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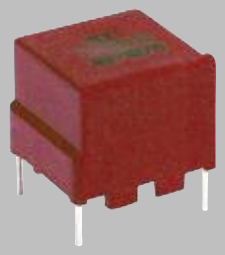

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High power switch mode transformers • Drive transformers
Current sense transformers • Switching inductors
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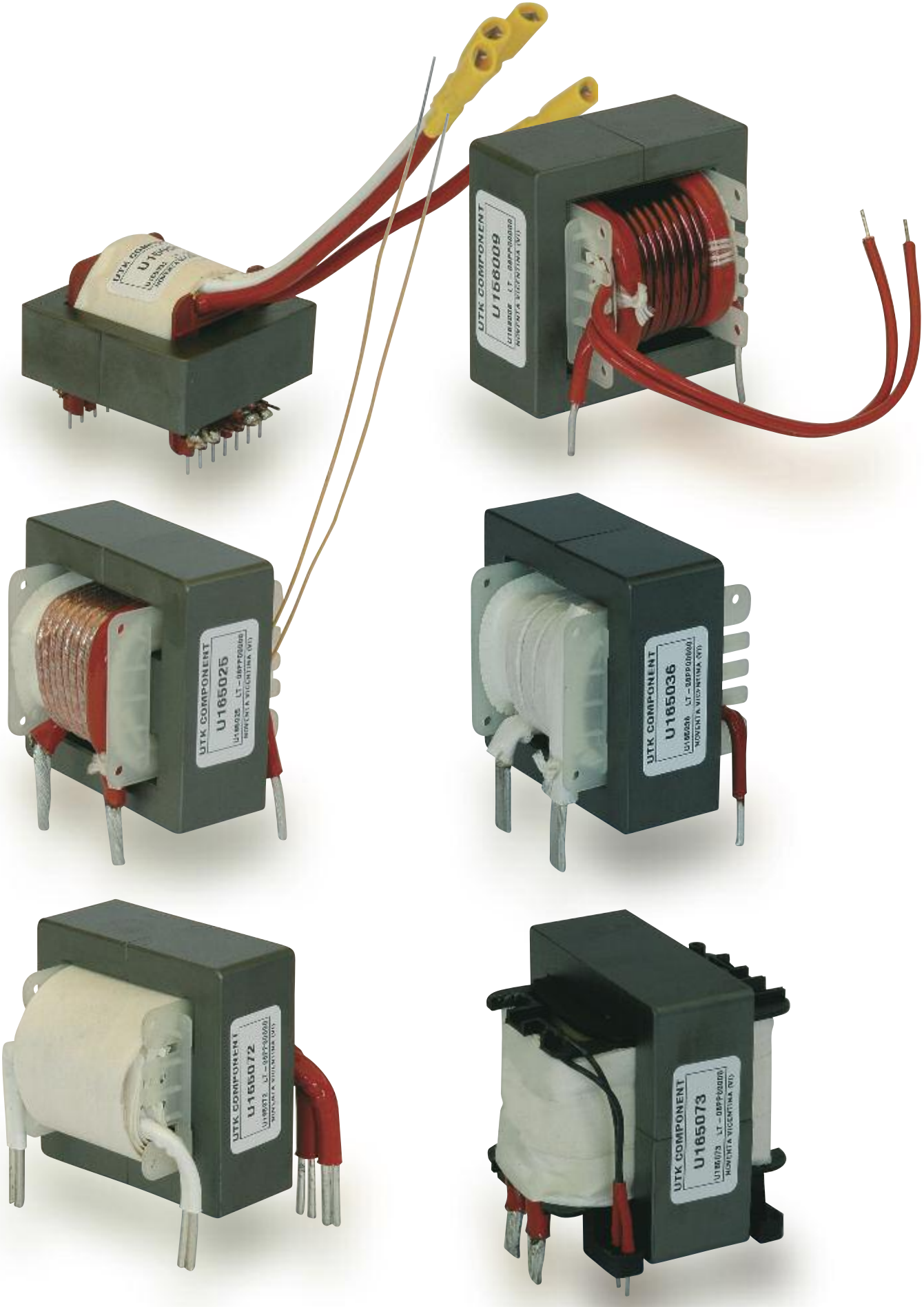
UTK COMPONENT
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UTK COMPONENT
U165073


U190005
U240005


UTK COMPONENT
U503056

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Notes

Presentation of the company – UTK component

UTK Component has been designing and producing standard or customer specific inductive components for industrial or professional purposes, operating on the national and international market, since 1986. UTK Component develops in close co-operation with the customer the design and the production of the inductive components, and offers at the same time well established production techniques and innovative technological solutions.

The steady and rapid evolution in the semiconductor technology, the more and more advanced integration, the availability of powerful electronic components, require the use of inductive components of higher performance. The recent introduction of international safety standards establishes also strict quality standards.

Thanks to the constant research for new technical and technological solutions, UTK Component offers a wide range of inductive components in order to satisfy even the most demanding designers. The products on the catalogue include pulse and drive transformers, current sense transformers, switching transformers and inductors, EMI filters. UTK Component designs, develops and produces special components as well, offering the customers its experience and technological competence and a high qualified designing staff. UTK inductive components are at the present time appreciated and used in several different industrial applications: motor control, power conversion, UPS, welding power supplies, battery chargers, telecom, and so on..

From the very beginning UTK Component could keep in the forefront in its branch by developing a highly specialised "know-how" and pursuing with coherence and determination the corporate aims.

- **Customer's satisfaction** - thanks to a reliable and professional commercial relation with the customer, based on mutual satisfaction and communication, and then to the highest flexibility and sensibility in satisfying all customers' needs in the development of new specific products or in the supply of standard products.
- **Total Quality** - through the continuous updating and improvement of the company organisational structures and the utmost attention to the production process, the approval testing, the respect of the international standards and to the different aspects connected with regulations and certifications.
- **Technological growth** - through the sensibility to the technological improvement and thanks to constant updating of the production and testing instruments and machinery.

Nowadays UTK Component operates successfully on the national and international market both directly and through a network of agents and distributors, and counts among its customers some of the most important companies of many different industrial sectors. The efficiency of the production system allows the achievement of a turnover of more than one million pieces per year at an almost null reject and defect rate .

UTK Component invests regularly a share of its turnover in the technological research in order to introduce new components and to develop new and even more efficient production systems, for granting high quality products to a more and more competitive price. The production lines are automated and equipped with numerical control devices, which provide high production capacity and a constant respect and preservation of the production standards. The automated testing system located at the end of each line allows to test 100% of the production with the utmost flexibility and adaptability.

Of same importance are the human resources. UTK Component invests on people, in order to create a motivated and responsible staff, professionally reliable and quality oriented. As further confirmation of the interest of the company owners and top management in the quality system, UTK Component is certificated since 1996 according to UNI EN ISO 9001. This is an important acknowledgement, obtained through the efforts and the contribution of all the company levels, which grants the quality in all the internal procedures.

The results of this policy are nowadays clear. The perfect balance between human experience and the utilisation of the most modern technologies, make UTK Component an industrial entity of undoubted professionality and value.

The present catalogue contains exhaustive and comprehensive technical information on UTK Component products and on the related applications. Don't hesitate to contact UTK Component for further information or explanations. Our commercial and technical departments are at Your disposal.

Pulse transformers

Features

- **Used in SCR and TRIAC starting circuits of low, medium and high powers.**
- **Wide range of standard products available.**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**
- **Compact size**

Technical description

UTK pulse transformers, normally used to drive semiconductors as thyristors and triacs, can transfer a square wave or a pulse with very short rise and fall times without appreciable distortion of the waveform. In such applications they provide both the firing pulse to the semiconductor's gate, and the isolation between the low power control circuit and the power semiconductors, according to the international standards for the safety of the transformers.

UTK pulse transformers have the following characteristics.

