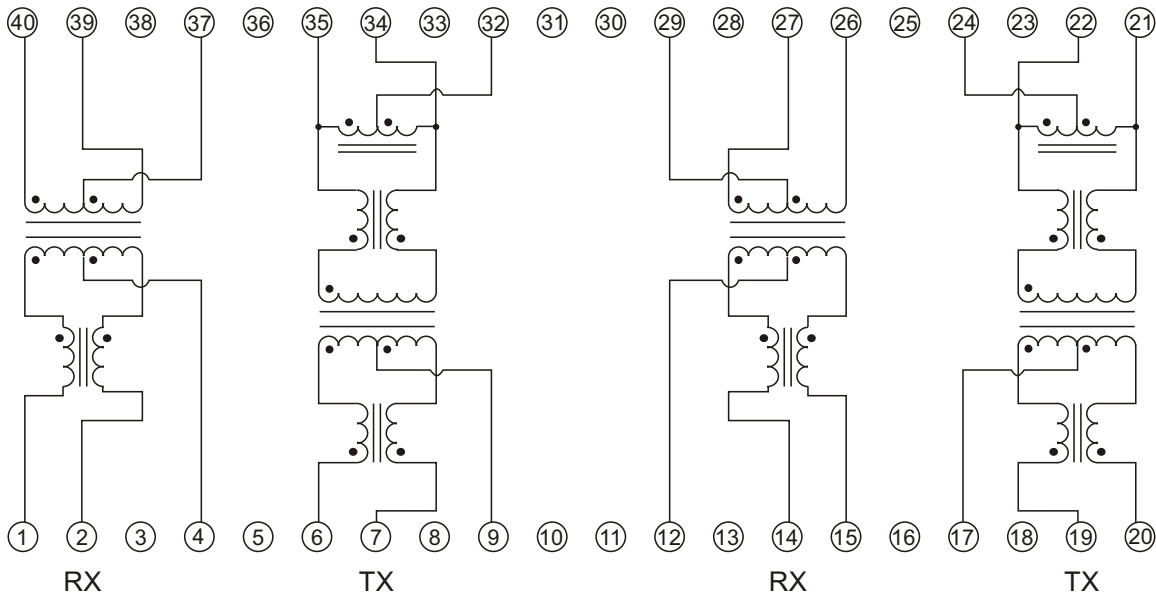
824-M0020R





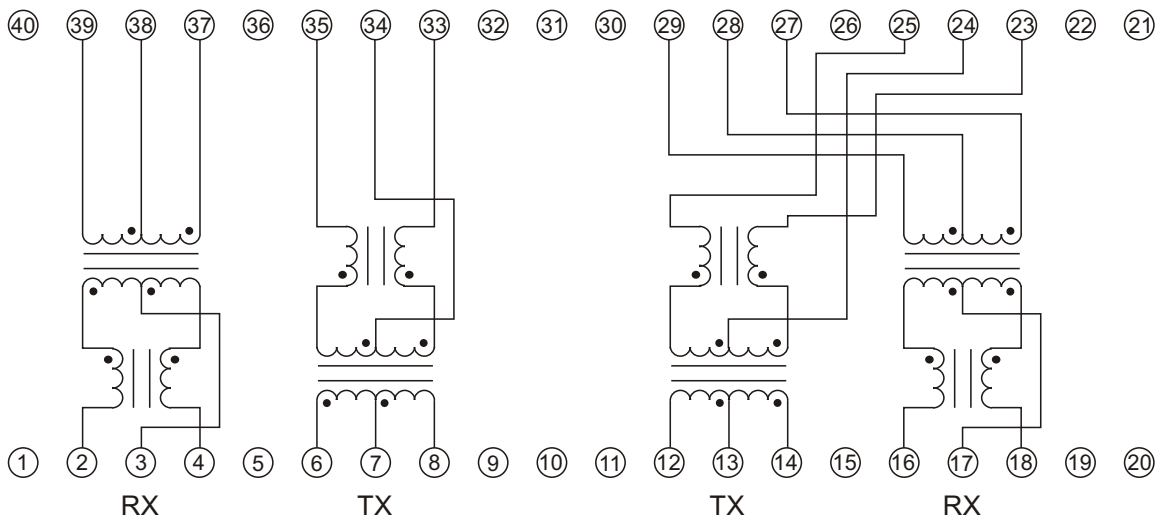
SCHEMATICS

824-M0071R



SCHEMATICS

824-M0257R



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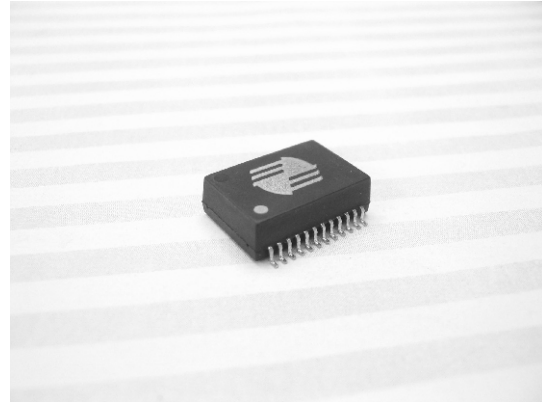
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

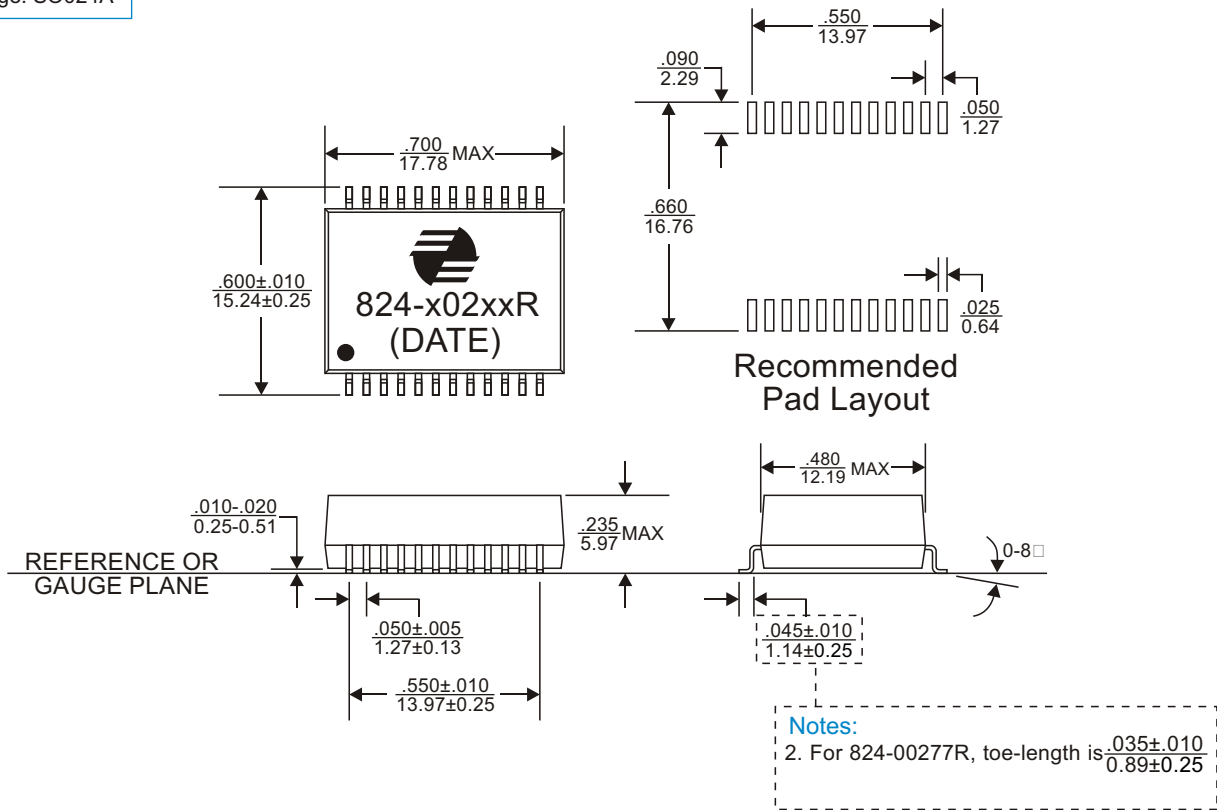
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)		Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	1-60MHz		
824-M0256R	1.0	18.0	14.4	13.1	12.0	37.0	25.0	33.0	1500
						.1-100MHz			
824-M0277R <sup>1,2</sup>	1.4	16.0	14.4	13.1	12.0	33.0		33.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C

**MECHANICAL DIMENSIONS**

Package: SO024A



**Notes:**

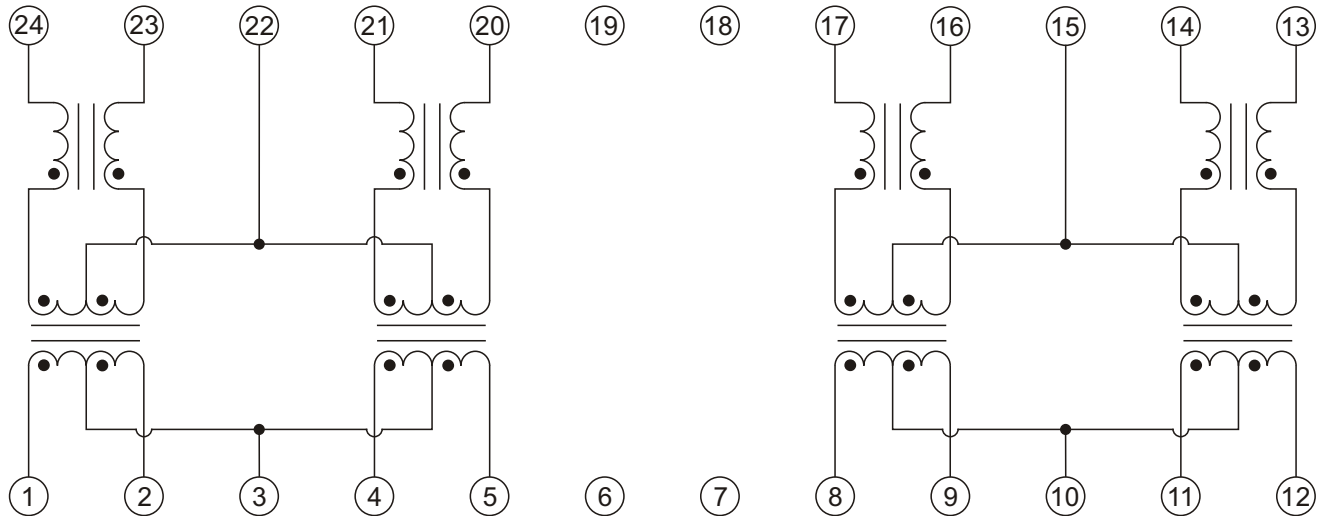
- All dimensions are specified in inches with higher precedence in inches.  
mm
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 2.4 typ.
Tape & Reel	: 450 / reel

**SCHEMATICS**

824-M0256R

**LINE SIDE (Secondary)**

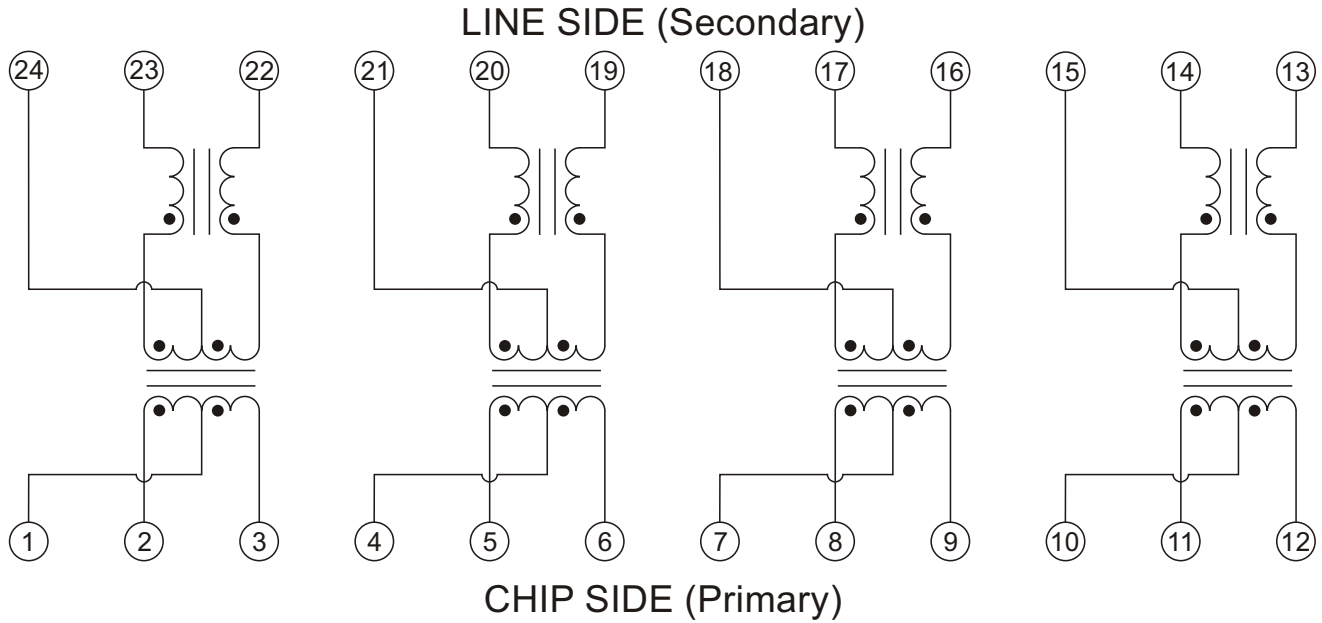


**CHIP SIDE (Primary)**



**SCHEMATICS**

824-00277R



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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
-  RoHS compliant

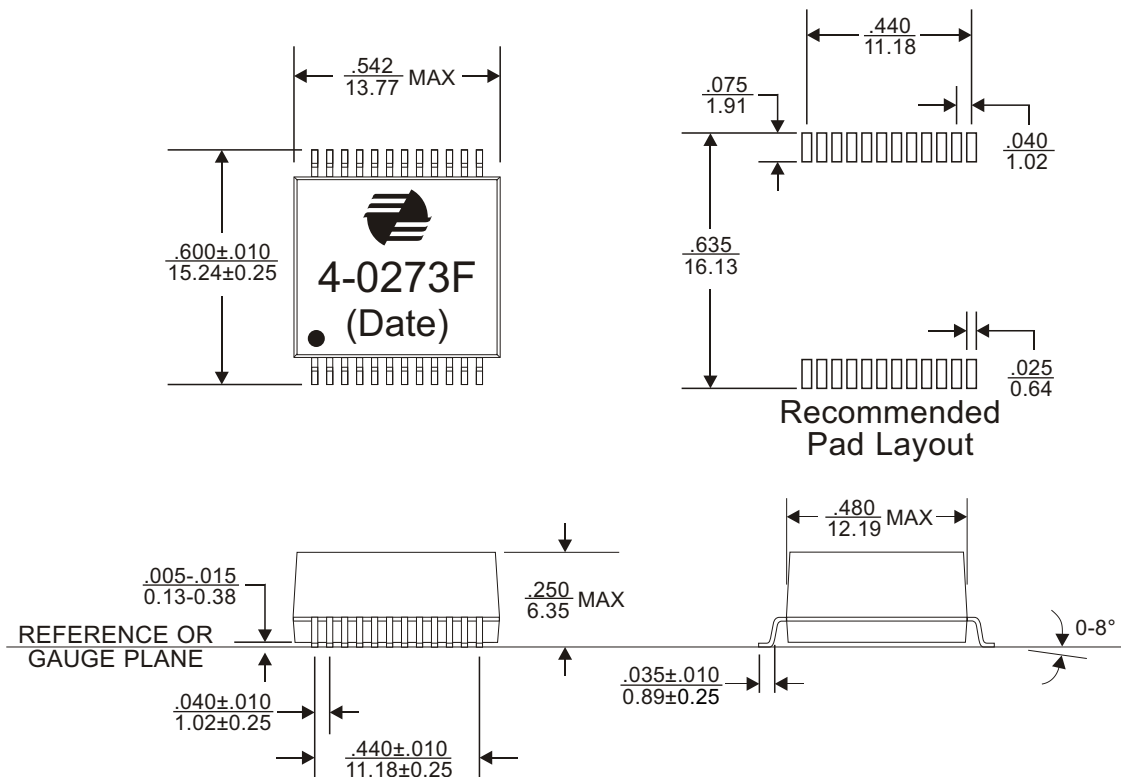


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)				Crosstalk (dB Min)	Hipot (Vrms)
		1-100MHz	2-30MHz	40MHz	50MHz	60-80MHz	2-30MHz	60MHz	100MHz		
824-00273F	1.0	16.0	13.5	11.5	10.0	40.0	33.0	28.0	21.5	31.0	1500

**MECHANICAL DIMENSIONS**

Package: SO024C



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

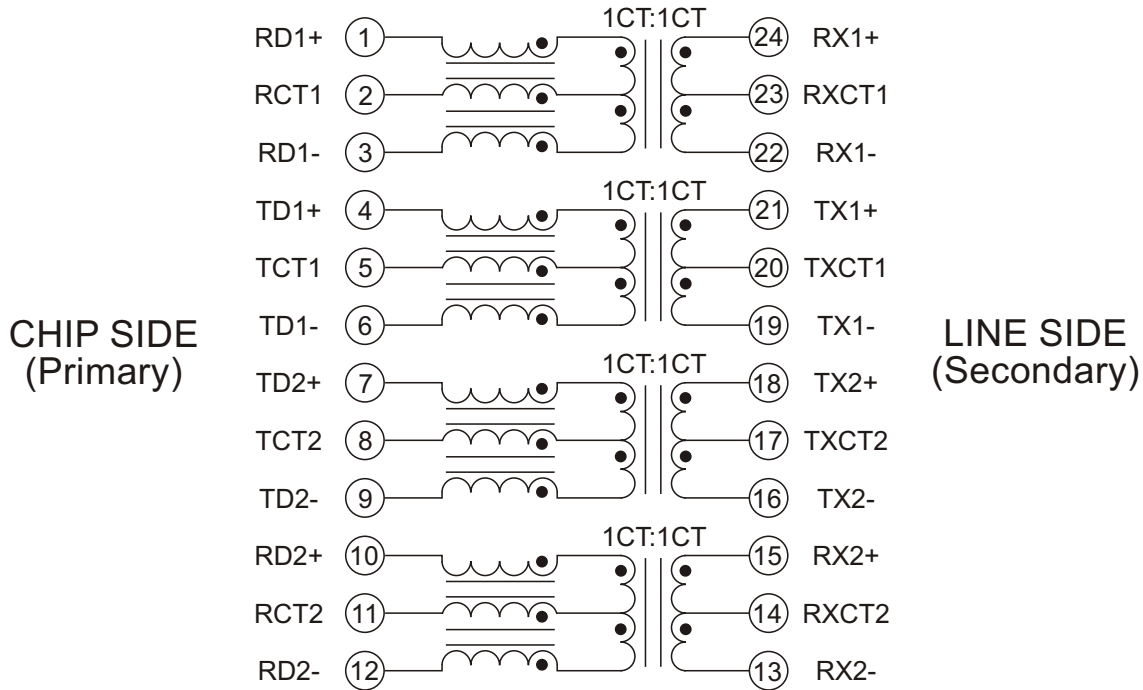
Weight (in gram)	:	2.4 typ.
Tape & Reel	:	450 / reel