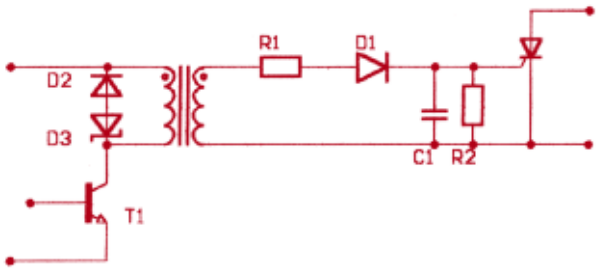
- Compact construction. They are vacuum-filled and encapsulated in plastic box made with self extinguishing material UL94-HB, suitable for the application on high density PCBs.
- Availability in a standard temperature range (0+80°) or an extended range
- Safe and reliable galvanic insulation
- Excellent magnetic coupling between the primary and secondary winding, which provides high fidelity in the transmission of the pulse having the shortest propagation times, and a low magnetizing current.
- Transmission of high instantaneous power values
- High degree of immunity from noise and interference, thanks to the low coupling capacitance between primary and secondary.
- Low losses.
- Maximum working voltage up to 1KV. Dielectric strength tests are conducted according to the international standards EN61558 and EN60950.

A wide range of standard products is available for the driving of low to high power devices. In order to satisfy specific requirements UTK Component can develop special products according to the customers' needs.

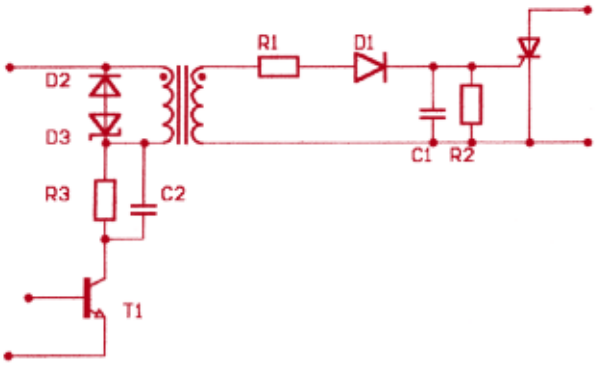
UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters (n, Lp, Ld, Ck, Rp, Rs)
- Dielectric strength

Applications



Firing circuit for SCR. Resistance R2 and capacitor C1 improve the noise immunity of the driving circuit and prevent spurious triggering . Resistance R1 limits the gate current. D2 and D3 allow fast core recovery in the transformer. D1 inhibits the gate current during the demagnetization.



Through the addition of the resistance R3 and capacitor C2 a double level driving pulse is obtained: a higher starting peak in order to optimise the firing of the thyristor, followed by a fall of the driving current for lower dissipation.

Reference parameters

Winding ratio — n

Turns ratio of the primary winding to the secondary.

Voltage time area — ∫udt

Voltage time Integral on the secondary winding, or voltage time area. In case of application of unipolar pulse to the primary winding, ∫udt shows the maximum permitted value for the integral of secondary voltage, to avoid saturation of the magnetic core. Expressed in Vμs.

Rise time — Ts

Time interval calculated on the rising slope of the secondary waveform, between 10% and 90% of the peak value, with resistive load equal to Rn and driving voltage 12V with duty cycle 50%. This parameter is mainly related to the quality of the magnetic coupling between the primary and the secondary winding and with the value of the leakage inductance Ld.

Peak current — Ip

Maximum permitted secondary current

Load Resistance — Rn

Nominal load resistance

Inductance — Lp

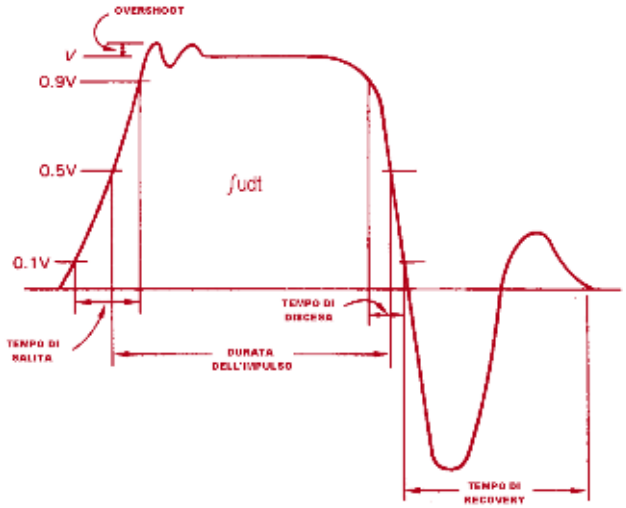
Nominal value of inductance on primary winding. The maximum deviation from the nominal value (tolerance) is +\-30%. Measured with LCR meter at the primary winding (Ambient temp 25°C, frequency 10KHz, drive UAC,rms=250mV).

Coupling capacitance — Ck

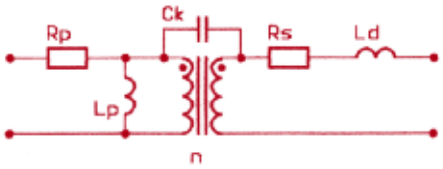
Coupling capacitance between primary and secondary winding, depending on electric coupling of the coils. Low Ck values provide a high level of noise immunity to the firing circuit, preventing transmission of voltage spikes or high frequency noise coupling to the secondary and avoiding spurious triggering. Measured with LCR meter between the primary and secondary windings, with both windings shorted (frequency 10KHz, drive UAC,rms=250mV).

Winding resistance — Rp,Rs

Resistance measured with LCR meter at the primary and secondary windings.



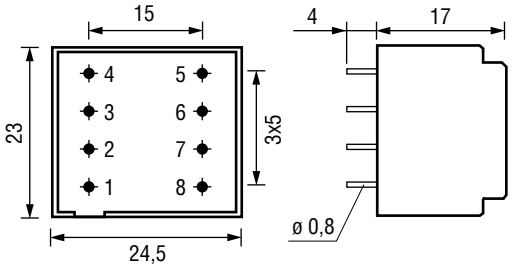
Pulse



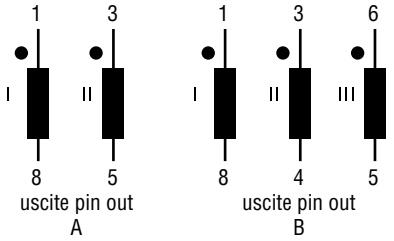
Equivalent circuit of the pulse transformer.

Code	n	∫udt (μVs)	Ts (μs)	Ip (mA)	Rn (Ω)	Lp (mH)	Ck (pF)	Rp (Ω)	Rs (Ω)	Model	Pin Out
TI-120010	1:1	300	<0,8	750	15	3,2	25	0,7	0,7	TI-120	A
TI-120020	1:1:1	300	<0,8	750	15	3,2	23	0,7	0,7	TI-120	B
TI-120030	2:1	250	<0,8	1100	10	7,3	28	0,5	0,25	TI-120	A
TI-120040	2:1:1	250	<0,8	1100	10	7,3	31	0,5	0,25	TI-120	B
TI-120050	3:1	150	<0,5	1100	10	7,3	22	0,5	0,15	TI-120	A
TI-125010	1:1	500	<1	1100	10	2,3	35	0,45	0,45	TI-125	A
TI-125020	1:1:1	500	<1	1100	10	2,3	35	0,45	0,45	TI-125	B
TI-125030	2:1:1	500	<1	1100	10	9	55	0,9	0,45	TI-125	B
TI-125040	1:1	1000	<2	600	20	7,6	45	0,8	0,8	TI-125	A
TI-125050	1:1:1	1000	<2	600	20	9	55	0,9	0,9	TI-125	B
TI-125060	3:1	300	<0,8	1100	10	8,3	40	0,6	0,2	TI-125	A
TI-125070	3:1:1	300	<0,8	1100	10	8,3	40	0,6	0,2	TI-125	B

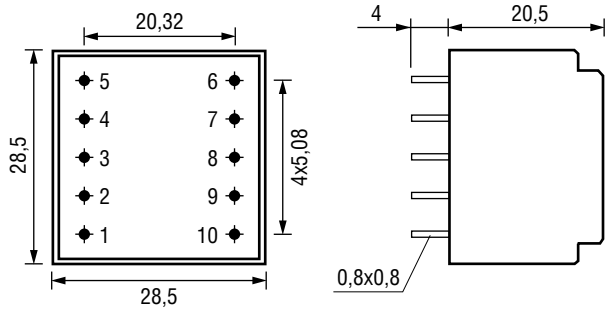
Modello
Model
TI-120



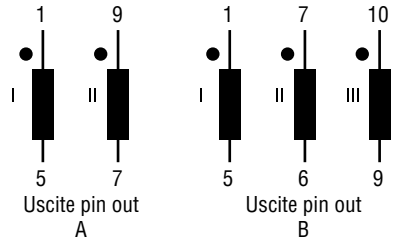
View pin-side



Modello
Model
TI-125



View pin-side



Low power switch mode transformers

Features

- **Transformers for low power and high frequency switch mode power supplies (flyback ,forward and pushpull circuits)**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**
- **Compact size**

Technical description

If linear regulators are still predominant in low power applications (lower than 10W), where no high efficiency, low weight or volume are required, the switch mode power supply circuits have become more and more popular in the last years thanks to the many advantages they offer and to the wide availability and application of single chip control circuits at a low cost. The reduction of the weight and dimensions, the higher efficiency and the lower thermal dissipation bring to an almost unavoidable utilisation of switching circuits in portable battery applications and generally in all applications where particularly restricted weights and dimensions are required for powers up to few hundreds Watts. Other applications, becoming more and more popular, include small stand-by power supplies and off-line switching circuits for electronic PCBs. The most commonly used circuits topologies for such applications include flyback, forward and push-pull, which provide galvanic insulation from the mains, availability of multiple outputs and powers till few hundreds Watts.

UTK produces transformers for low power switching power supplies according to the customer requirements, using standard configurations and well established methodologies to guarantee the high quality of the result. UTK can also provide qualified technical support in the design phase of the transformer, offering its competence in the selection of the materials and the most suitable production techniques.

Transformers for single chip switching converters are also available.

- National Semiconductor SIMPLE SWITCHER
- ST Microelectronics VIPER 50/100
- Power Integrations TOPSWITCH e TINYSWITCH

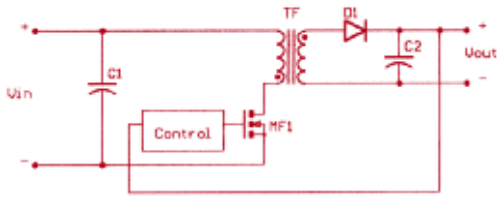
UTK Component switching transformers have the following characteristics.

- Compact construction. They are vacuum-filled and encapsulated in plastic box made with self extinguishing material UL94-HB, suitable for the application on high density PCBs.
- Availability in a standard temperature range (0+80°) or an extended range
- Multiple secondary windings
- Safe and reliable galvanic insulation
- Output power up to 200/300W
- Working frequency up to 500KHz

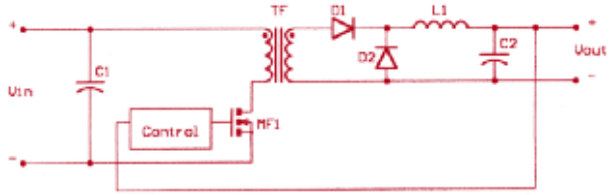
UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters
- Dielectric strength

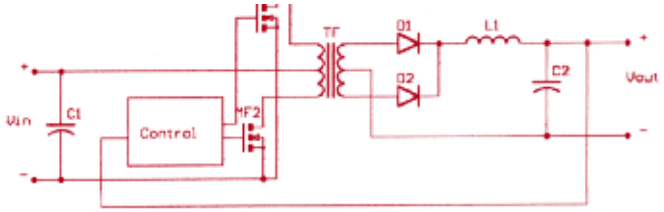
Applications



Flyback circuit



Forward circuit



Push-Pull circuit

Core selection

In the following we give a table to help the designer in the core selection phase, showing the theoretical power output of a switching stage depending on the circuit topology and working frequency. Actual values may differ from the theoretical values since other factors, for example the number of the secondary windings, working voltages, circuit details, temperature rise limits, etc, are not taken into consideration.

Low power switch mode transformers

Theoretical power output [Watt] of a Forward converter at the frequency shown [KHz]

Core	Ae	Ab	25	50	75	100	125	150	175	200
EFD15/8/5	0,150	0,148	0,9	1,8	2,7	3,6	4,4	5,3	6,2	7,1
EFD20/10/7	0,310	0,264	3,3	6,5	10	13	16	20	23	26
EFD25/13/9	0,580	0,402	9	19	28	37	47	56	65	75
EFD30/15/9	0,690	0,523	14	29	43	58	72	87	101	116
EE13/7/4	0,130	0,116	0,6	1,2	1,8	2,4	3,0	3,6	4,2	4,8
EE16/8/5	0,201	0,216	1,7	3,5	5,2	6,9	8,7	10	12	14
EE20/10/6	0,335	0,350	4,7	9,4	14	19	24	28	33	38
EE25/13/7	0,525	0,560	12	24	35	47	59	71	82	94
EE30/15/7	0,600	0,800	19	38	58	77	96	115	134	154
EE32/16/9	0,830	0,970	32	64	97	129	161	193	225	258
ETD29/16/10	0,760	0,903	28	55	82	110	137	165	192	220
ETD34/17/11	0,971	1,220	47	95	142	190	237	284	332	379
ETD39/20/13	1,250	1,740	87	174	261	348	435	522	609	696

Theoretical power output [Watt] of a PushPull converter at the frequency shown [KHz]

Core	Ae	Ab	25	50	75	100	125	150	175	200
EFD15/8/5	0,150	0,148	1,8	3,6	5,3	7,1	8,9	11	12	14
EFD20/10/7	0,310	0,264	6,5	13	20	26	33	39	46	52
EFD25/13/9	0,580	0,402	19	37	56	75	93	112	131	149
EFD30/15/9	0,690	0,523	29	58	87	116	144	173	202	231
EE13/7/4	0,130	0,116	1,2	2,4	3,6	4,8	6,0	7,2	8,4	10
EE16/8/5	0,201	0,216	3,5	6,9	10	14	17	21	24	28
EE20/10/6	0,335	0,350	9,4	19	28	38	47	56	66	75
EE25/13/7	0,525	0,560	24	47	71	94	118	141	165	188
EE30/15/7	0,600	0,800	38	77	115	154	192	230	269	307
EE32/16/9	0,830	0,970	64	129	193	258	322	386	451	515
ETD29/16/10	0,760	0,903	55	110	165	220	275	329	384	439
ETD34/17/11	0,971	1,220	95	190	284	379	474	569	663	758
ETD39/20/13	1,250	1,740	174	348	522	696	870	1044	1218	1392

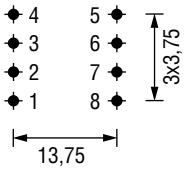
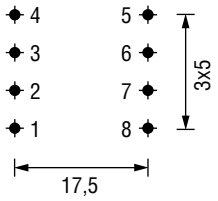
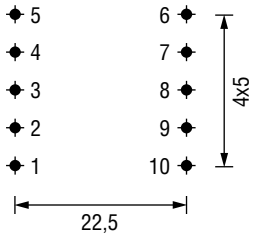
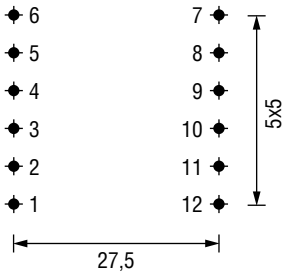
Theoretical power output [Watt] of a Flyback converter at the frequency shown [KHz]