**SCHEMATICS**

824-00273F



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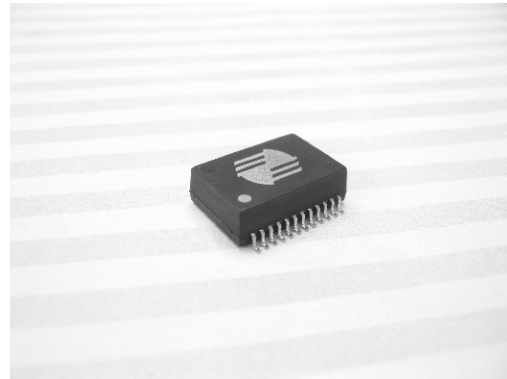
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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC Bias
-  Dual port design for IP phone or IP switch applications
-  350mA balanced DC line current capability
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C.
-  Some Models are UL60950 recognized
-  RoHS compliant



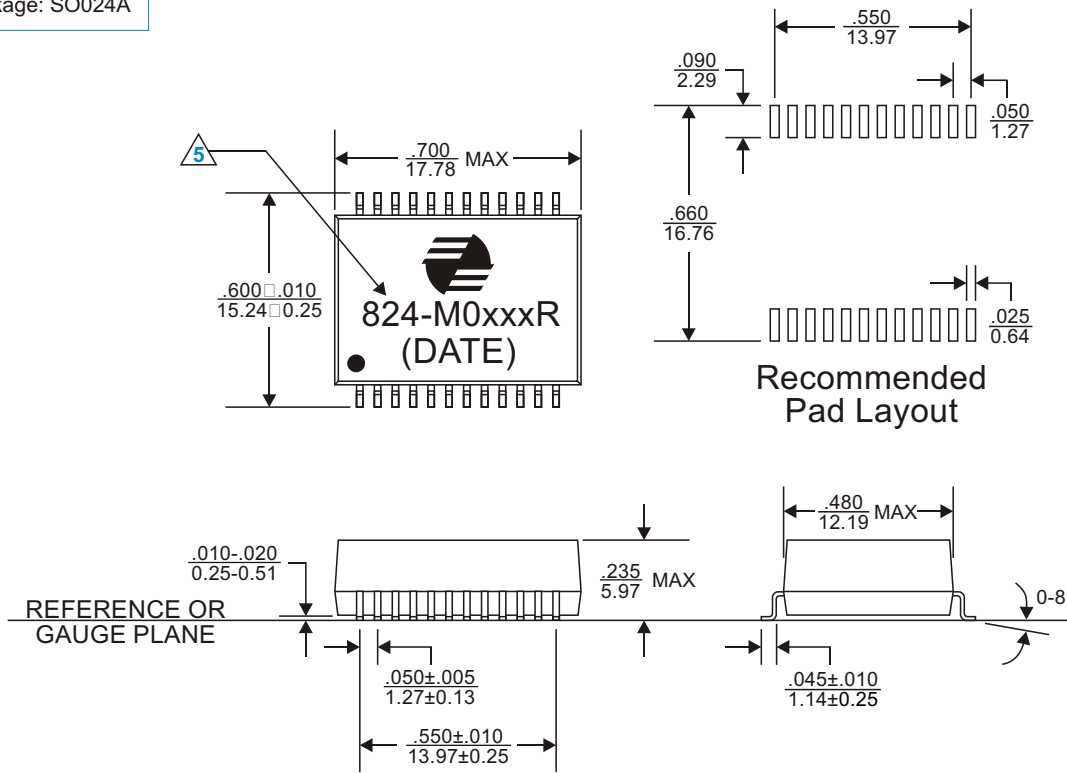
**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	.5-30MHz	40MHz	50MHz			
824-M0146R <sup>2</sup>	1CT:1CT	1CT:1CT	1.1	18.0	15.5	13.5	12.0	38.0	38.0	1500
824-M0205F <sup>2</sup>	1CT:1	1CT:1	1.2	18.0	15.5	13.5	12.0	40.0	40.0	1500
824-M0206R <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.2	18.0	15.5	13.5	12.0	38.0	38.0	1500

1. Operating temperature -40°C to +85°C.
2. Suitable for Auto MDI/MDIX applications.

**MECHANICAL DIMENSIONS**

Package: SO024A



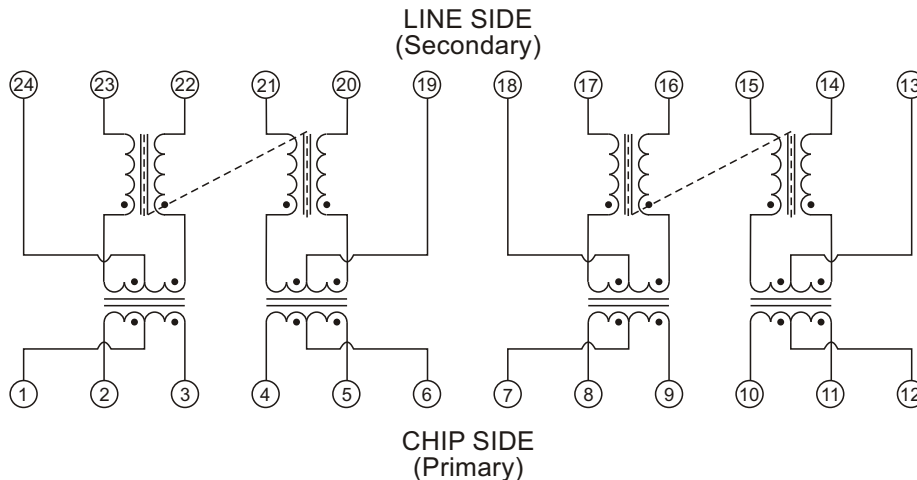
**Notes:**

- 3. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- 4. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
- 5. For 824-M0205 RoHS version, the part will be marked with "824-M00205F", instead of "824-M0205".

Weight (in gram)	: 2.4 typ.
Tape & Reel	: 450 / reel

**SCHEMATICS**

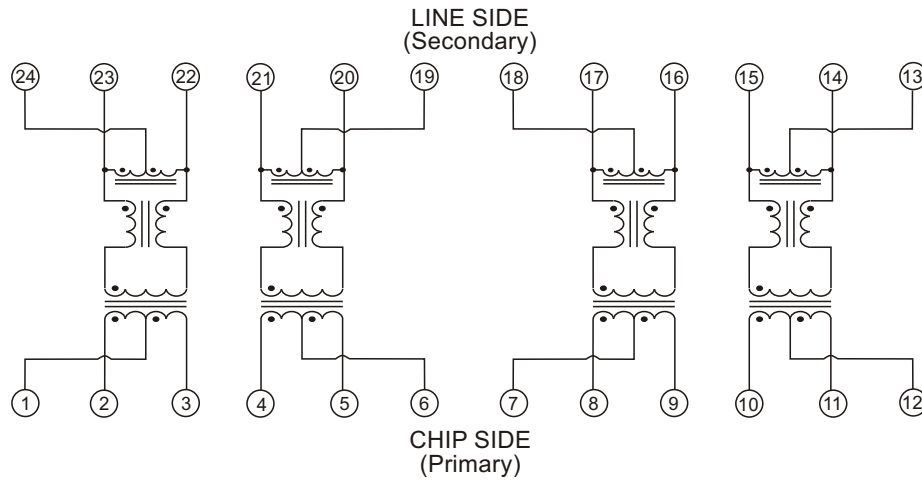
824-M0146R / 824-M0206R





**SCHEMATICS**

824-M0205F



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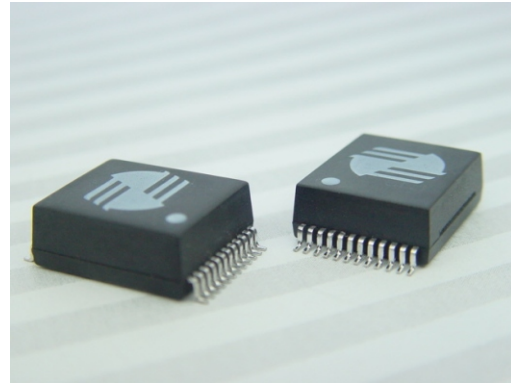
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- Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC Bias
- Dual port design for IP phone or IP switch applications
- 350 mA balanced DC line current capability
- Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
- Operating temperature 0°C to +70°C
- RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

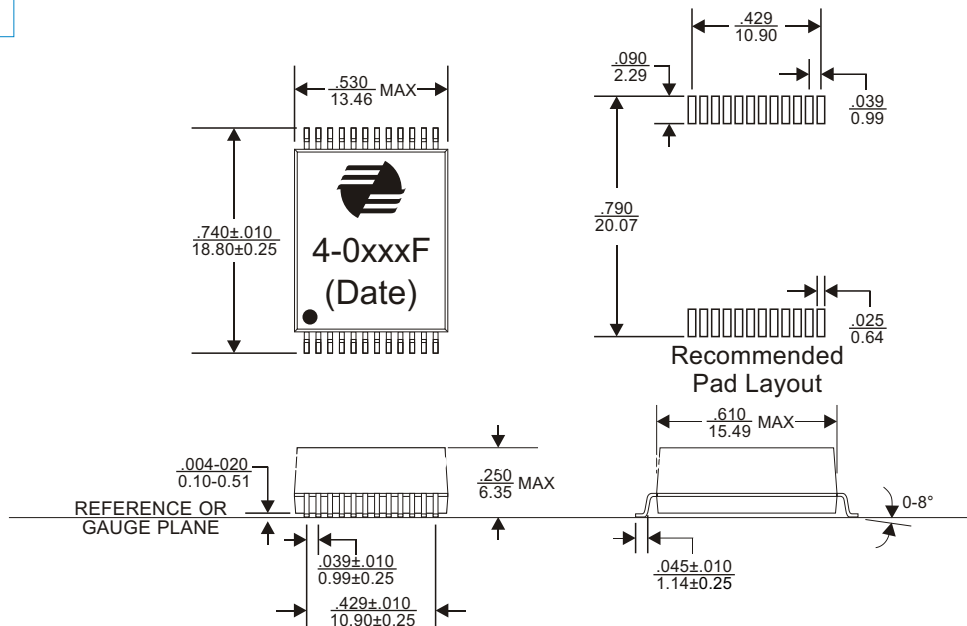
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)			Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz		60-80MHz	1-100MHz	30MHz	
824-00100F	1.2	16.0	14.0	13.0	12.0	35.0	43.0	37.0	33.0	1500
824-00102F	1.2	16.0	14.0	13.0	12.0	35.0	43.0	37.0	33.0	1500
824-00122R <sup>1</sup>	1.2	16.0	14.0	13.0	12.0	35.0	43.0	37.0	33.0	1500
824-00208F <sup>1</sup>	1.1	18.0	15.5	13.6	12.0	35.0	33.0	33.0	33.0	1500
824-00209F <sup>1,2</sup>	1.2	18.0	15.5	13.6	12.0	35.0	33.0	33.0	33.0	1500
824-00294F	1.4	16.0	14.0	13.0	12.0	35.0	43.0	37.0	33.0	1500
824-00295F <sup>2</sup>	1.4	16.0	14.0	13.0	12.0	35.0	43.0	37.0	33.0	1500

**Notes:**

1. Suitable for Auto MDI/MDIX applications.
2. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: S0024N



**Notes:**

3. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
4. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

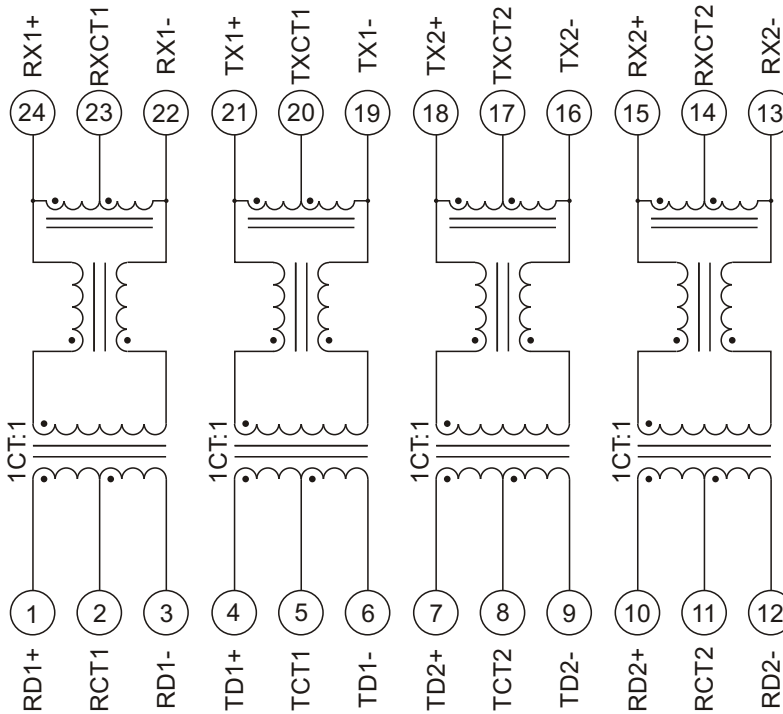
Weight (in gram)	: 2.5 typ.
Tape & Reel	: 450 / reel



**SCHEMATICS**

824-00122R

**LINE SIDE  
(Secondary)**

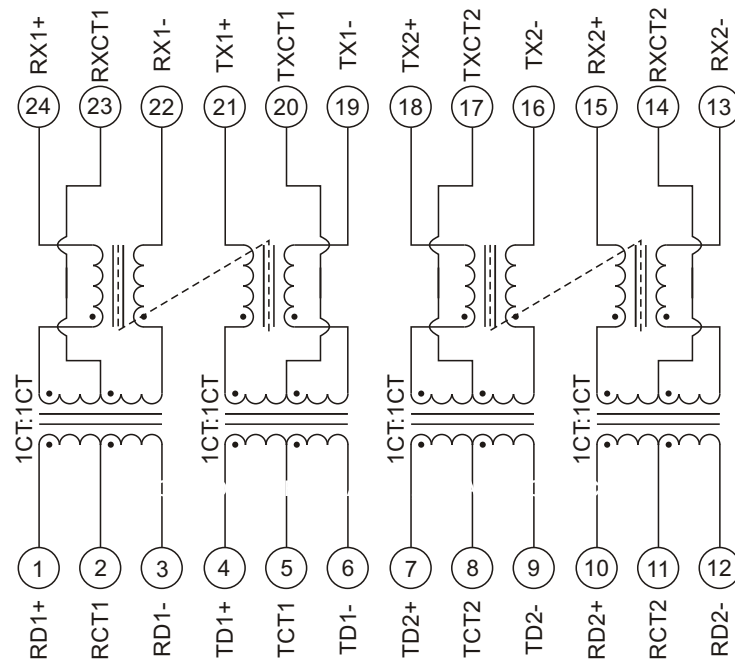


**CHIP SIDE  
(Primary)**

**SCHEMATICS**

824-00208F / 824-00209F

**LINE SIDE  
(Secondary)**



**CHIP SIDE  
(Primary)**

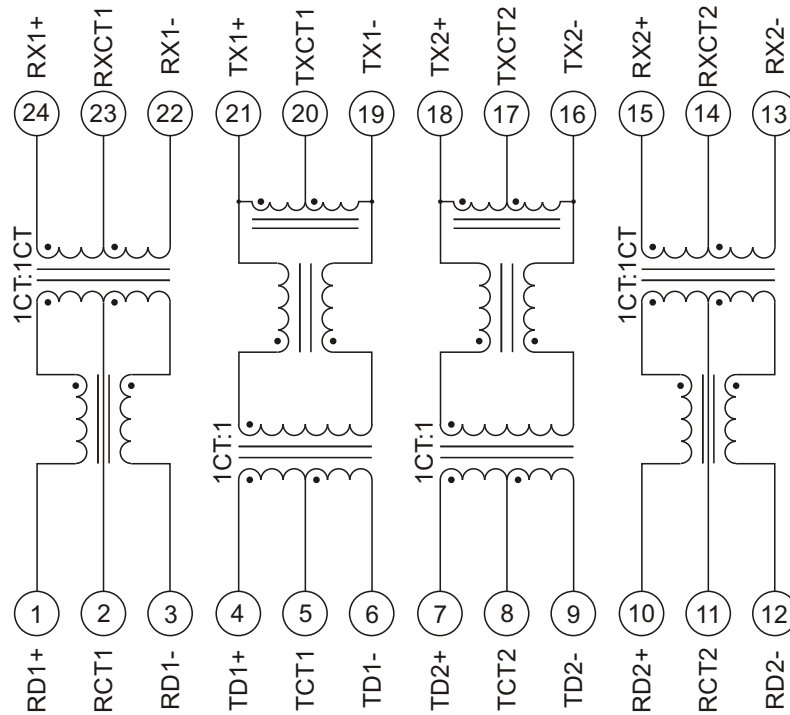


**SCHEMATICS**

824-00100F

**LINE SIDE  
(Secondary)**

**CHIP SIDE  
(Primary)**

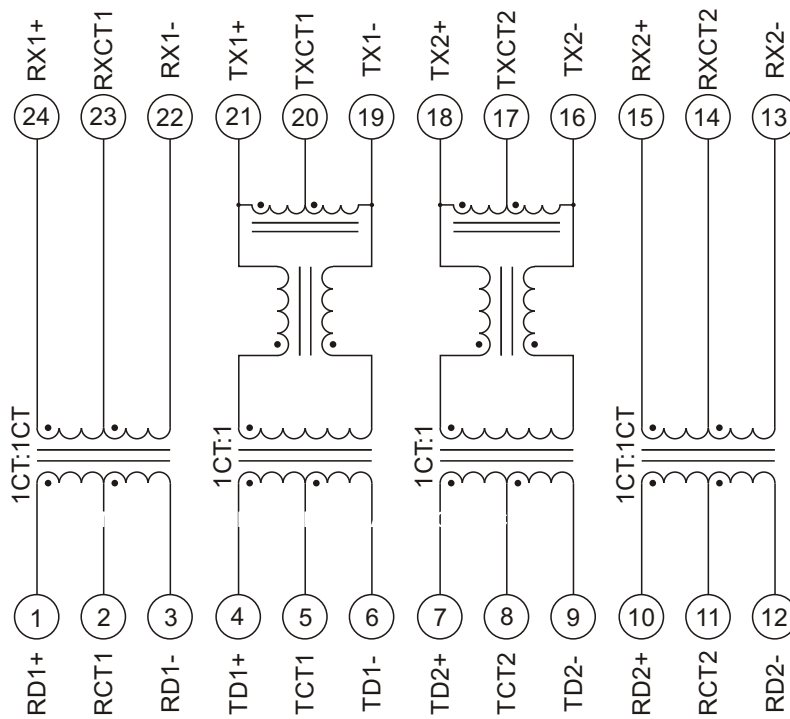


**SCHEMATICS**

824-00102F

**LINE SIDE  
(Secondary)**

**CHIP SIDE  
(Primary)**

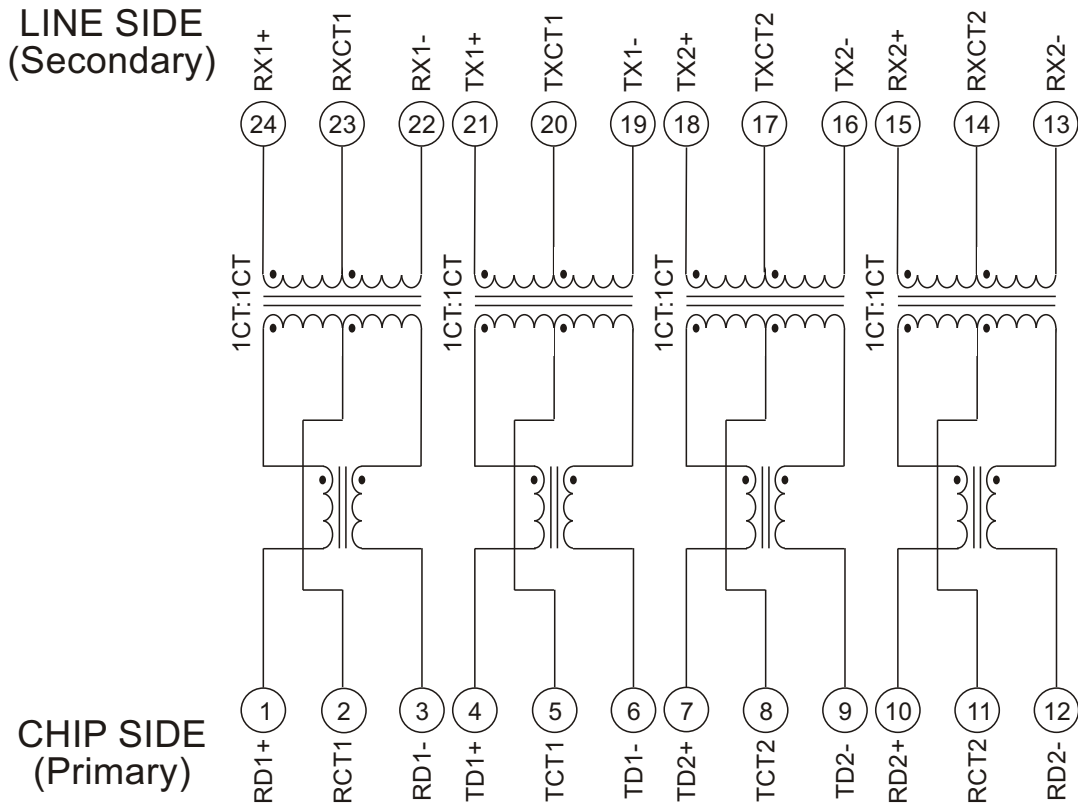






**SCHEMATICS**

824-00294F / 824-00295F



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-  Compliant with IEEE802.3af standard including 350uH OCL with 8mA DC Bias
-  Suitable for Mid-span or End-span PoE applications
-  Dual port design for IP phone or IP switch applications
-  350 mA balanced DC line current capability
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