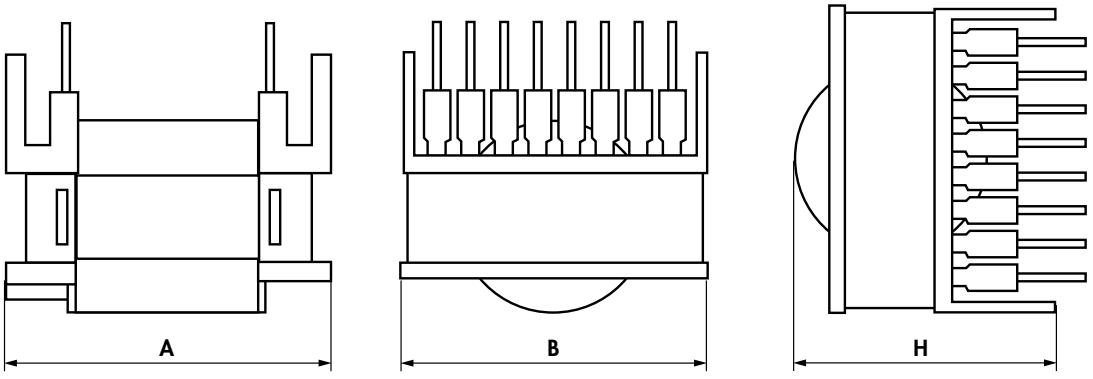
Core	Ae	Ab	25	50	75	100	125	150	175	200
EFD15/8/5	0,150	0,148	0,6	1,3	1,9	2,5	3,1	3,7	4,3	5,0
EFD20/10/7	0,310	0,264	2,3	4,6	6,9	9,2	11	14	16	18
EFD25/13/9	0,580	0,402	6,5	13	20	26	33	39	46	52
EFD30/15/9	0,690	0,523	10	20	30	40	51	61	71	181
EE13/7/4	0,130	0,116	0,4	0,8	1,3	1,7	2,1	2,5	2,9	3,4
EE16/8/5	0,201	0,216	1,2	2,5	3,6	4,8	6,1	7,3	8,5	9,7
EE20/10/6	0,335	0,350	3,3	6,6	10	13	16	20	23	26
EE25/13/7	0,525	0,560	8,3	16	25	33	41	49	58	66
EE30/15/7	0,600	0,800	13	27	40	54	67	81	94	108
EE32/16/9	0,830	0,970	23	45	68	90	113	135	158	180
ETD29/16/10	0,760	0,903	19	38	58	77	96	115	135	154
ETD34/17/11	0,971	1,220	33	66	100	133	166	199	232	265

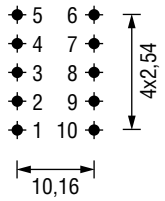
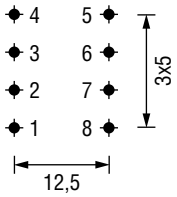
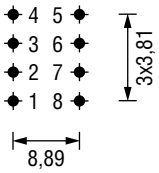
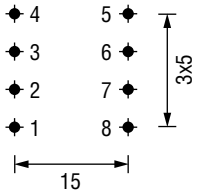
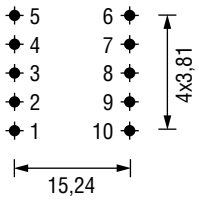
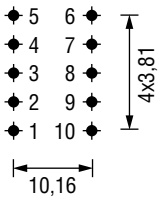
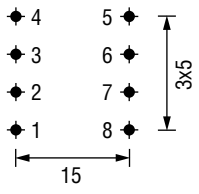
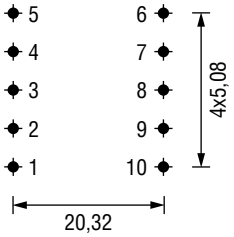
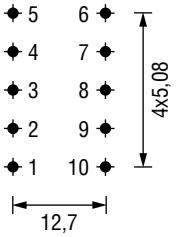
NOTES

1- The table gives the theoretical power output of a converter depending on the working frequency and the circuit topology.
2- Ae and Ab respectively show the cross sectional area of the core and the winding area [cm2].
3- Theoretical values are calculated for a peak flux density Bmax=0.16T, and a coil current density of 4A/mmq.
4 Actual values of output power differ from theoretical values as core gets larger and for higher frequencies and power. Other factors, for example skin effect and proximity effect, are not taken into consideration. At frequencies over 50/100KHz the core losses of some materials require also a reduction of the peak flux density Bmax.

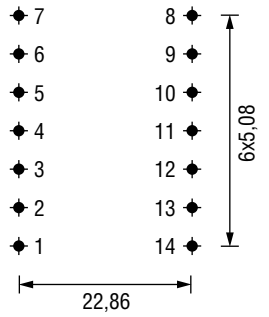
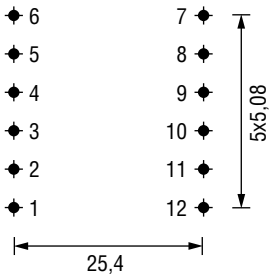
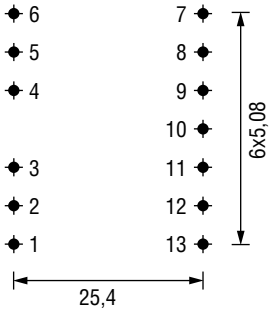
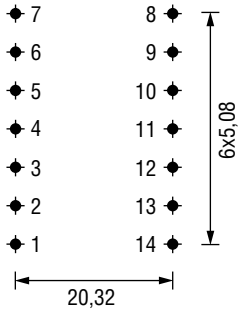
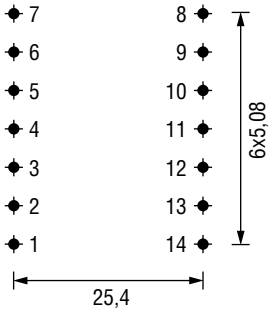
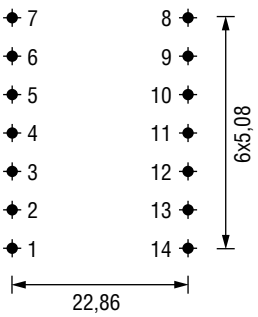
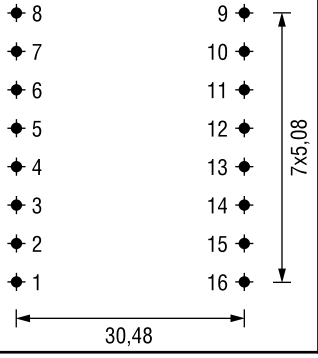
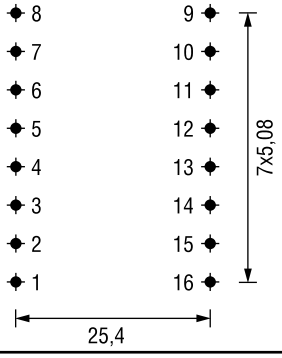
STANDARD BOBBINS

	HORIZONTAL VERSION			VERTICAL VERSION		
	HOLE ARRANGEMENT	DIMENSIONS		HOLE ARRANGEMENT	DIMENSIONS	
	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)
EFD15/8/5		A= 16,5 B= 15 H= 8,5				
EFD20/10/7		A= 21 B= 21 H= 10				
EFD25/13/9		A= 26 B= 26 H= 13				
EFD30/15/9		A= 32 B= 31 H= 13				



STANDARD BOBBINS	HORIZONTAL VERSION			VERTICAL VERSION		
	HOLE ARRANGEMENT	DIMENSIONS		HOLE ARRANGEMENT	DIMENSIONS	
	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)
EE13/7/4 (EF12,6)		A= 16,5 B= 13 H= 10,5				
EE16/8/5 (EF16)		A= 17 B= 17 H= 12,5	A= 19,5 B= 19,5 H= 15		A= 13 B= 18 H= 18,5	A= 14 B= 19 H= 19,5
		A= 17,5 B= 17 H= 11,5	A= 19,5 B= 19,5 H= 15			
EE20/10/6 (EF20)		A= 22 B= 22 H= 17			A= 17 B= 22 H= 22,5	A= 18 B= 22 H= 24
		A= 21 B= 20 H= 14	A= 24,5 B= 23 H= 17			
EE25/13/7 (EF25)		A= 25 B= 25 H= 18	A= 28,5 B= 28,5 H= 20,5		A= 19,5 B= 27,5 H= 28	A= 21 B= 28 H= 32

STANDARD BOBBINS

	HORIZONTAL VERSION			VERTICAL VERSION		
	HOLE ARRANGEMENT	DIMENSIONS		HOLE ARRANGEMENT	DIMENSIONS	
	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)
EE30/15/7		A= 32 B= 34 H= 23			A= 20 B= 36 H= 35	
EE32/16/9 (EF132)		A= 31,5 B= 33 H= 24				
ETD29/16/10		A= 36 B= 36 H= 26	A= 38 B= 38 H= 27		A= 24 B= 35 H= 41	
ETD34/17/11		A= 43 B= 40 H= 35	A= 45 B= 42 H= 37		A= 30 B= 40 H= 46	
ETD39/20/13		A= 48 B= 45 H= 38	A= 51 B= 48 H= 40		A= 33 B= 45 H= 50	

High power switch mode transformers

Features

- **High power transformers for high frequency inverter circuits.**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**
- **Wounded with standard copper insulated wire, copper strip or Litz wire**
- **Applications include UPS, welding power sources, battery chargers, electric vehicles, industrial power supplies.**

Technical description

The electrical energy conversion process in high frequency inverters requires the use of power transformers in order to provide an insulating barrier from the input to the output and to raise or lower the input signal and adjust it to the required output values. These components seem to be the heaviest and bulkiest of the whole equipment. The characteristics of the power transformers often affect also the efficiency, the volume, the weight, the cost and the performance of the whole system. The design and development of power transformers consequently require a specific know how and experience.