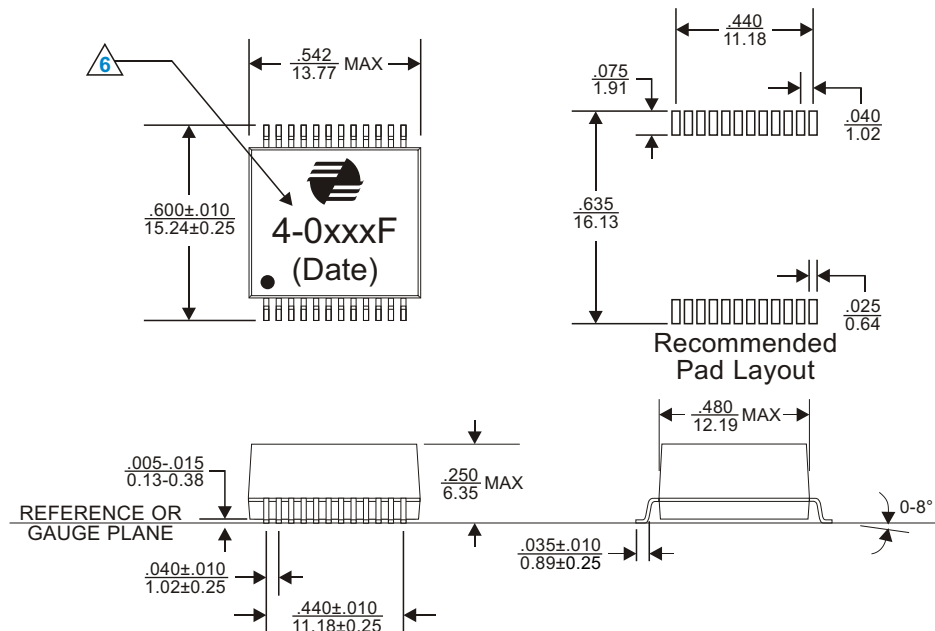
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR <sup>3</sup> (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00101F <sup>1</sup>	1.2	18.0	15.5	13.6	12.0	33.0	33.0	1500
824-00103R	1.2	16.0	14.0	13.0	12.0	30.0	33.0	1500
824-00207F <sup>1,2</sup>	1.2	18.0	15.5	13.6	12.0	33.0	33.0	1500

**Notes:**

1. Suitable for Auto MDI/MDIX applications.
2. Operating temperature -40°C to +85°C.
3. For 824-00103, CMRR is for transmit channels only.

**MECHANICAL DIMENSIONS**

Package: SO024C



**Notes:**

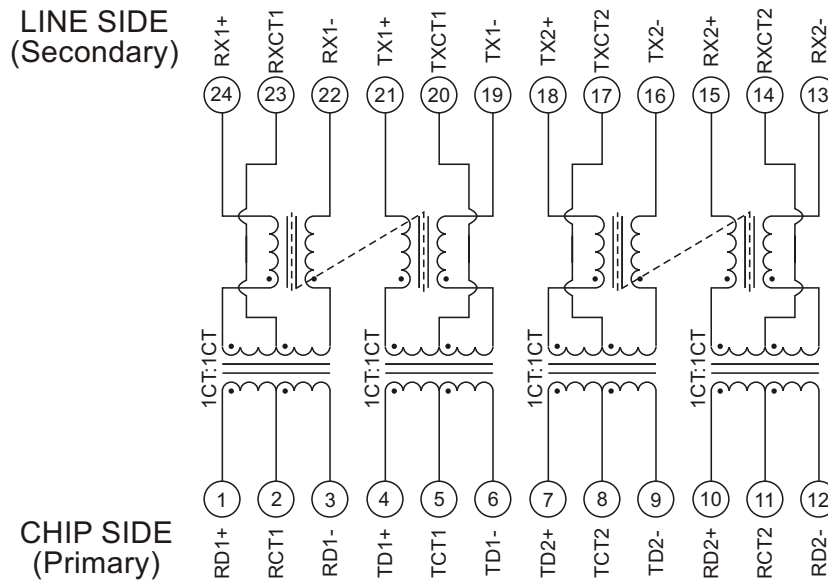
4. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
5. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
6. For 824-00103 RoHS version, the part will be marked with "4-0103R", instead of "4-0103".

Weight (in gram)	: 2.4 typ.
Tape & Reel	: 450 / reel



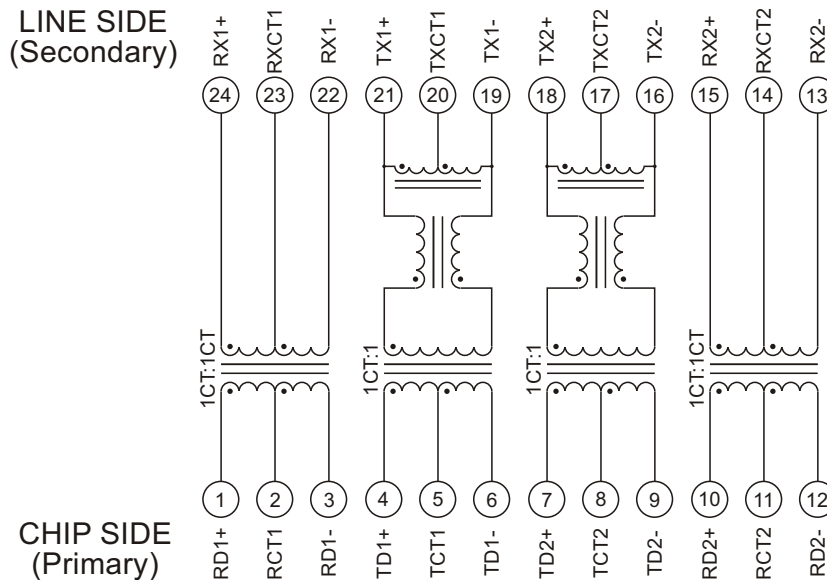
**SCHEMATICS**

824-00101F / 824-00207R



**SCHEMATICS**






824-00103F

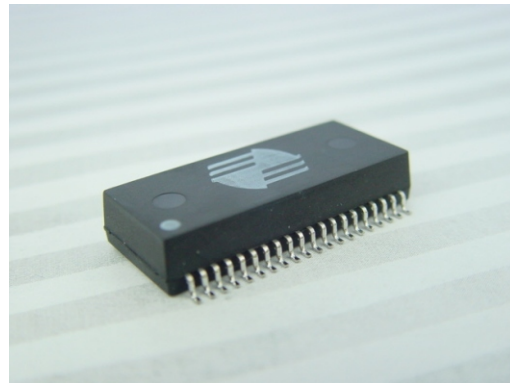


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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Some models are UL60950 recognized
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)		Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	.1-100MHz		
824-M0012R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0017R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0061R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0076R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0077R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0079R	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	32.0	1500	
824-M0133F <sup>1</sup>	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	35.0	1500	
824-M0170F <sup>1</sup>	1CT:1CT	1:1	1.1	18.0	15.5	13.5	12.0	30.0	35.0	1500	
	Tx	Rx	.1-100MHz	2-30MHz	40MHz	50MHz	60-80MHz	1-60MHz	60-200MHz	.1-100MHz	
824-M0116R <sup>2</sup>	1CT:1CT	1CT:1CT	1.0	18.0	14.4	13.1	12.0	37.0	25.0	33.0	1500
824-M0171F <sup>1,2</sup>	1CT:1CT	1CT:1CT	1.0	18.0	14.4	13.1	12.0	37.0	25.0	33.0	1500
824-M0240R	1CT:1CT	1CT:1CT	1.0	18.0	14.4	13.1	12.0	37.0	25.0	33.0	1500

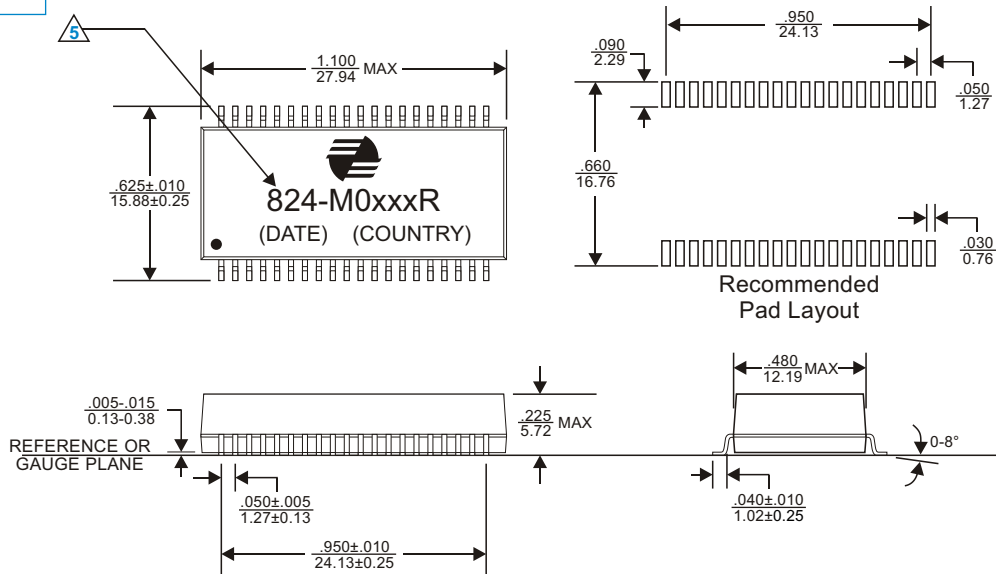
**Notes:**

1. Operating temperature -40°C to +85°C.
2. Suitable for Auto MDI/MDIX applications.



**MECHANICAL DIMENSIONS**

Package: SO040A



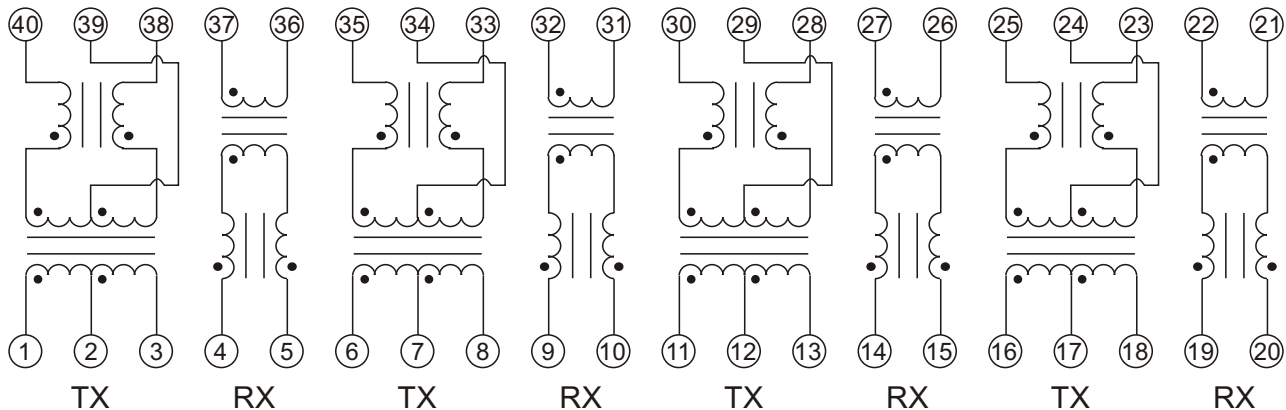
**Notes:**

- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .
- For 824-M0133/824-M0170/824-M0171 RoHS versions, the part will be marked with "824-M0xxxF", instead of "824-M0xxx".

Weight (in gram)	: 4.0 typ.
Tape & Reel	: 350 / reel

**SCHEMATICS**

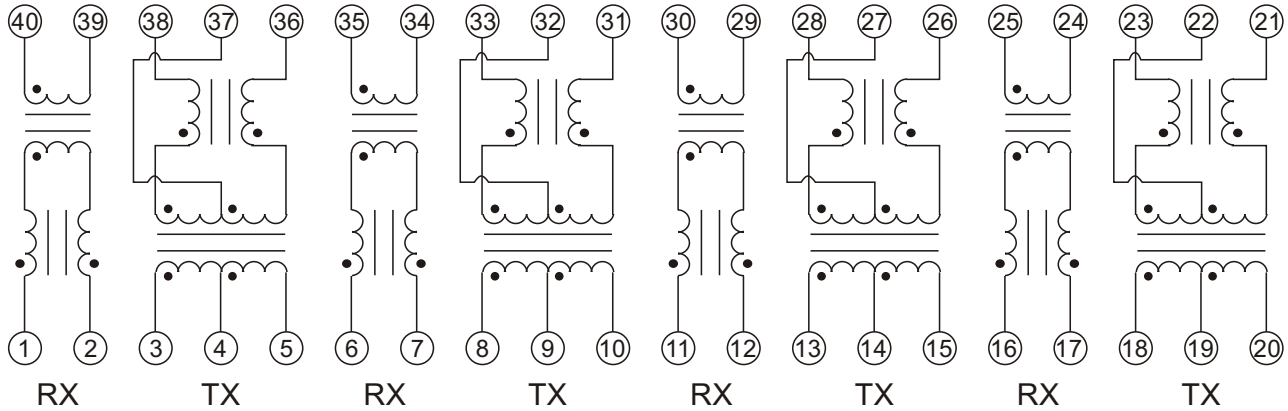
824-M0012R / 824-M0133F





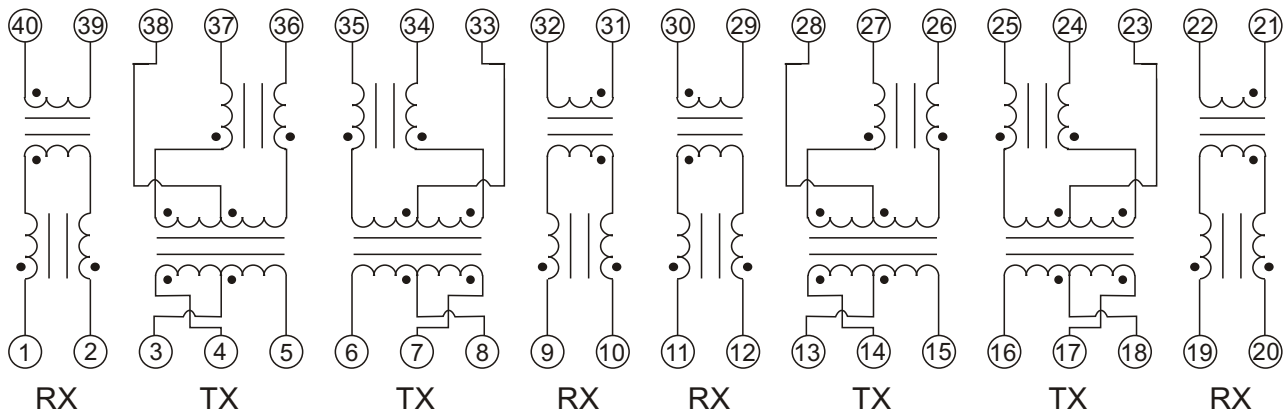
**SCHEMATICS**

824-M0017R



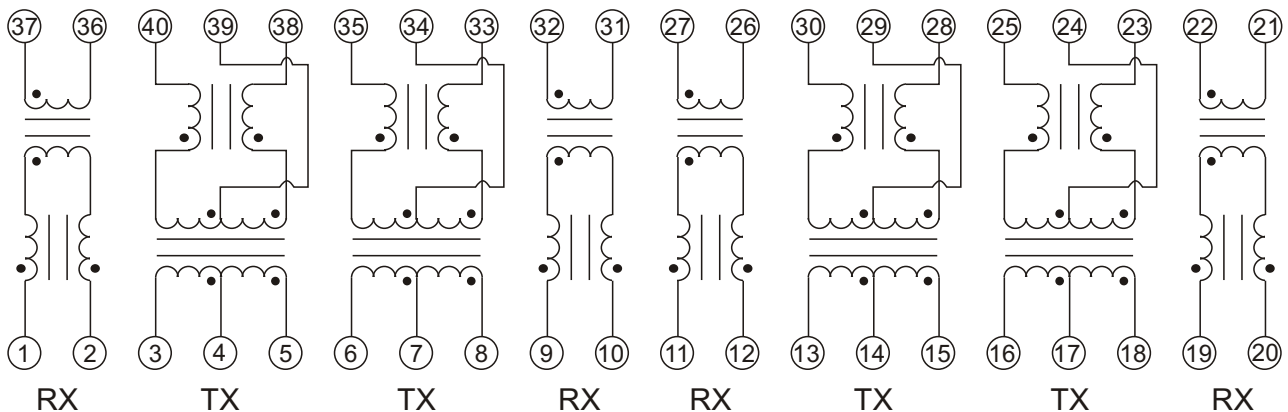
**SCHEMATICS**

824-M0061R / 824-M0170F



**SCHEMATICS**

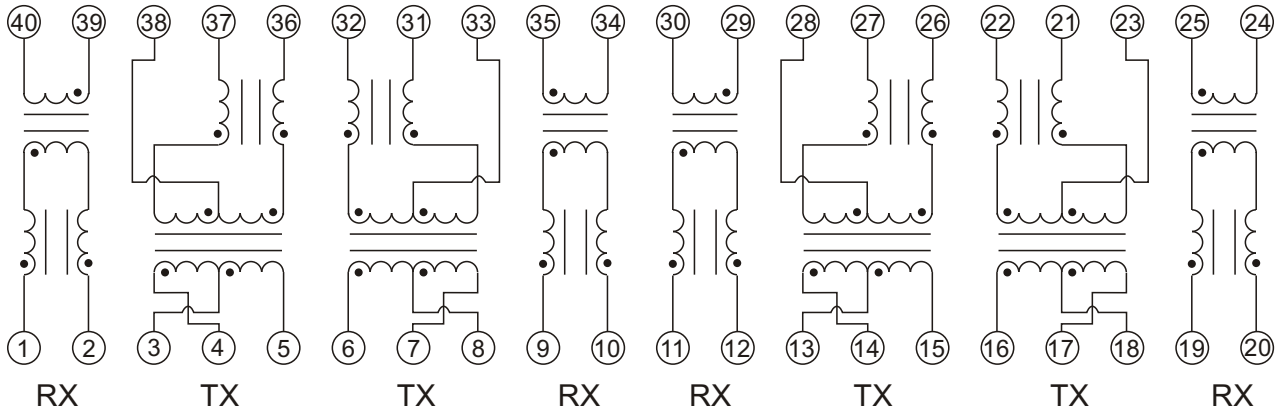
824-M0076R





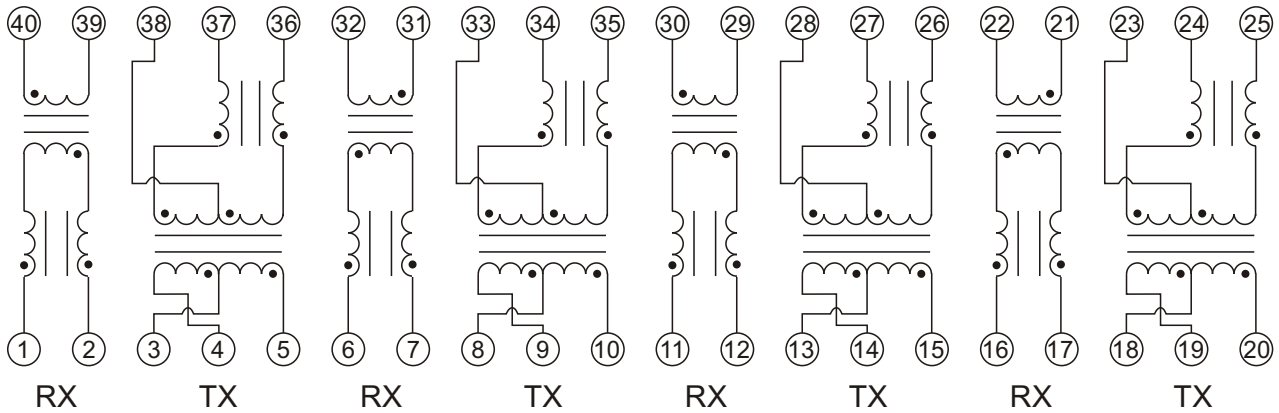
**SCHEMATICS**

824-M0077R



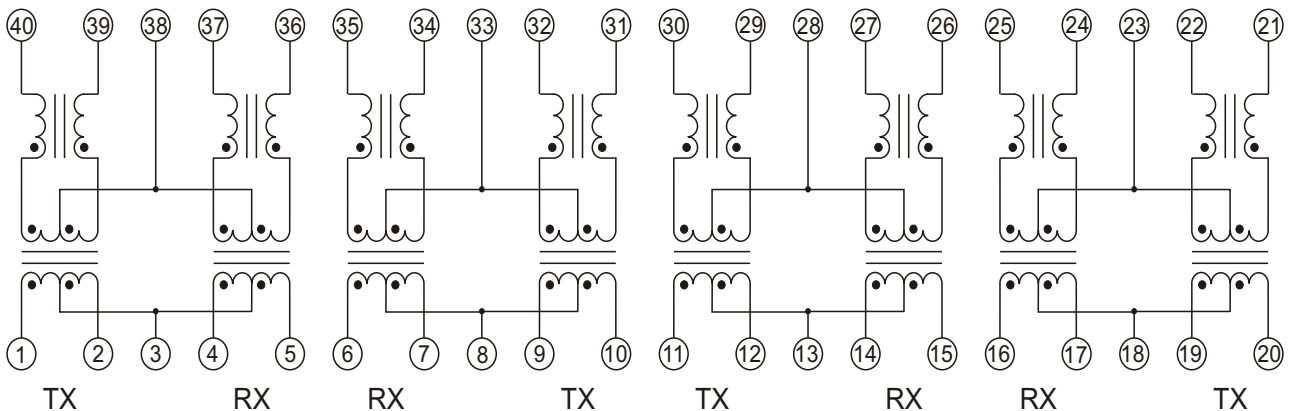
**SCHEMATICS**

824-M0079R



**SCHEMATICS**

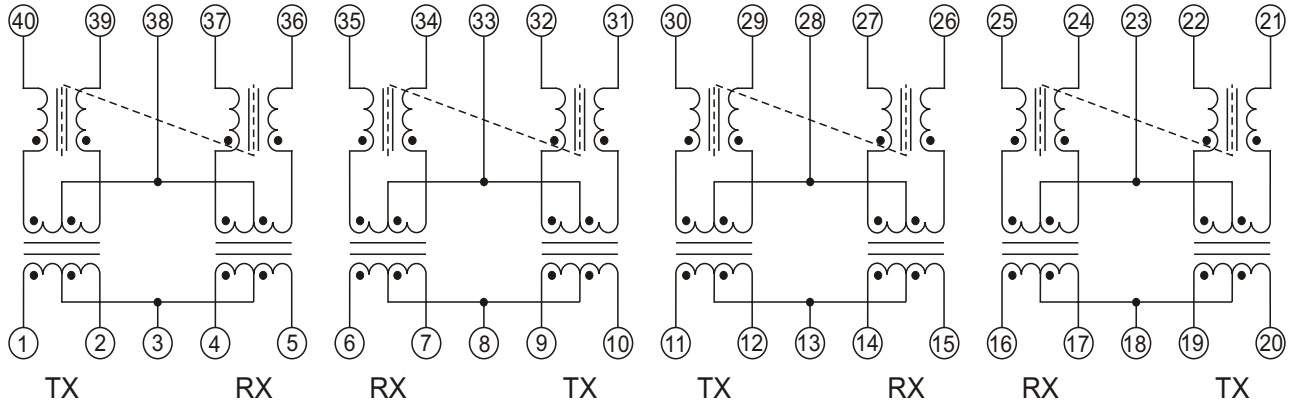
824-M0116R / 824-M0171F





SCHEMATICS

824-M0240R



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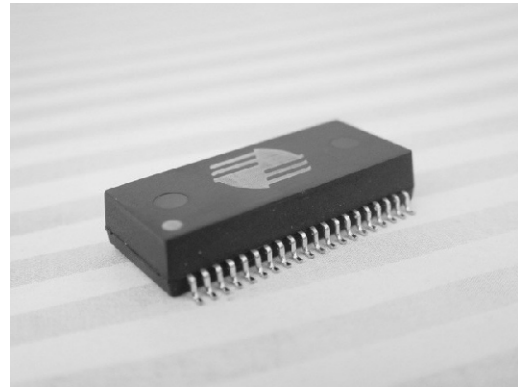
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC Bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Some models are UL60950 recognized
-  RoHS compliant

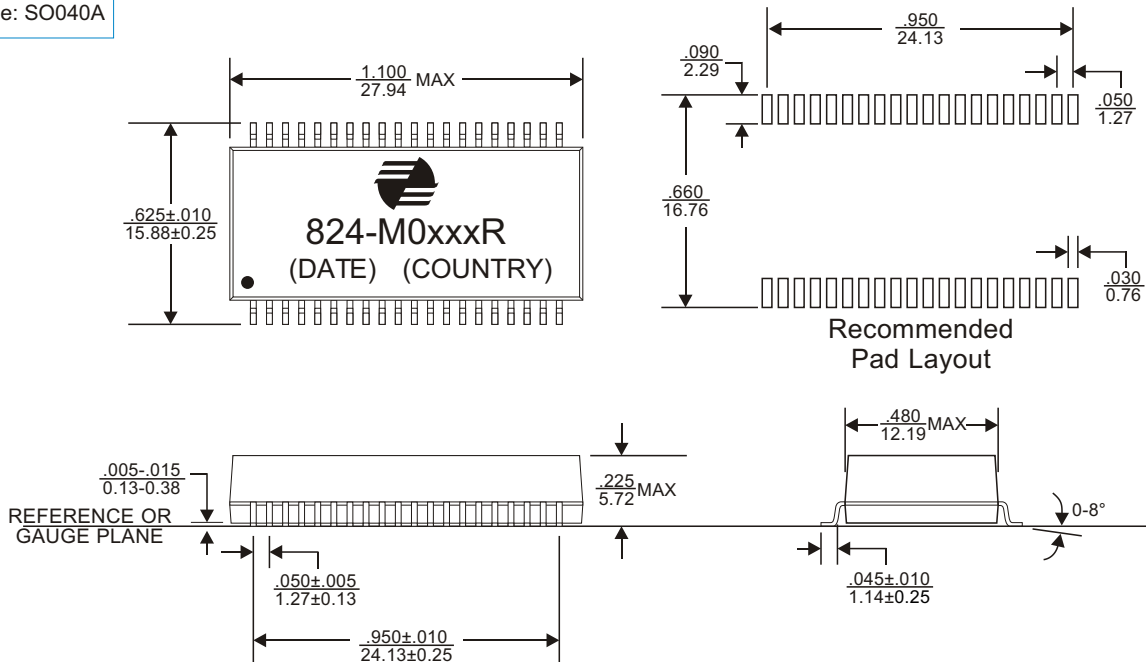


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Turns Ratio		Insertion Loss (dB Typ)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0002R	2CT:1CT	1:1	0.5	18.0	15.5	13.5	12.0	30.0	32.0	1500
824-M0016R	2CT:1CT	1:1	0.5	18.0	15.5	13.5	12.0	30.0	32.0	1500
824-M0025R	2CT:1CT	1:1	0.5	18.0	15.0	13.5	12.0	30.0	32.0	1500
824-M0082R	1.41CT:1CT	1:1	0.5	18.0	16.0	14.0	12.0	30.0	32.0	1500
824-M0244R	1.25CT:1CT	1:1	0.5	18.0	15.5	13.5	12.0	30.0	32.0	1500

**MECHANICAL DIMENSIONS**

Package: SO040A



**Notes:**

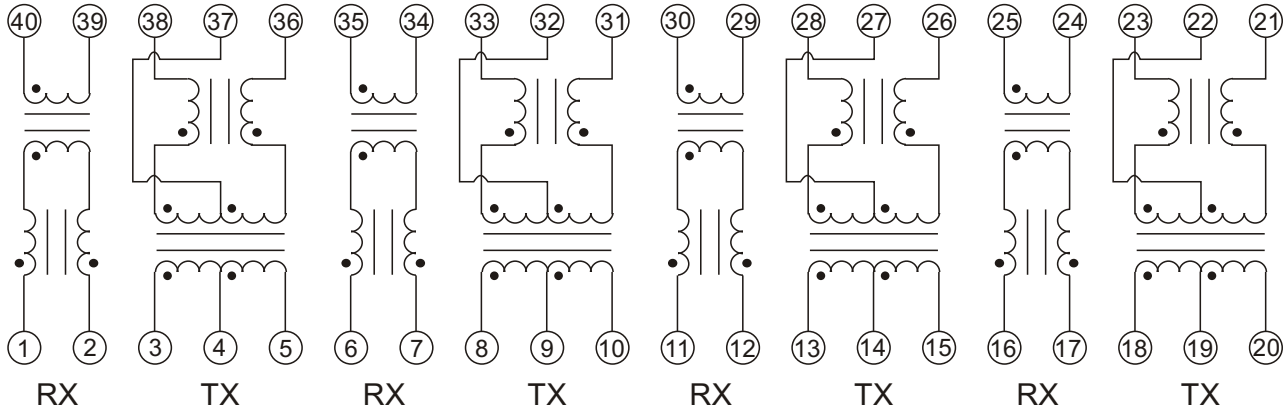
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 4.0 typ.
Tape & Reel	: 350 / reel



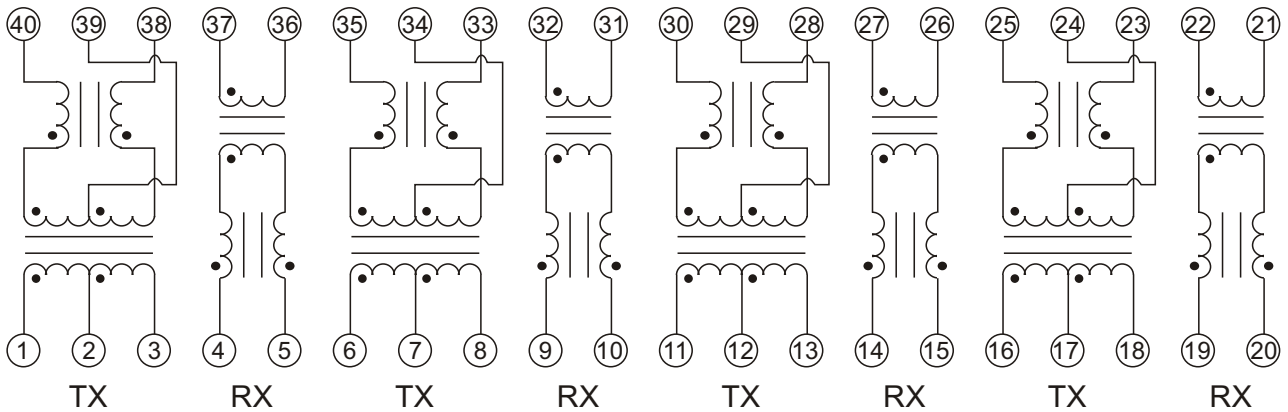
**SCHEMATICS**

824-M0002R



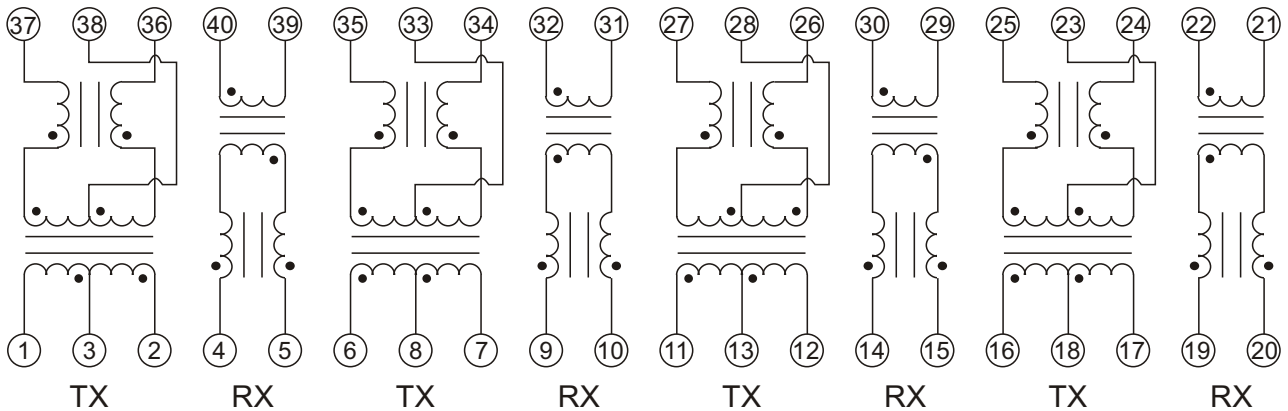
**SCHEMATICS**

824-M0016R



**SCHEMATICS**

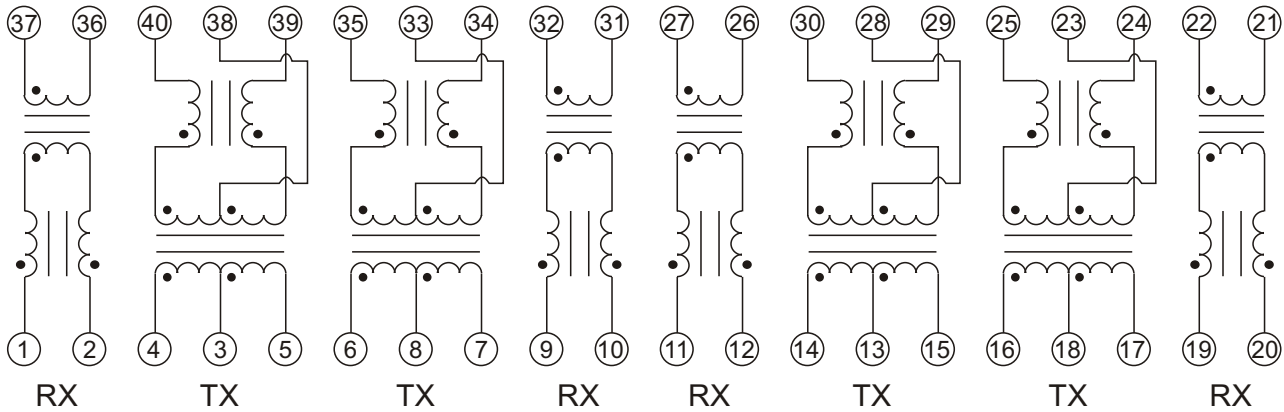
824-M0025R





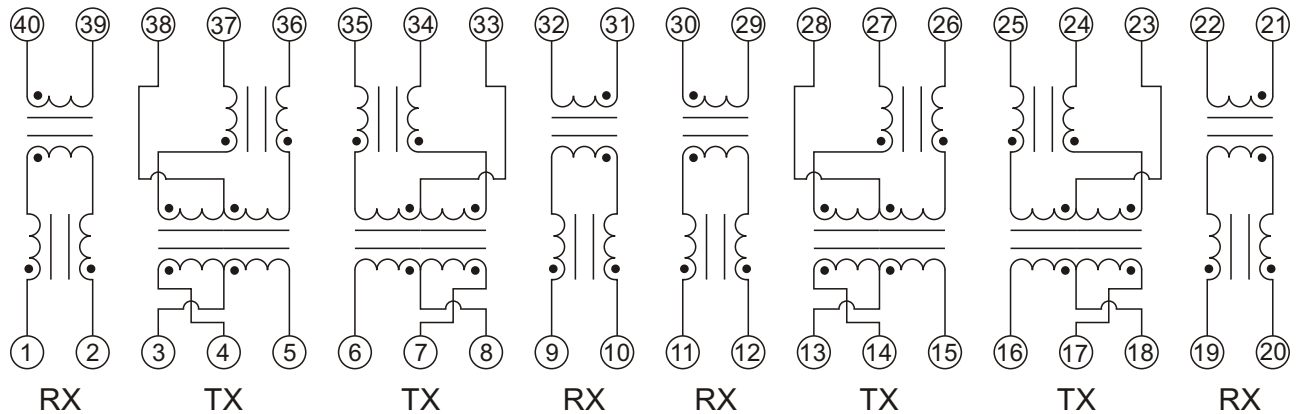
**SCHEMATICS**

824-M0082R



**SCHEMATICS**

824-M0244R



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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Excellent crosstalk and return loss performance
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  Symmetrical TX and RX channels suitable for Auto MDI/MDIX applications
-  Some models are UL60950 recognized
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)		Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	.1-200MHz		
824-M0124R	1.0	18.0	14.4	13.1	12.0	35.0		35.0	1500
824-M0187R <sup>1</sup>	1.0	18.0	14.4	13.1	12.0	27.0		33.0	1500
						DM-CMRR			
	.1-100MHz	2-30MHz	40MHz	50MHz	60-80MHz	1-60MHz	60-200MHz	1-100MHz	
824-M0313R <sup>1</sup>	1.4	18.0	14.4	13.1	12.0	37.0	25.0	33.0	1500