UTK produces power transformers, using standard configurations and well established methodologies to guarantee the high quality of the result. UTK can also provide qualified technical support in the design phase of the transformer, offering its competence in the selection of the materials and the most suitable production techniques.

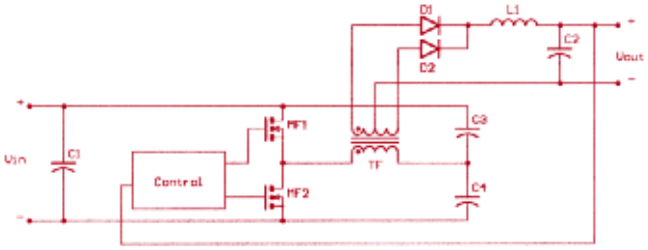
UTK Component power transformers have the following characteristics.

- Open construction with standard bobbins and cores, for vertical and horizontal mounting; vacuum-filled and encapsulated in plastic box for higher isolation voltage.
- Availability in a standard temperature range (0+80°) or an extended range
- Wound with standard copper insulated wire, copper strip or Litz wire
- Low leakage inductance and low primary to secondary coupling capacitance
- Safe and reliable galvanic insulation
- Output power up to 10KW
- Working frequency up to 200KHz
- Manufactured according to the international standards EN61558 and EN60950.

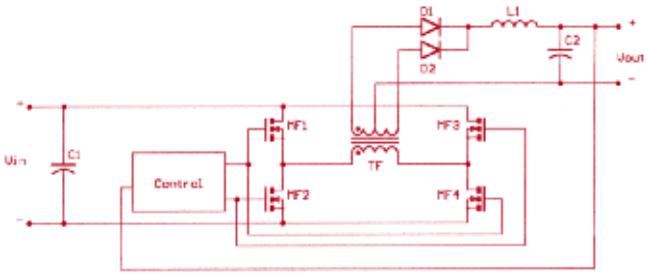
UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters
- Dielectric strength

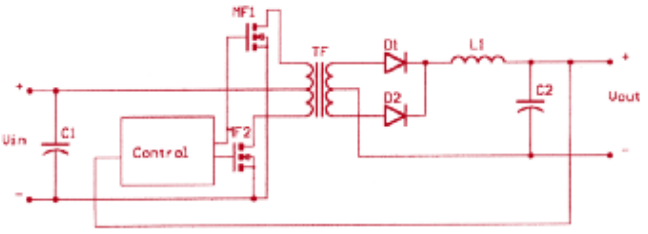
Applications



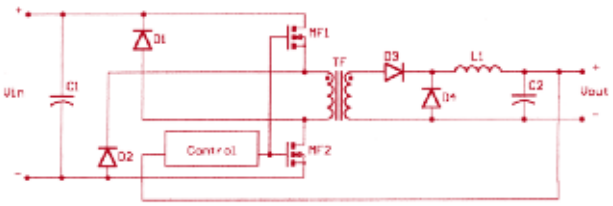
Half Bridge power converter circuit



Full-Bridge power converter circuit



Push-Pull power converter circuit



Double ended Forward power converter circuit

Core selection

In the following we give a table to help the designer in the core selection phase, showing the theoretical power output of a switching stage depending on the circuit topology and working frequency. Actual values may differ from the theoretical values since other factors, for example the number of the secondary windings, working voltages, circuit details, temperature rise limits, etc, are not taken into consideration.

Theoretical power output [Watt] of a Forward converter at the frequency shown [KHz]

Core	Ae	Ab	25	50	75	100	125	150	175	200
ETD39/20/13	1,250	1,740	87	174	261	348	435	522	609	696
ETD44/22/15	1,740	2,130	148	297	445	593	741	890	1038	1186
ETD49/25/16	2,110	2,710	229	457	686	915	1144	1372	1601	1830
EE42/21/15	1,780	1,770	126	252	378	504	630	756	882	1008
EE42/21/20	2,340	1,720	161	322	483	644	805	966	1127	1288
EE55/28/21	3,540	2,800	397	793	1189	1586	1982	2379	2775	3172
EE55/28/25	4,200	3,360	565	1129	1693	2258	2822	3387	3951	4516
EE65/32/27	5,320	4,150	883	1766	2649	3533	4416	5299	6182	7065
EE70/33/32	6,830	4,450	1216	2432	3647	4863	6079	7294	8510	9726

Theoretical power output [Watt] of a PushPull converter at the frequency shown [KHz]

Core	Ae	Ab	25	50	75	100	125	150	175	200
ETD39/20/13	1,250	1,740	174	348	522	696	870	1044	1218	1392
ETD44/22/15	1,740	2,130	297	593	890	1186	1483	1779	2076	2372
ETD49/25/16	2,110	2,710	457	915	1372	1830	2287	2745	3202	3660
EE42/21/15	1,780	1,770	252	504	756	1008	1260	1512	1764	2016
EE42/21/20	2,340	1,720	322	644	966	1288	1610	1932	2254	2576
EE55/28/21	3,540	2,800	793	1586	2379	3172	3965	4758	5551	6344
EE55/28/25	4,200	3,360	1129	2258	3387	4516	5645	6774	7903	9032
EE65/32/27	5,320	4,150	1766	3533	5299	7065	8831	10597	12364	14130
EE70/33/32	6,830	4,450	2432	4863	7294	9726	12157	14589	17020	19452

Theoretical power output [Watt] of a Half/full Bridge converter at the frequency shown [KHz]

Core	Ae	Ab	25	50	75	100	125	150	175	200
ETD39/20/13	1,250	1,740	2,39	479	718	957	1196	1436	1675	1914
ETD44/22/15	1,740	2,130	408	815	1223	1631	2038	2446	2854	3262
ETD49/25/16	2,110	2,710	629	1258	1887	2516	3145	3774	4403	5032
EE42/21/15	1,780	1,770	347	693	1040	1386	1733	2079	2426	2773
EE42/21/20	2,340	1,720	443	886	1328	1761	2214	2656	3099	3542
EE55/28/21	3,540	2,800	1090	2181	3271	4361	5452	6542	7632	8723
EE55/28/25	4,200	3,360	1552	3105	4657	6209	7762	9314	10866	12419
EE65/32/27	5,320	4,150	2429	4857	7286	9714	12143	14572	17000	19429
EE70/33/32	6,830	4,450	3343	6687	10030	13373	16716	20060	23403	26746

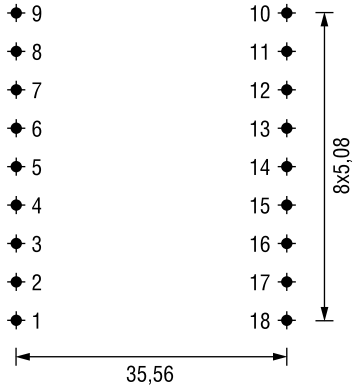
NOTES

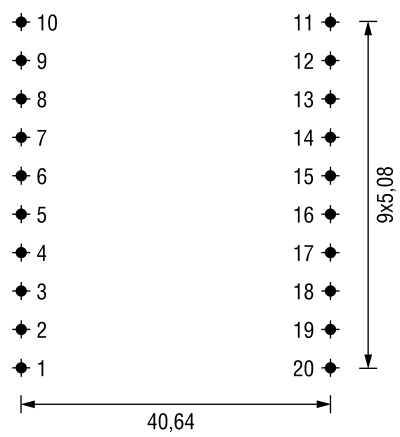
1- The table gives the theoretical power output of a converter depending on the working frequency and the circuit topology.
2- Ae and Ab respectively show the cross sectional area of the core and the winding area [cm2].
3- Theoretical values are calculated for a peak flux density Bmax=0.16T, and a coil current density of 4A/mmq.
4- Actual values of output power differ from theoretical values as core gets larger and for higher frequencies and power. Other factors, for example skin effect and proximity effect, are not taken into consideration. At frequencies over 50/100KHz the core losses of some materials require also a reduction of the peak flux density Bmax.