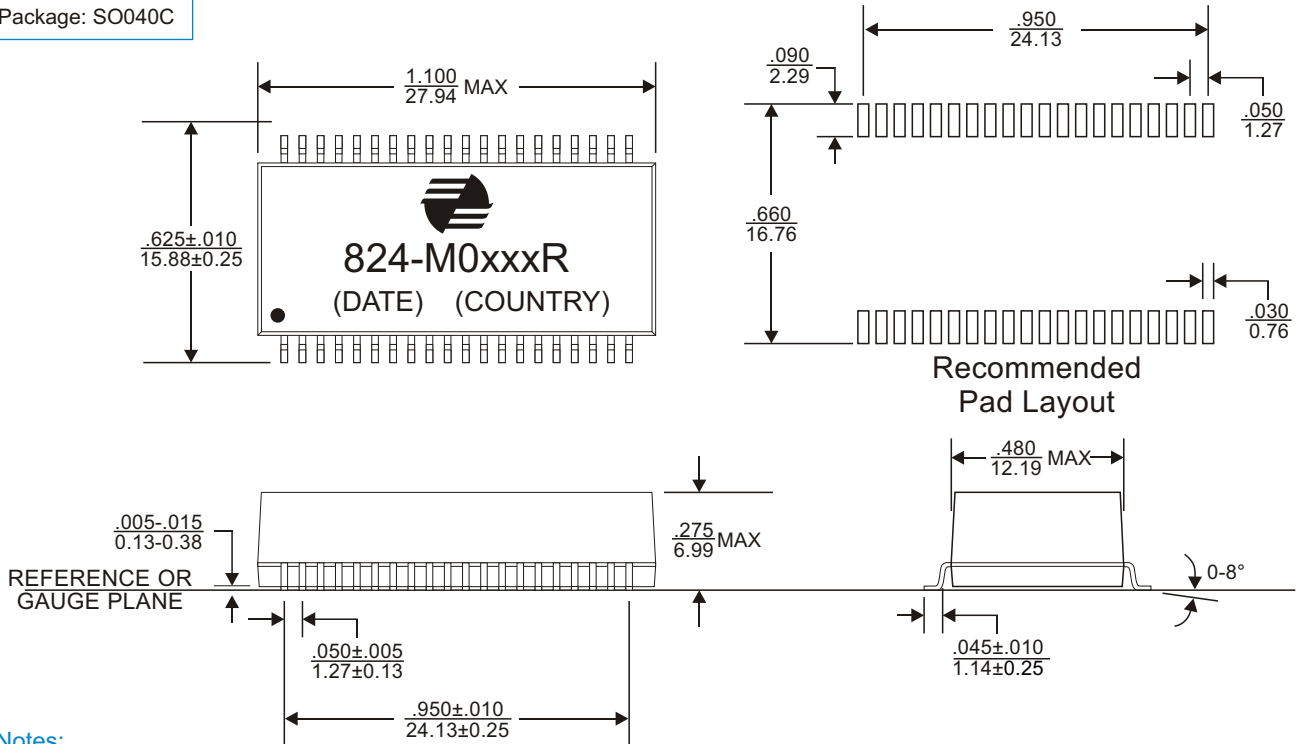
**Notes:**

1. Operating temperature -40°C to +85°C.



**MECHANICAL DIMENSIONS**

Package: SO040C



**Notes:**

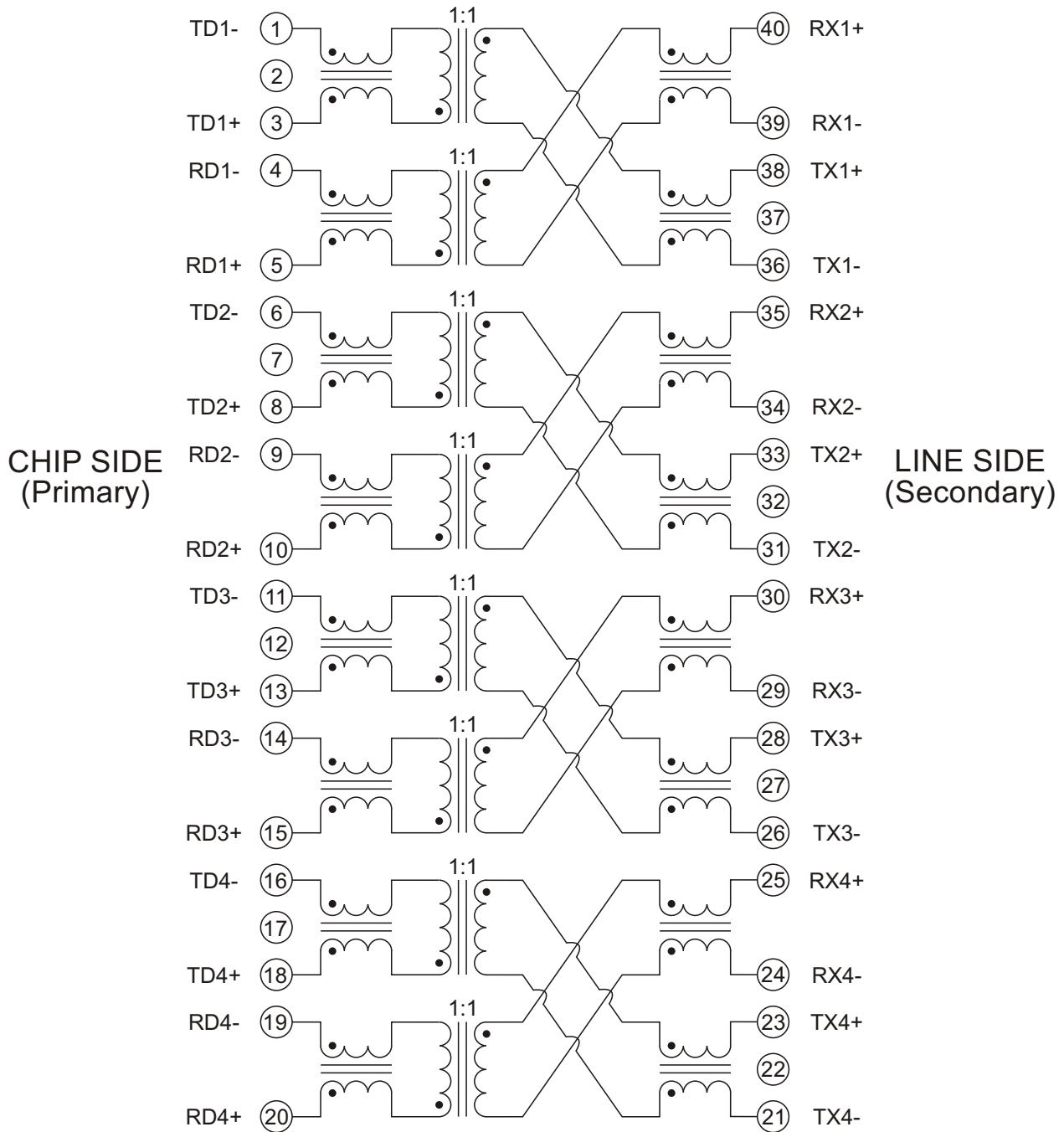
- All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
- Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	4.6 typ.
Tape & Reel	:	300 / reel



SCHMATICS

824-M0124R / 824-M0187R

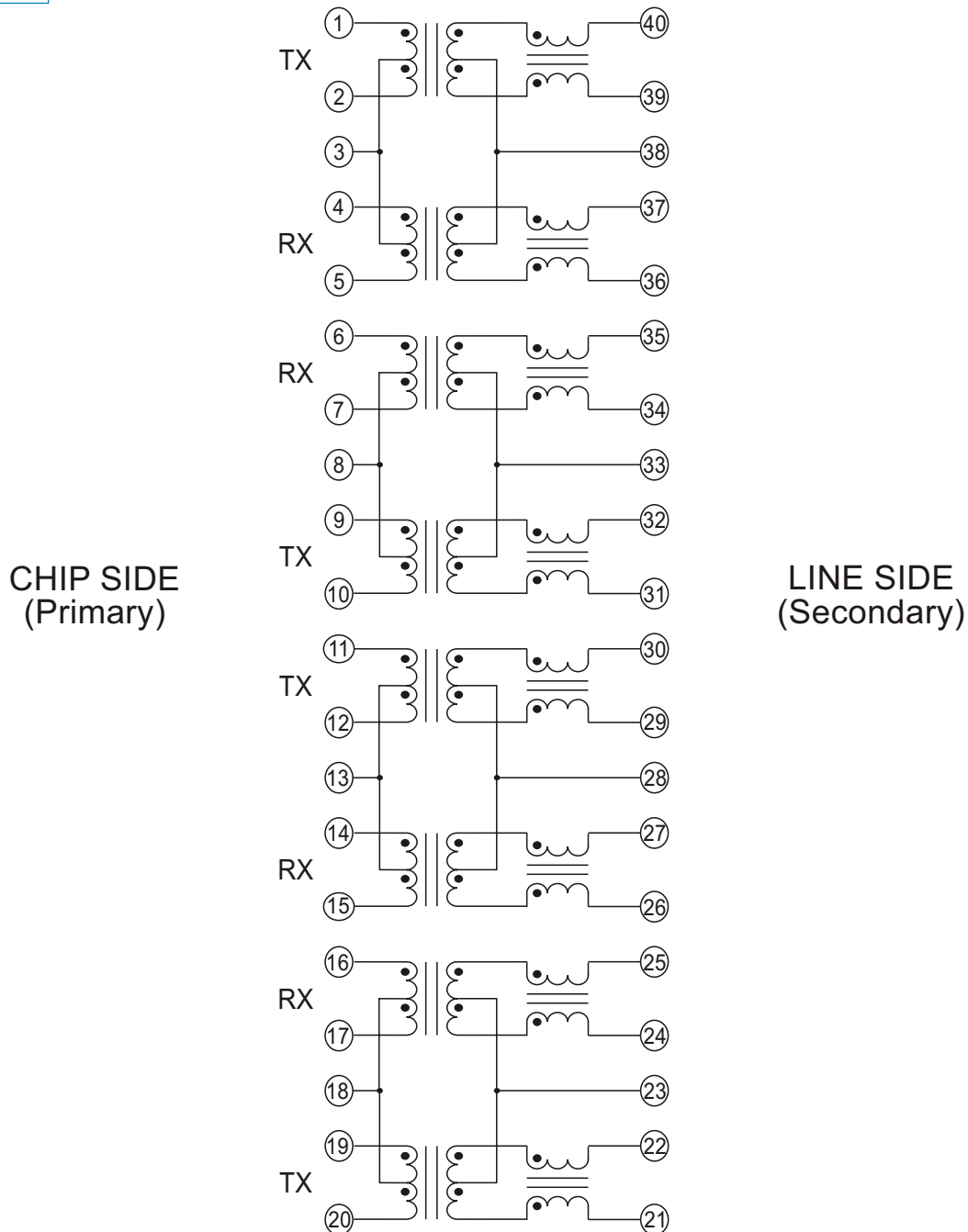






**SCHEMATICS**

824-M0313R



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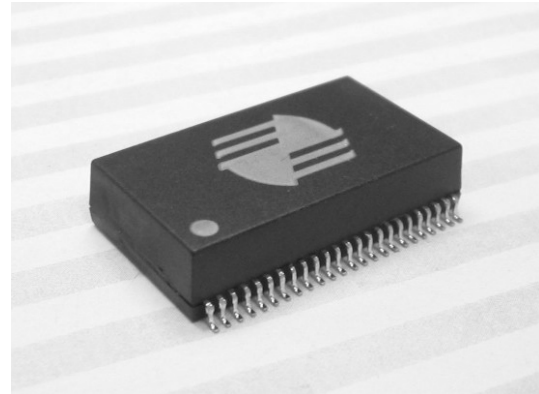
Website: <http://www.eleceltek.com> / [www.eemagnetic.com](http://www.eemagnetic.com)

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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Operating temperature 0°C to +70°C
-  RoHS compliant

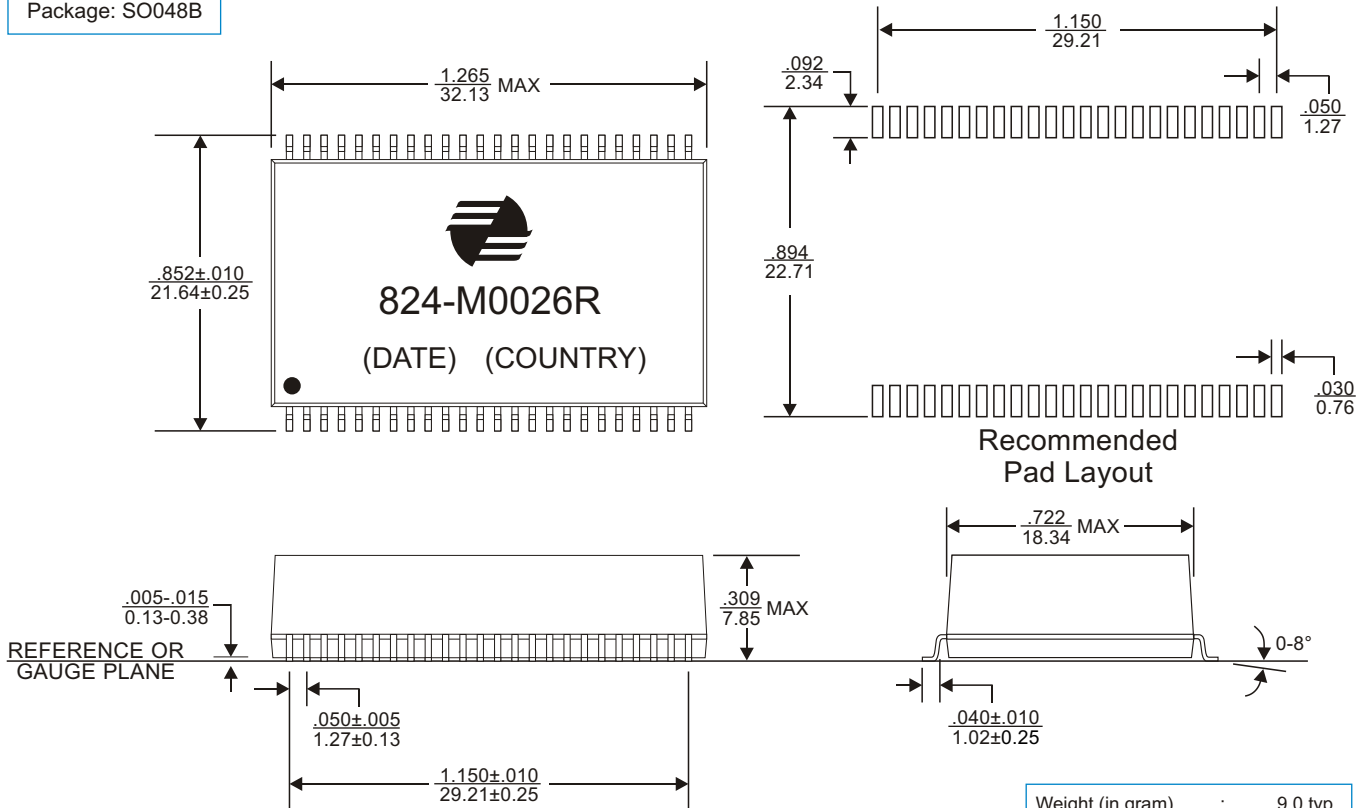


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	.1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	.1-100MHz	.1-100MHz	
824-M0026R	1.0	16.0	14.0	13.0	12.0	35.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO048B



Weight (in gram)	: 9.0 typ.
Tape & Reel	: 200 / reel

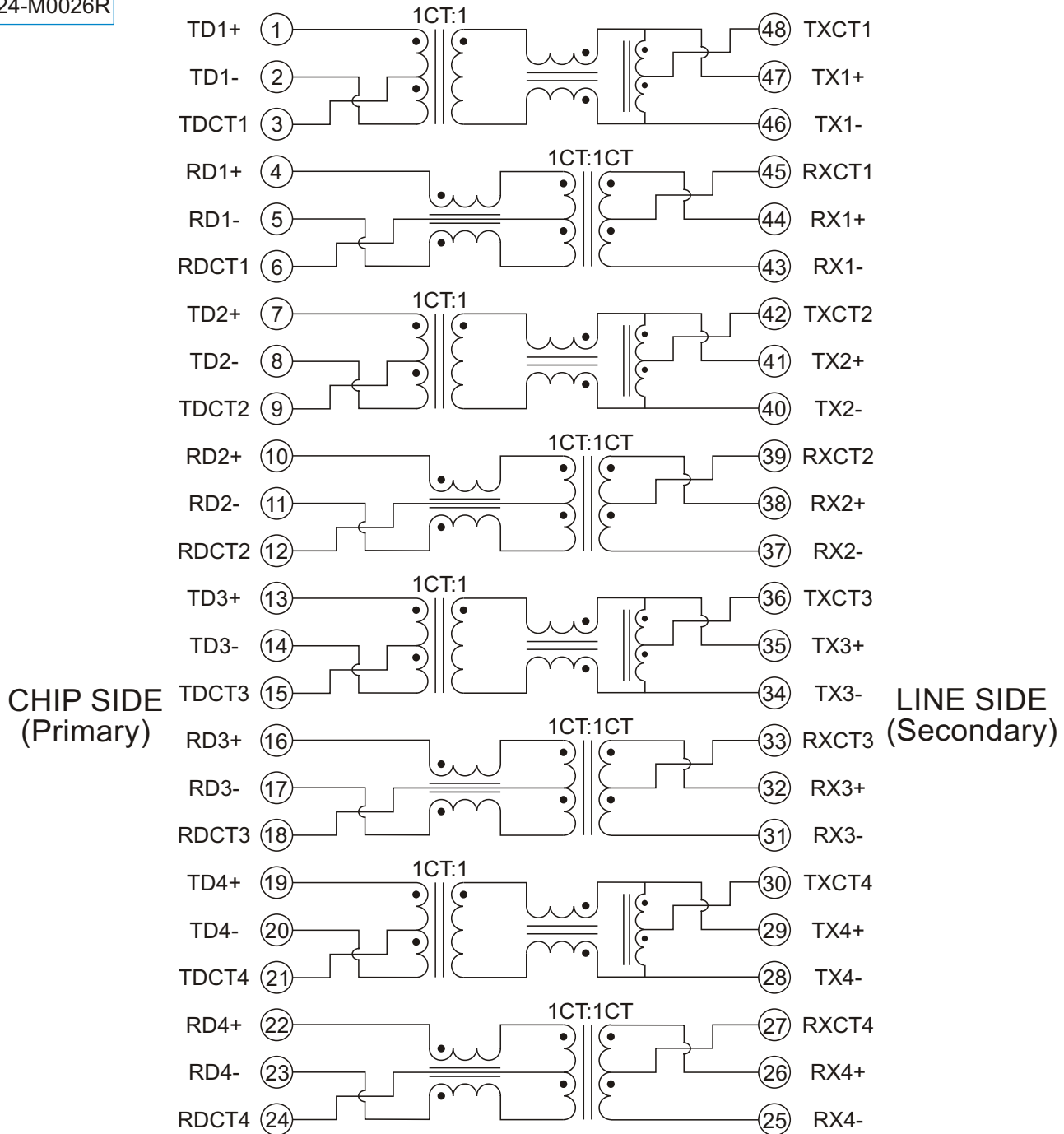
**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



SCHEMATICS

824-M0026R







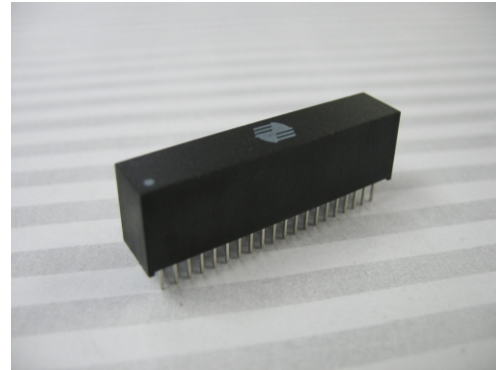
FOR MORE INFORMATION, PLEASE CONTACT

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-  Compliant with IEEE802.3 specification including 350uH OCL with 8mA DC Bias
-  Compact design for use in the most space-restrictive application
-  Operating temperature 0°C to +70°C
-  RoHS compliant

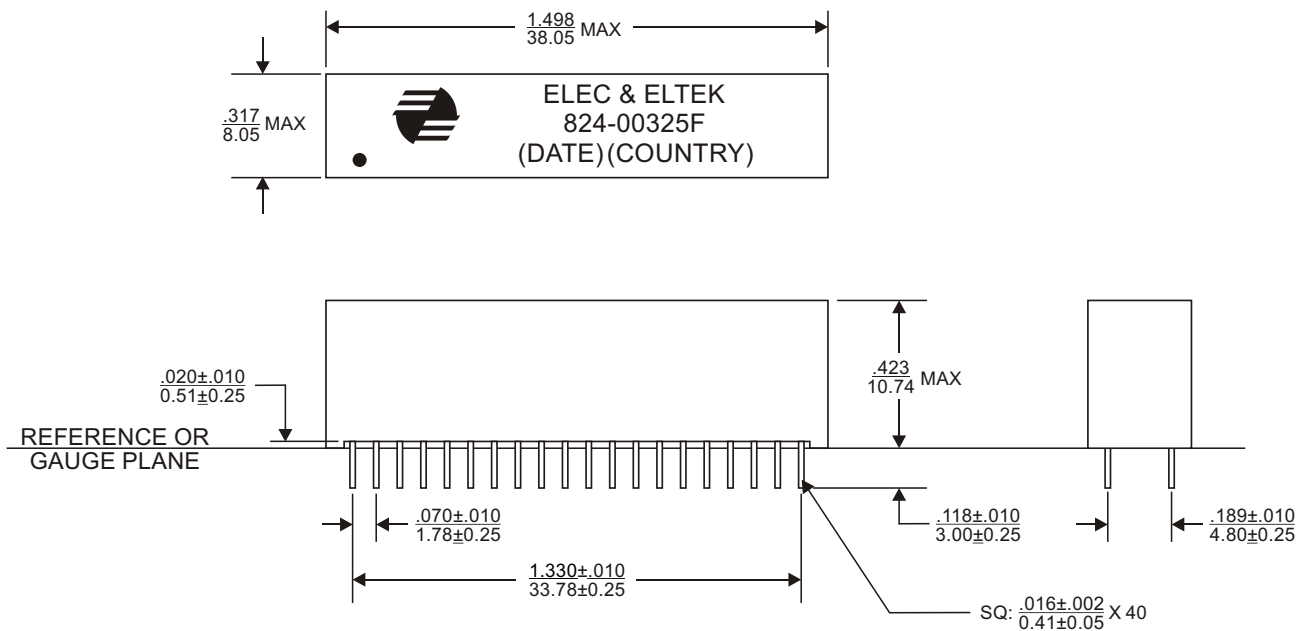


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)			CMRR (dB Min)			Crosstalk (dB Min)			Hipot (Vrms)
		1-100MHz	30MHz	50MHz	60-80MHz	1-30MHz	30-60MHz	60-125MHz	30MHz	60MHz	
824-00325F	1.2	15.0	13.0	11.0	30.0	25.0	20.0	40.0	35.0	30.0	1500

**MECHANICAL DIMENSIONS**

Package: TH-40



**Notes:**

1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

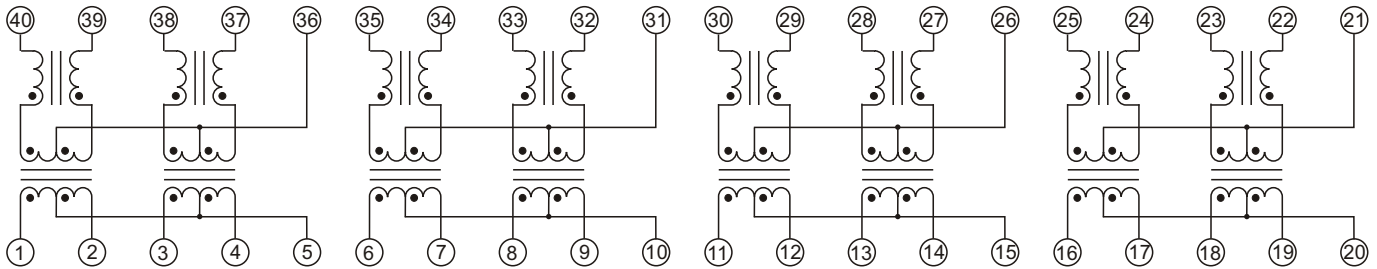
Weight (in gram)	: 4.6	Typ.
Tube	: 13	Tube



**SCHEMATICS**

824-00325F

**LINE SIDE (Secondary)**



**CHIP SIDE (Primary)**

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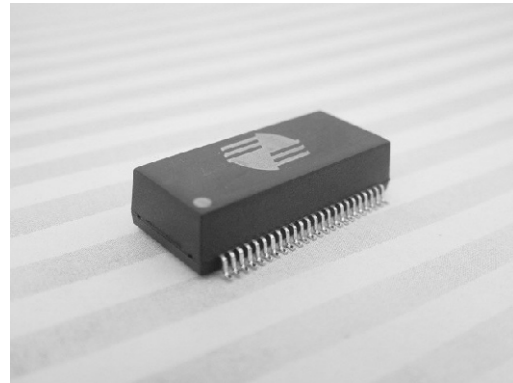
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-  Compliant with IEEE802.3af specification including 350uH OCL with 8mA DC Bias
-  Designed for IP phone or IP switch applications
-  350mA balanced DC line current capability
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact design for use in the most space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

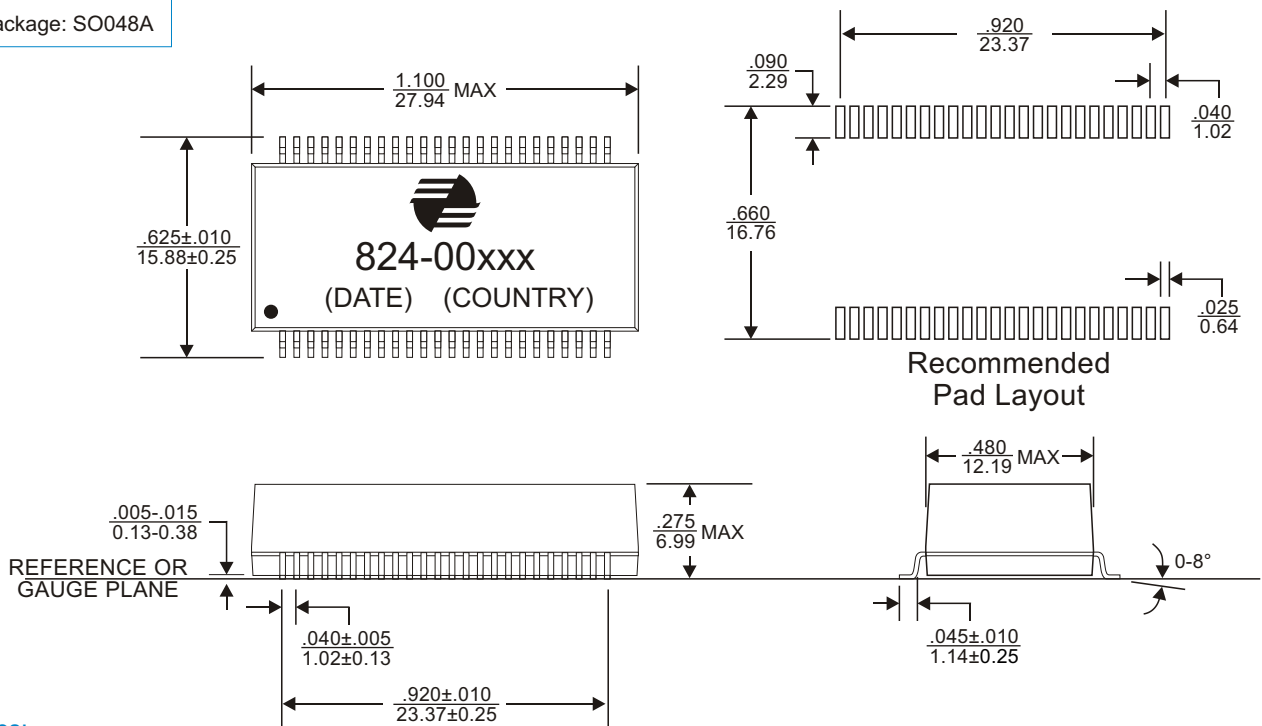
Part Number	Turns Ratio		Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
	Tx	Rx		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00186F	1CT:1	1CT:1CT	1.2	16.0	14.0	13.0	12.0	35.0	35.0	1500
824-00222F	1CT:1	1CT:1CT	1.2	16.0	14.0	13.0	12.0	35.0	33.0	1500
824-00283F <sup>1</sup>	1CT:1CT	1CT:1CT	1.2	16.0	14.0	13.0	12.0	33.0	33.0	1500

**Notes:**

1. Suitable for Auto MDI/MDIX applications.

**MECHANICAL DIMENSIONS**

Package: SO048A



**Notes:**

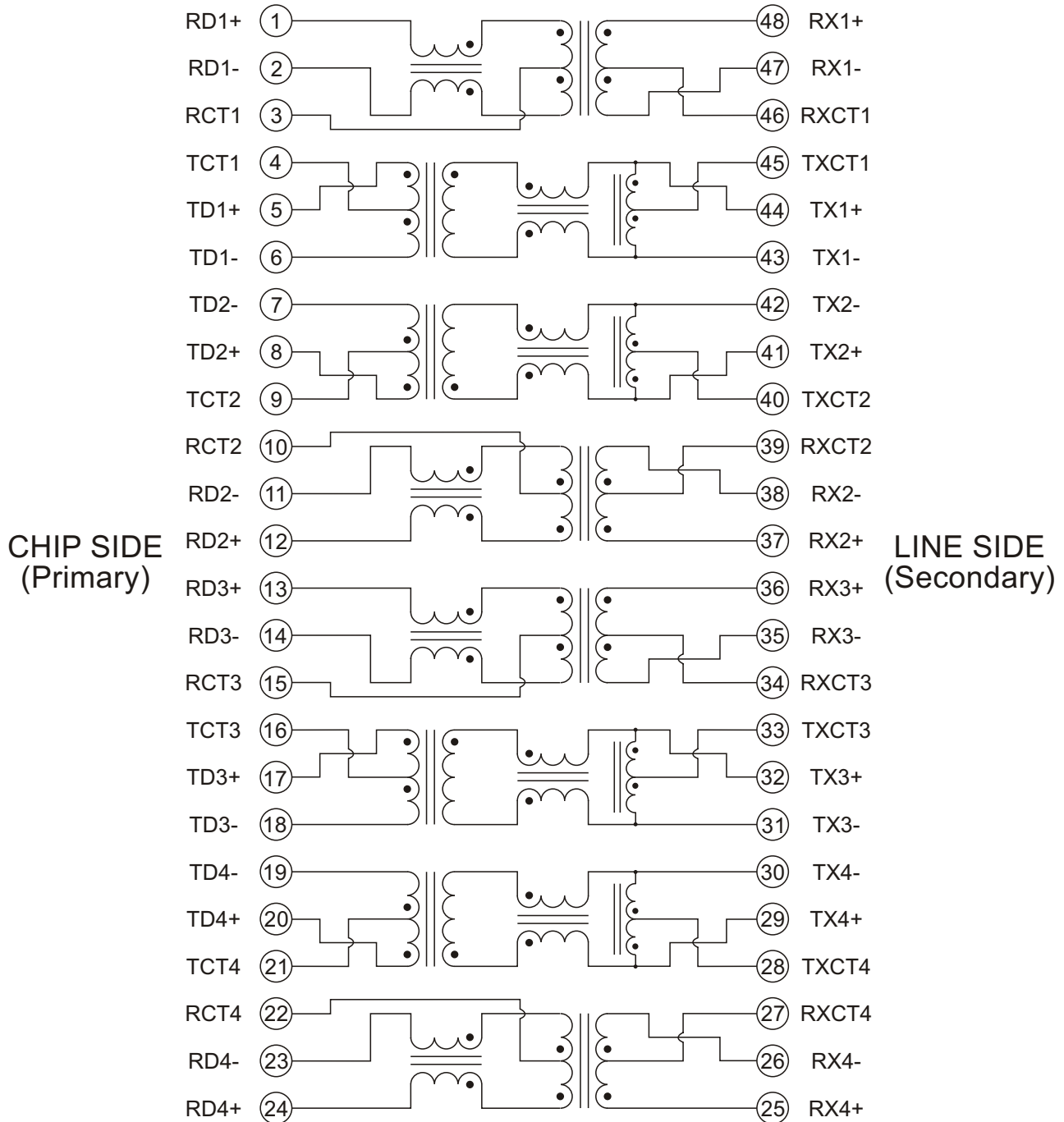
2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	4.6 typ.
Tape & Reel	:	300 / reel