STANDARD BOBBINS

HORIZONTAL VERSION

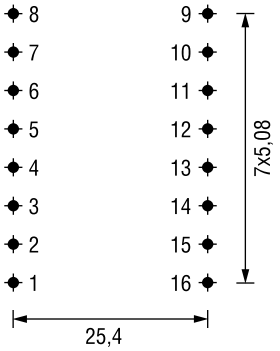
HOLE ARRANGEMENT	DIMENSIONS	
VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)
ETD39/20/13	A= 48 B= 45 H= 38	A= 51 B= 48 H= 40
ETD44/22/15	A= 52 B= 50 H= 40	A= 55 B= 53 H= 43
ETD49/25/16	A= 57 B= 54 H= 43	A= 60 B= 57 H= 46

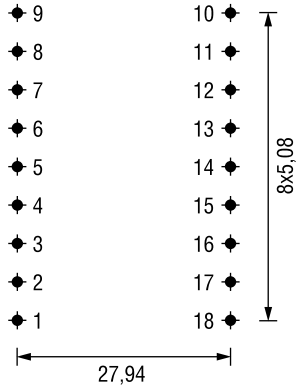


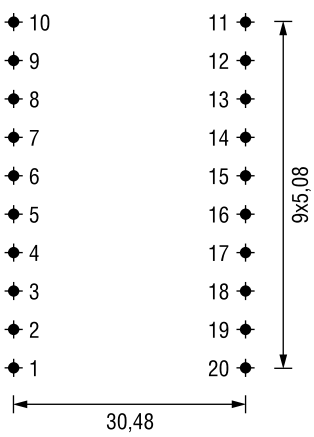


VERTICAL VERSION

HOLE ARRANGEMENT	DIMENSIONS	
VIEW PIN - SIDE	OPEN VERSION (AxBxH)	BOX VERSION (AxBxH)
ETD39/20/13	A= 33 B= 45 H= 50	
ETD44/22/15	A= 35 B= 50 H= 55	
ETD49/25/16	A= 36 B= 55 H= 59	



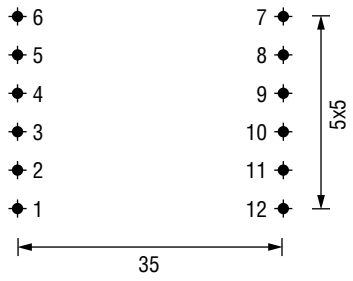
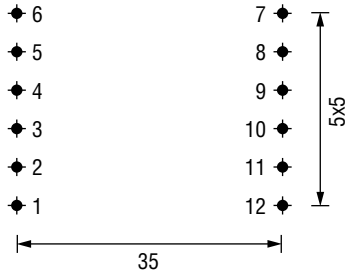
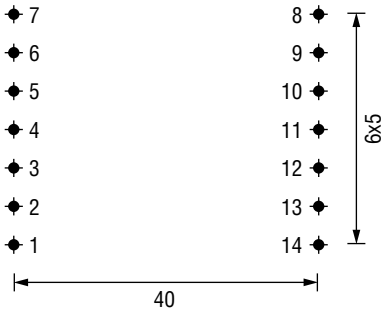




STANDARD BOBBINS

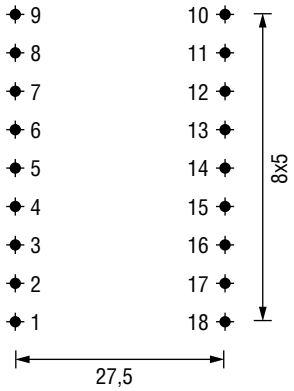
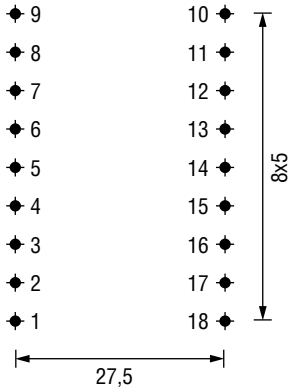
HORIZONTAL VERSION

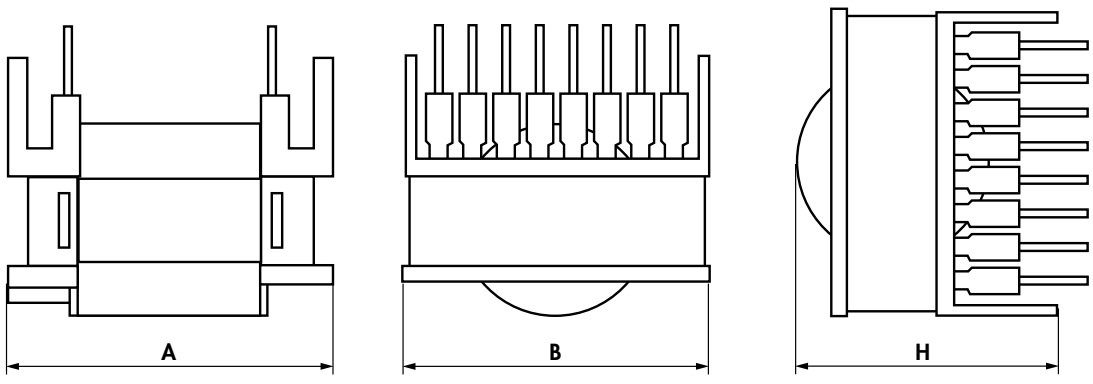
HOLE ARRANGEMENT — DIMENSIONS

	VIEW PIN - SIDE	OPEN VERSION (AxBxH)
EE42/21/15		A= 45 B= 43 H= 45
EE42/21/20		A= 45 B= 43 H= 40
EE55/28/21		A= 56 B= 56 H= 44

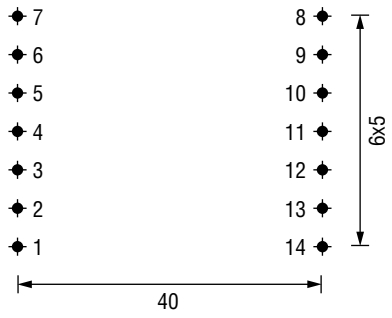
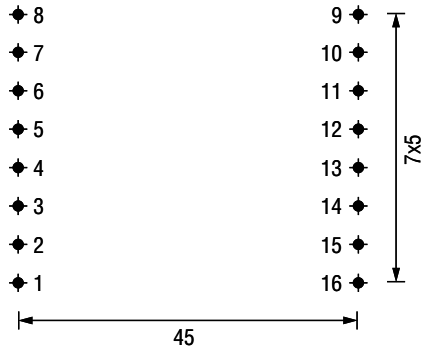
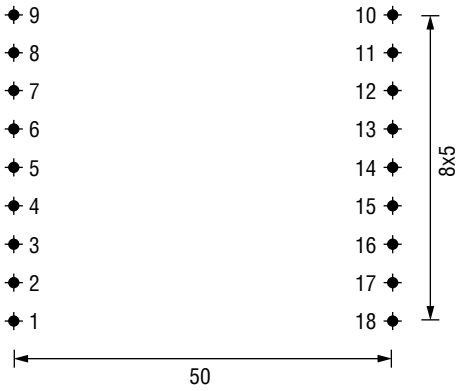
VERTICAL VERSION