SCHMATICS

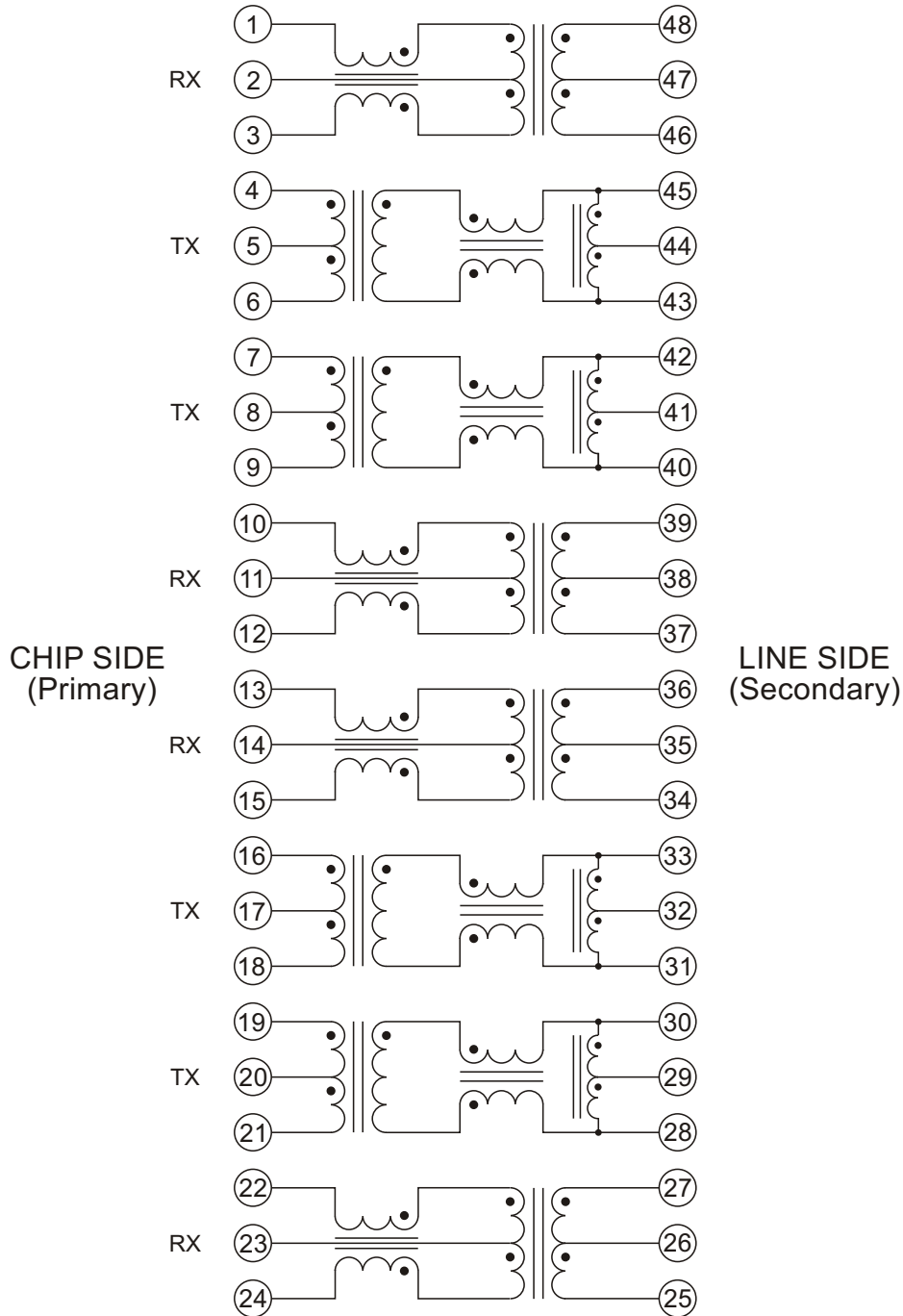
824-00186F





SCHMATICS

824-00222F

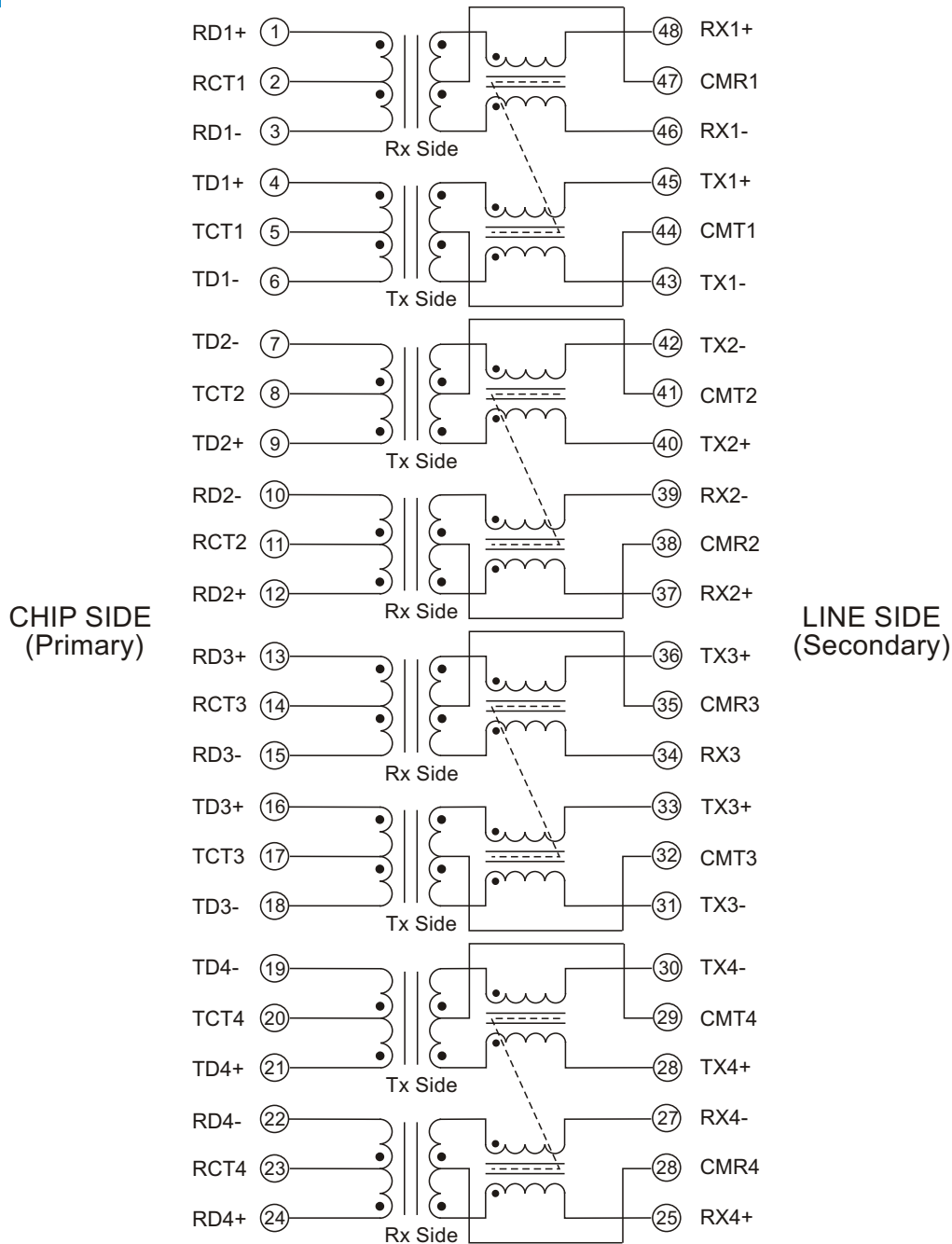






**SCHEMATICS**








824-00283F

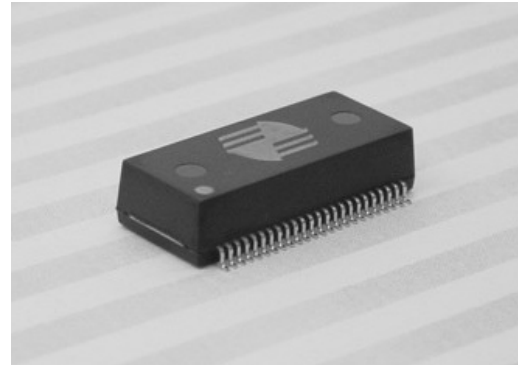


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-  Compliant with IEEE802.3af specification including 350uH OCL with 8mA DC Bias
-  Quad port design for IP phone or IP switch applications
-  350 mA balanced DC line current capability
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact design for use in the most space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

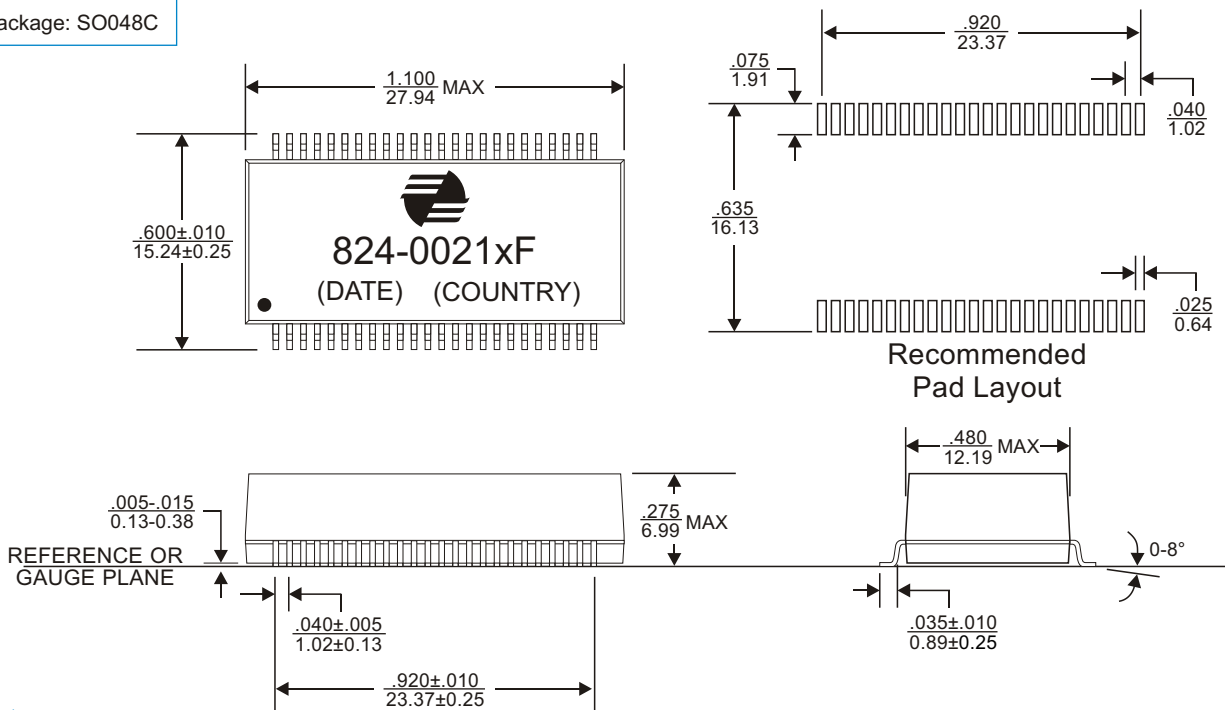
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00210F	1.1	18.0	15.5	13.6	12.0	38.0	38.0	1500
824-00211F	1.1	18.0	15.5	13.6	12.0	40.0	40.0	1500
824-00212F <sup>1</sup>	1.1	18.0	15.5	13.6	12.0	38.0	38.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO048C



**Notes:**

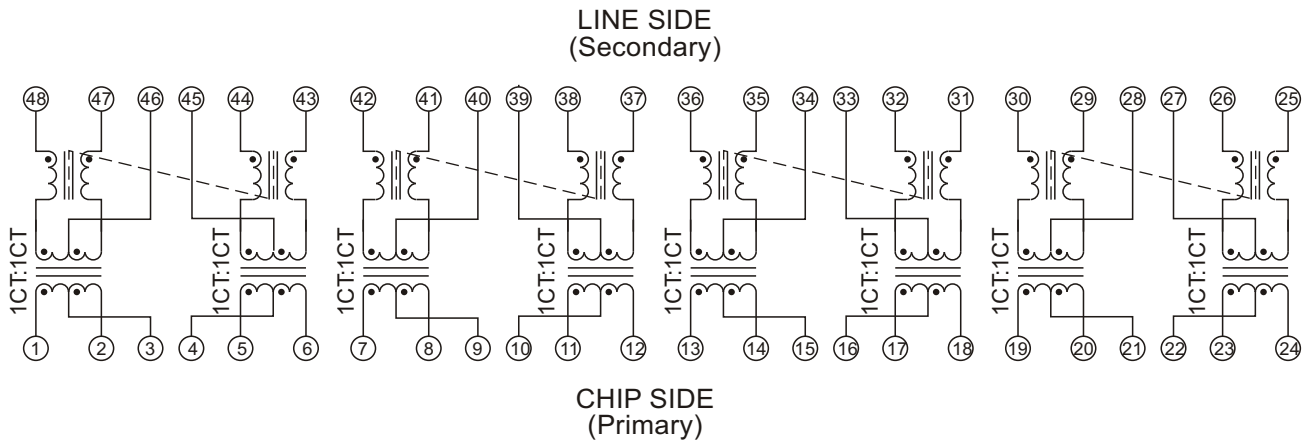
2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	: 4.6 typ.
Tape & Reel	: 300 / reel



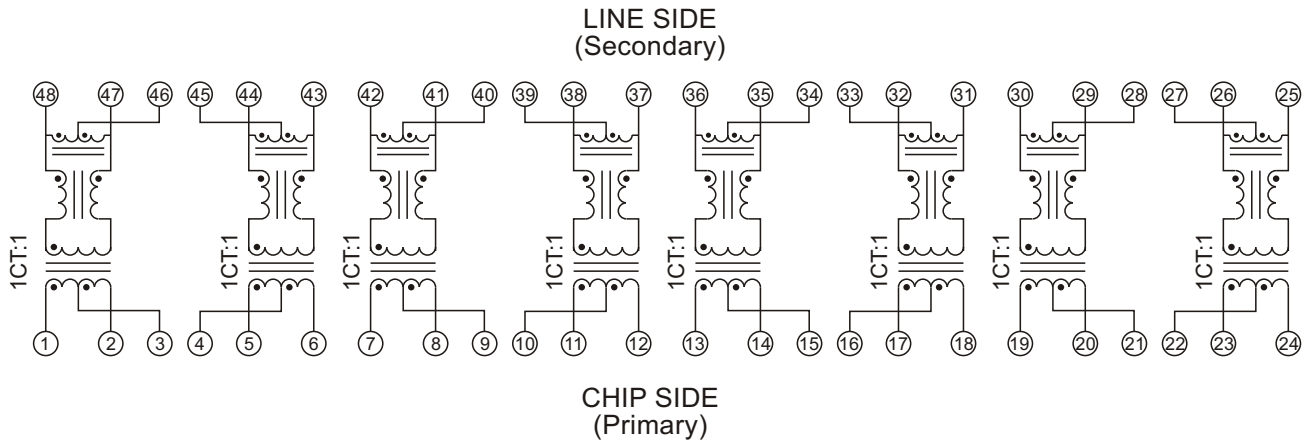
SCHMATICS

824-00210F / 824-00212F



SCHMATICS

824-00211F



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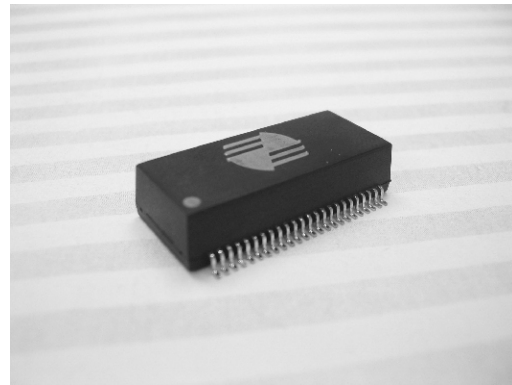
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-  Compliant with IEEE802.3af specification including 350uH OCL with 8mA DC Bias
-  Quad port design for IP phone or IP switch applications
-  350mA balanced DC line current capability
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact design for use in the most space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

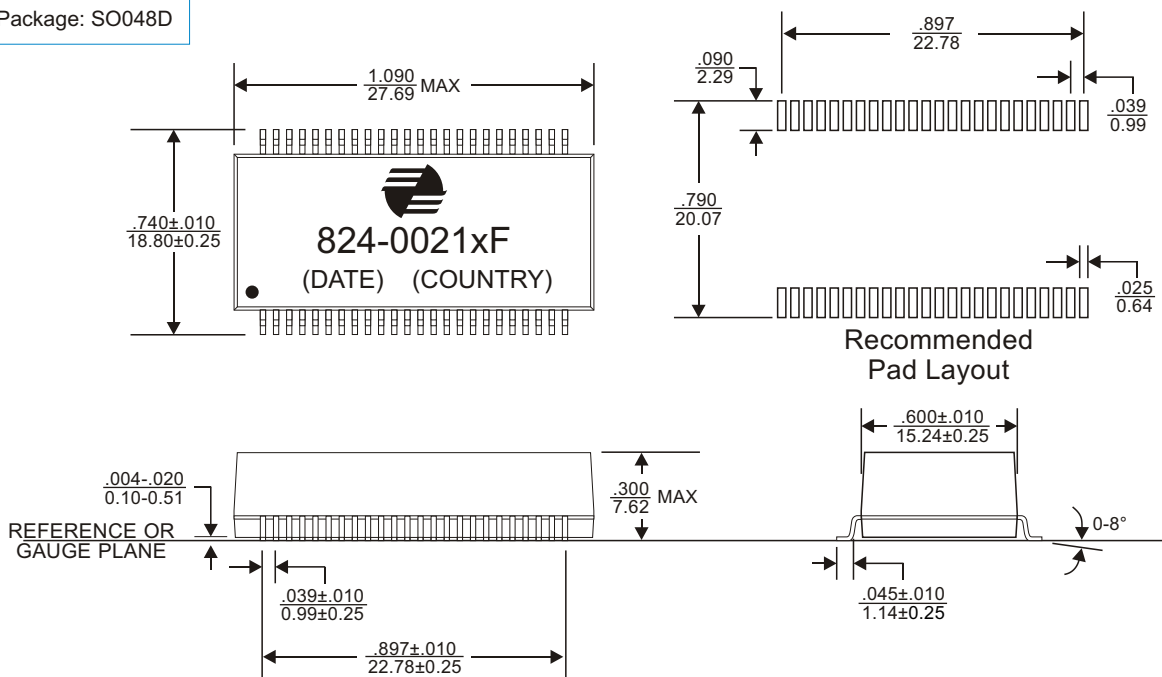
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Typ)	Crosstalk (dB Typ)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-00213F	1.1	18.0	15.5	13.6	12.0	40.0	40.0	1500
824-00214F	1.1	18.0	15.5	13.6	12.0	38.0	38.0	1500
824-00215F <sup>1</sup>	1.1	18.0	15.5	13.6	12.0	38.0	38.0	1500
824-00216F <sup>1</sup>	1.1	18.0	15.5	13.6	12.0	40.0	40.0	1500

**Notes:**

1. Operating temperature -40°C to +85°C.

**MECHANICAL DIMENSIONS**

Package: SO048D



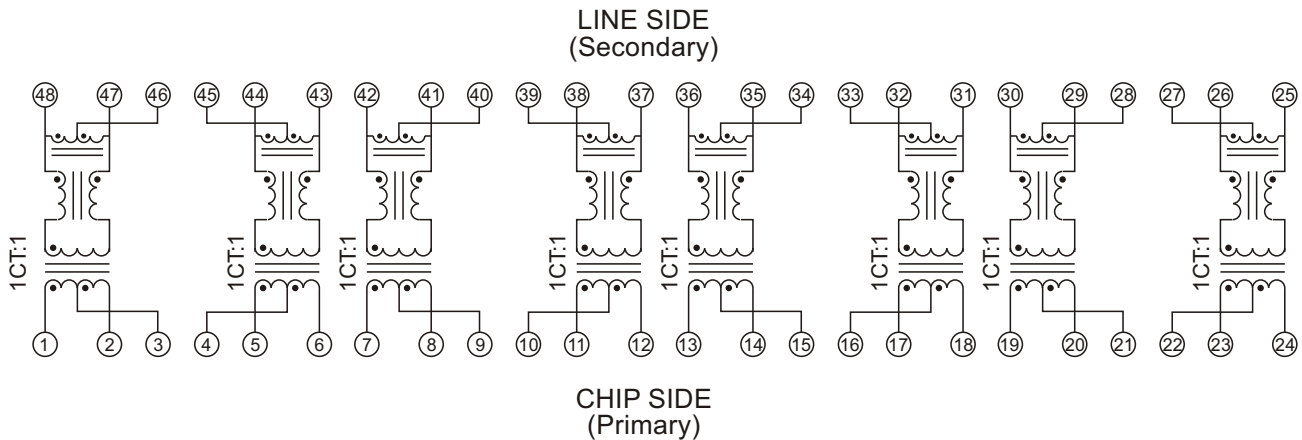
Notes: 2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.

3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .



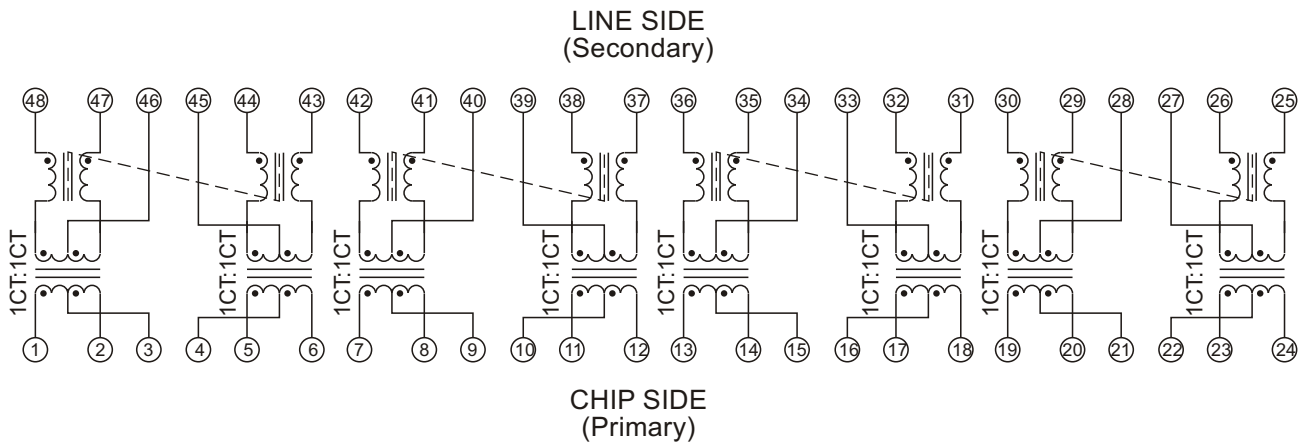
**SCHEMATICS**

824-00213F / 824-00216F



**SCHEMATICS**

824-00214F / 824-00215F



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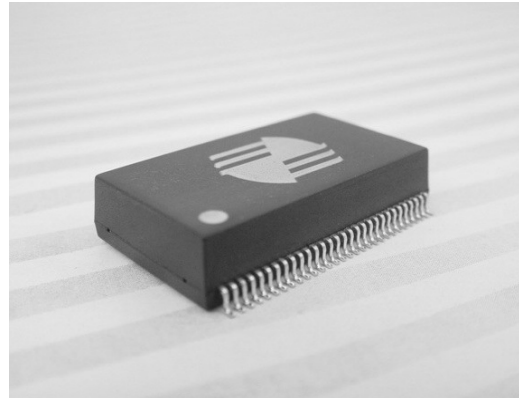
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact 5-port design for use in space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant

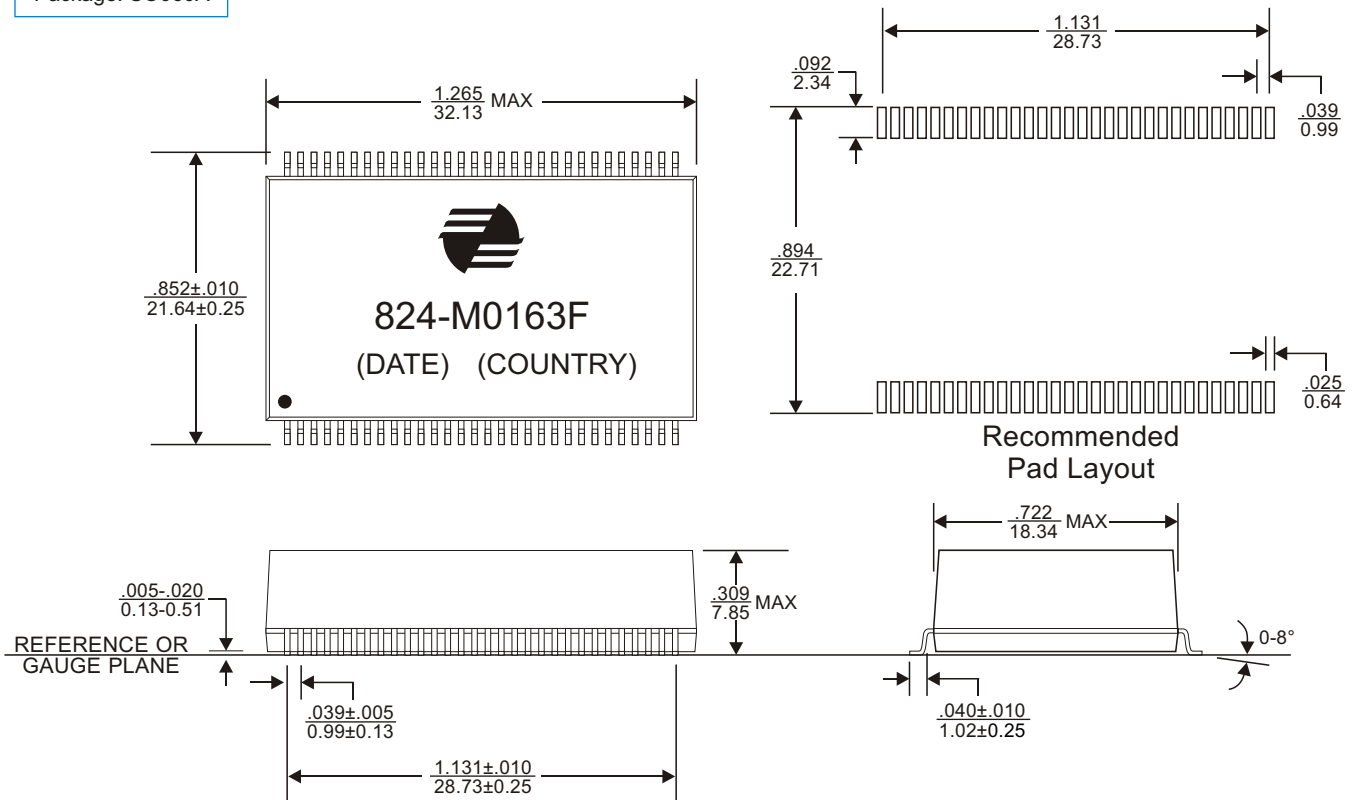


**ELECTRICAL SPECIFICATION @ 25°C**

Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0163F	1.0	16.0	14.0	13.0	12.0	35.0	33.0	1500

**MECHANICAL DIMENSIONS**

Package: SO060A



**Notes:**

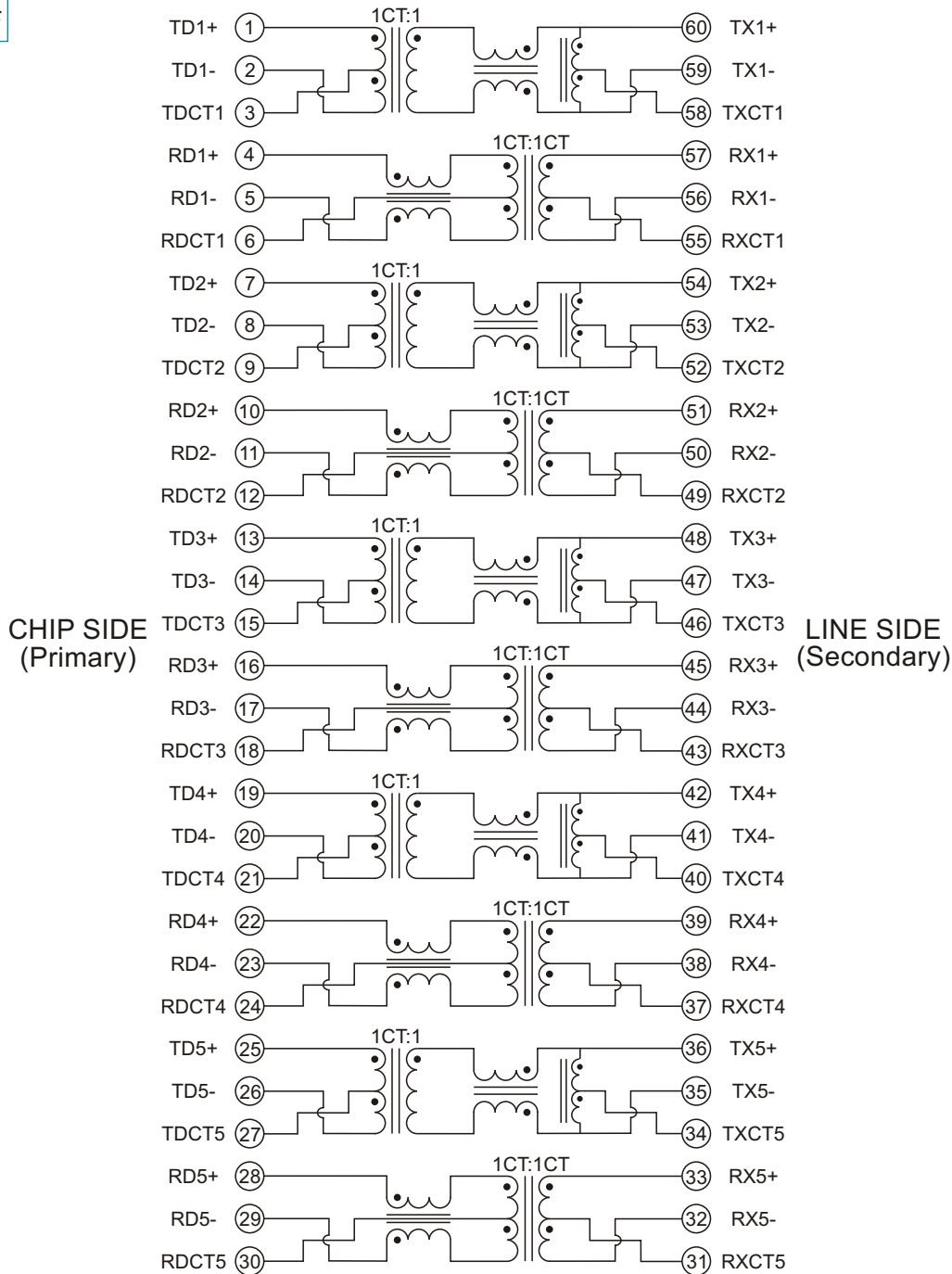
1. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
2. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$ .

Weight (in gram)	:	9.0 typ.
Tape & Reel	:	200 / reel



**SCHEMATICS**

824-M0163F



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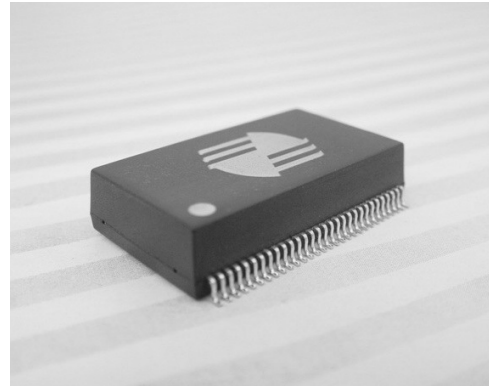
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-  Compliant with IEEE802.3 standard including 350uH OCL with 8mA DC Bias
-  Designed to withstand IR-Reflow with peak temperature per IPC/JEDEC J-STD-020C
-  Compact Hex port design for use in space-restrictive applications
-  Operating temperature 0°C to +70°C
-  RoHS compliant



**ELECTRICAL SPECIFICATION @ 25°C**

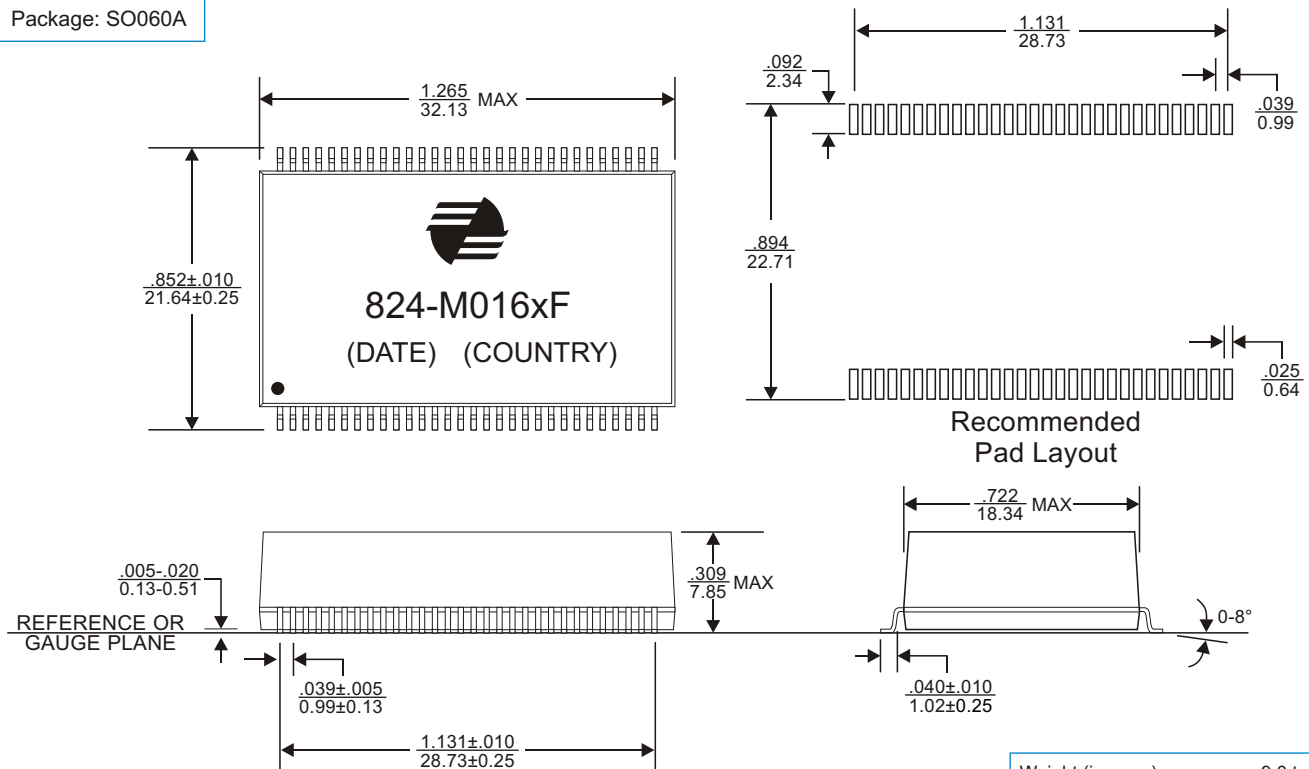
Part Number	Insertion Loss (dB Max)	Return Loss (dB Min)				CMRR (dB Min)	Crosstalk (dB Min)	Hipot (Vrms)
		.1-100MHz	1-30MHz	40MHz	50MHz			
824-M0161F	1.1	18.0	15.5	13.5	12.0	.1-100MHz	.1-100MHz	1500
824-M0162F <sup>1</sup>	1.0	18.0	14.4	13.1	12.0	1-60MHz	60-200MHz	1500

**Notes:**

1. Suitable for Auto MDI/MDIX applications.

**MECHANICAL DIMENSIONS**

Package: SO060A



**Notes:**

2. All dimensions are specified in  $\frac{\text{inches}}{\text{mm}}$  with higher precedence in inches.
3. Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.25}$ .

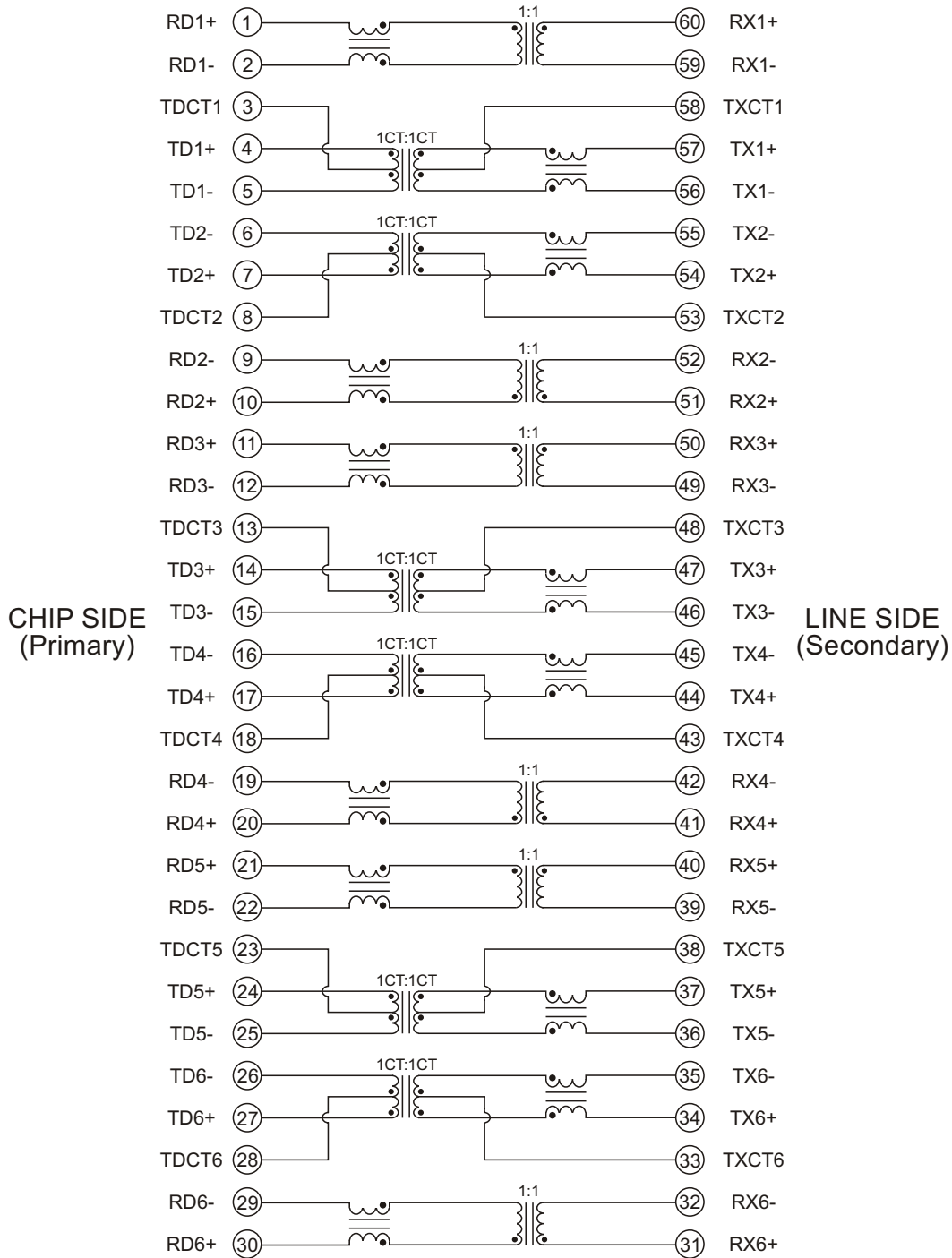
Weight (in gram)	: 9.0 typ.
Tape & Reel	: 200 / reel





**SCHEMATICS**

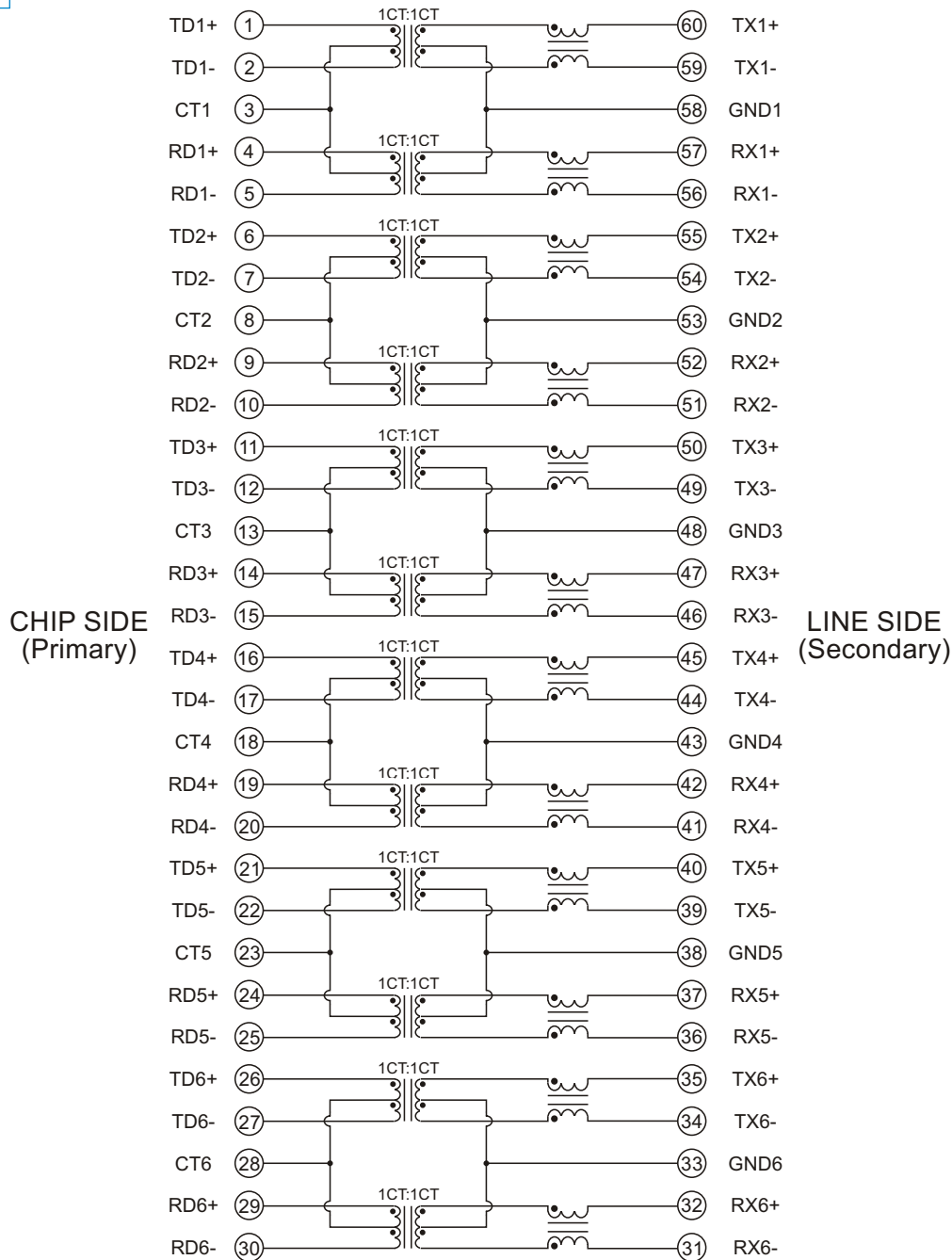
824-M0161F





**SCHEMATICS**

824-M0162F



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