HOLE ARRANGEMENT — DIMENSIONS

	VIEW PIN - SIDE	OPEN VERSION (AxBxH)
EE42/21/15		A= 33 B= 46 H= 46
EE42/21/20		A= 38 B= 48 H= 46
EE55/28/21		



STANDARD BOBBINS

	HORIZONTAL VERSION		VERTICAL VERSION	
	HOLE ARRANGEMENT DIMENSIONS		HOLE ARRANGEMENT DIMENSIONS	
	VIEW PIN - SIDE	OPEN VERSION (AxBxH)	VIEW PIN - SIDE	OPEN VERSION (AxBxH)
EE55/28/25		A= 56 B= 56 H= 48		
EE65/32/27		A= 66 B= 66 H= 55		
EE70/33/32		A= 66 B= 71 H= 58		

Drive transformers

Features

- **Used in high frequency drive circuits for MOSFETs and IGBTs.**
- **Wide range of standard products available.**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**
- **Compact size**

Technical description

Following the fast growth of the semiconductor technology, power electronic devices like MOSFETs and IGBTs have seen big changes during the past years. Modern semiconductor components allow switching of high powers with higher working voltages, higher operating frequencies and lower losses. At the same time they require complex and performing new driving circuits. UTK Component drive transformer are an outgrowth of the standard pulse transformers, optimised in the choice of the materials and manufacturing techniques to give superior performance in terms of switching speed, low transition times and form fidelity, in MOSFET and IGBT drive circuits. They give also safe and reliable galvanic isolation, according to international standards, with high working voltages.

UTK drive transformers have the following characteristics.

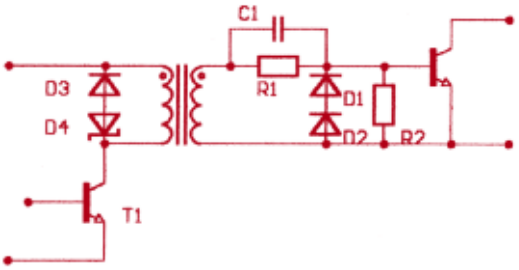
- Compact construction. They are vacuum-filled and encapsulated in plastic box made with self extinguishing material UL94-HB, suitable for the application on high density PCBs.
- Availability in a standard temperature range (0+80°) or an extended range
- Safe and reliable galvanic insulation
- Excellent magnetic coupling between the primary and secondary winding, which provides high fidelity in the transmission of the driving pulse
- Low magnetising current.
- Transmission of high instantaneous power values
- Working frequencies up to 200 KHz, with near-zero propagation times
- Low losses.
- Maximum working voltage up to 1KV. Dielectric strength tests are conducted according to the international standards EN61558 and EN60950.

A wide range of standard products is available for the driving of low to high power devices. In order to satisfy specific requirements UTK Component can develop special products according to the customers' needs.

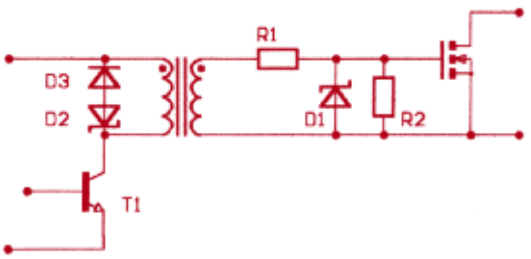
UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters (n, Lp, Ld, Ck, Rp, Rs)
- Dielectric strength

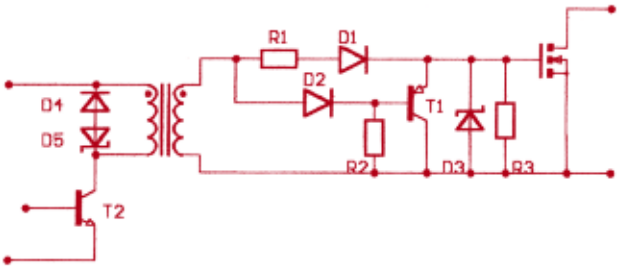
Applications



Transformer coupled BJT driving circuit.

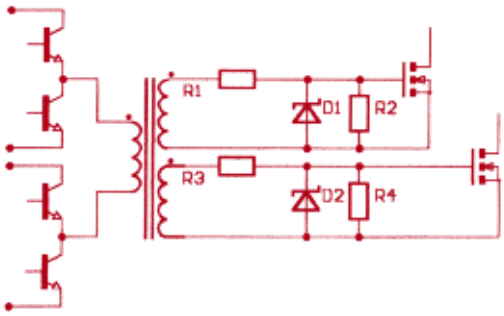


Transformer coupled MOSFET driving circuit.



Transformer coupled MOSFET driving circuit, with a low impedance path for fast gate turn-off.

Drive transformers



Dual output gate drive circuit for MOSFETs and IGBTs.

Reference parameters

Winding ratio n

Turns ratio of the primary winding to the secondary.

Voltage time area ∫udt

Voltage time Integral on the secondary winding, or voltage time area. In case of application of unipolar pulse to the primary winding, ∫udt shows the maximum permitted value for the integral of secondary voltage, to avoid saturation of the magnetic core. Expressed in Vμs.

Inductance Lp

Nominal value of inductance on primary winding. The maximum deviation from the nominal value (tolerance) is +\-30%. Measured with LCR meter at the primary winding (Ambient temp 25°C, frequency 10KHz, drive UAC,rms=250mV).

Leakage inductance Ld

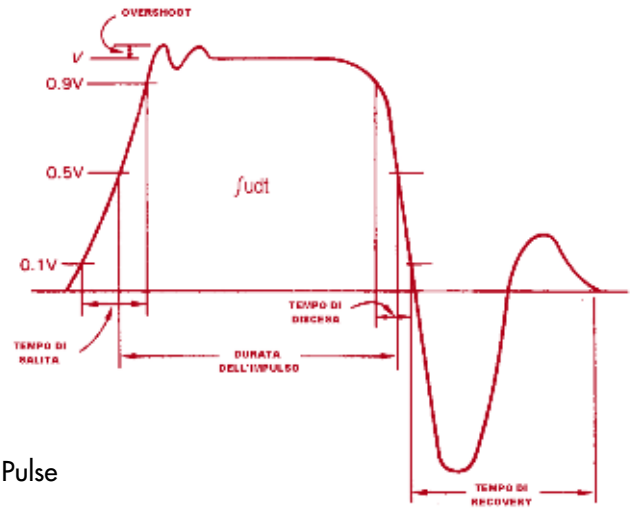
Leakage inductance measured at the primary winding. It gives indications concerning the quality of the magnetic coupling between primary and secondary winding. A low value of leakage inductance provides high fidelity in the pulse transmission with short transition and propagation times. Measured with LCR meter at the primary winding, with secondary windings shorted (Ambient temp 25°C, frequency 10KHz, drive UAC,rms=250mV).

Coupling capacitance Ck

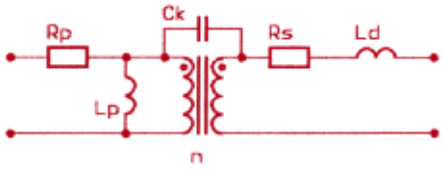
Coupling capacitance between primary and secondary winding, depending on electric coupling of the coils. Low Ck values provide a high level of noise immunity to the driving circuit, preventing transmission of voltage spikes or high frequency noise coupling to the secondary and avoiding spurious triggering. Measured with LCR meter between the primary and secondary windings, with both windings shorted (frequency 10KHz, drive UAC,rms=250mV).

Winding resistance Rp,Rs

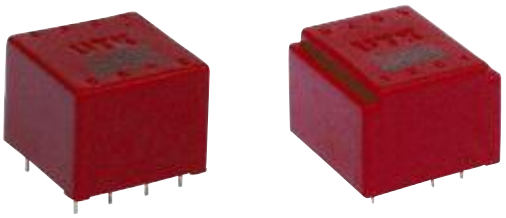
Resistance measured with LCR meter at the primary and secondary windings.



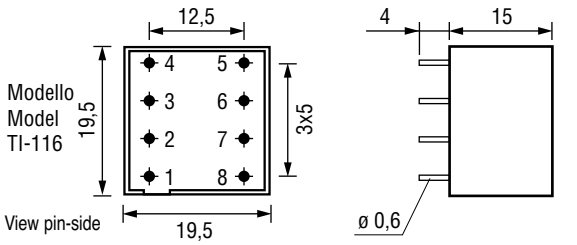
Pulse

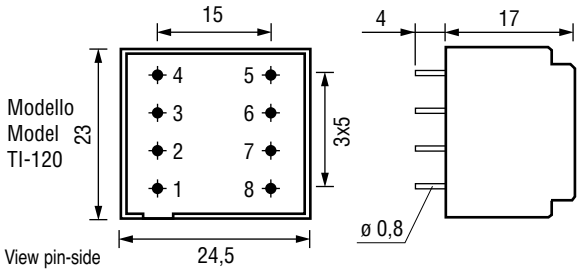


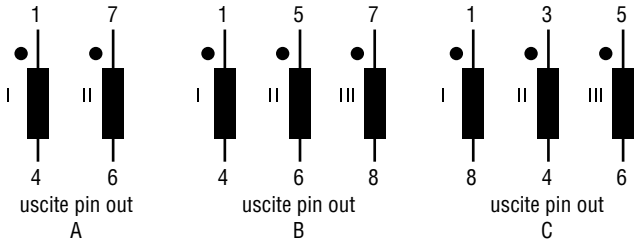
Equivalent circuit.

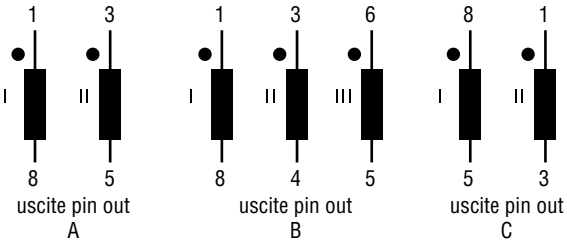


Code	n	∫udt (µVs)	Lp (µH)	Ld (µH)	Ck (pF)	Rp (mΩ)	Rs (mΩ)	Model	Pin Out
TI-116604	1:1:1	130	800	2,8	19	300	268-338	TI-116	C
TI-116606	1:1	130	800	2,4	18	260	302	TI-116	A
TI-116607	1:1,2:1,2	160	800	2,5	24	375	398-515	TI-116	C
TI-116608	1:1,2	160	800	2,3	17	375	390	TI-116	A
TI-116611	1:1	240	2300	9,5	17	720	850	TI-116	A
TI-116612	1:1:1	240	2300	9,4	21	850	720-990	TI-116	B
TI-116616	1:1	80	330	1,9	12	175	200	TI-116	A
TI-116617	1:1:1	80	330	2,2	14	198	175-224	TI-116	C
TI-116618	1:1,3	110	330	1,28	13	200	220	TI-116	A
TI-116620	1:1,3:1,3	110	330	1,7	16	200	220-282	TI-116	C
TI-116621	1:1:1	100	480	2,6	17	240	210-272	TI-116	C
TI-116623	1:1	100	480	1,6	14	210	244	TI-116	A
TI-116624	1,4:1	150	2000	6,2	19	535	442	TI-116	A
TI-116625	1,4:1:1	150	2000	6,6	21	610	380-505	TI-116	B
TI-116628	1:1,36:1,36	160	640	2,1	20	345	400-520	TI-116	C
TI-116629	1:1,7	160	400	1,7	13	275	388	TI-116	A
TI-116630	1:1,7:1,7	160	400	1,8	19	275	400-515	TI-116	C
TI-116627	1:1:1	210	2000	7,1	23	630	535-730	TI-116	B
TI-116631	1:1	210	2000	6,6	18	535	640	TI-116	A
TI-116632	1:1,36	160	640	2,2	15	336	390	TI-116	A
TI-116622	1,3:1,3	270	1700	6,5	23	760	800-1000	TI-116	B
TI-116633	1:1,3	270	1700	7,5	17	720	800	TI-116	A
TI-116613	1:1:1	270	3000	10	24	955	810-1100	TI-116	C
TI-116635	1,4:1	160	2100	7,6	17	695	575	TI-116	A
TI-116636	1,4:1:1	160	2100	9,1	21	800	490-650	TI-116	C
TI-120010	1:1	300	3200	5	25	705	790	TI-120	A
TI-120015	1:1:1	300	3200	5,1	28	790	710-880	TI-120	B
TI-120018	1:1	280	2600	4,85	23	635	715	TI-120	A
TI-120020	1:1:1	280	2600	5	28	715	645-800	TI-120	B
TI-120022	1:1,2	350	2600	4	25	730	795	TI-120	A
TI-120023	1:1,2:1,2	350	2600	4	29	735	805-985	TI-120	B
TI-120030	2:1	200	5500	10	28	485	235	TI-120	A
TI-120040	2:1:1	200	5500	10	31	555	200-265	TI-120	B
TI-120050	3:1	140	6000	16,5	22	500	161	TI-120	A
TI-120055	3:1:1	140	3800	16	26	450	139-185	TI-120	B
TI-120122	1:4:4	300	140	0,61	22	58	720-900	TI-120	B
TI-120125	3:1	70	950	6,5	25	128	55	TI-120	C
TI-120126	1:2,2:2,2	300	440	1,3	26	155	730-905	TI-120	B
TI-120127	1:1	140	440	1,65	21	110	125	TI-120	A
TI-120128	1:1:1	140	440	1,4	25	125	113-142	TI-120	B
TI-120129	1:1	250	1400	2,8	28	300	338	TI-120	A
TI-120130	1:1:1	250	1400	3,8	32	335	305-375	TI-120	B









Current sense transformers

Features

- **Current sense transformers used to detect switching currents in power semiconductors for control and monitoring functions or in current limiting circuits.**
- **Wide range of standard products available.**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**
- **Compact size**

Technical description

UTK current sense transformers are normally used to detect switching currents in power semiconductors, for control, monitoring and protection purposes or to read the current in "current mode" control circuits. They are necessary in all applications where a galvanic insulation between the measured current and the measuring circuit is required. Unlike the current transformers used for measurement application, these devices don't give very high accuracy. Their main application concerns in fact other factors, as for example cost and circuit simplicity, since they have to detect peak values or current trends rather than absolute values with the utmost precision.

In addition to the galvanic insulation between the power line and the control circuit, the current sensors give many advantages compared with resistive current sensing. The lower power dissipation of a current sense transformer allows a much higher signal level, improving the signal to noise environment of the control system. Unlike resistive shunts, where the resistance to inductance ratio is very poor, they also allow high working frequencies.

UTK Component current transformers have the following characteristics.

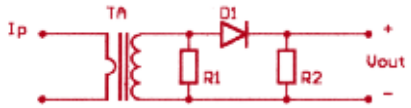
- Compact construction. They are vacuum-filled and encapsulated in plastic box made with self extinguishing material UL94-HB, suitable for the application on high density PCBs.
- Availability in a standard temperature range (0+80°) or an extended range
- High turns ratio, from 1:50 to 1:800
- Primary current from 20 to 100A
- High working frequency (from 40 KHz to 200KHz)
- Safe and reliable galvanic insulation
- Maximum working voltage up to 1KV. Dielectric strength tests are conducted according to the international standards EN61558 and EN60950.
- Low losses.

A wide range of standard products is available for the most common applications. In order to satisfy specific requirements UTK Component can develop special products according to the customers' needs.

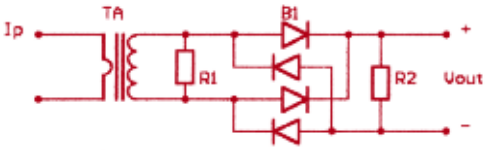
UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters
- Dielectric strength

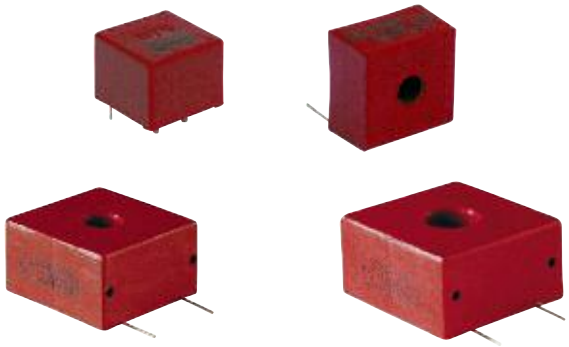
Applications

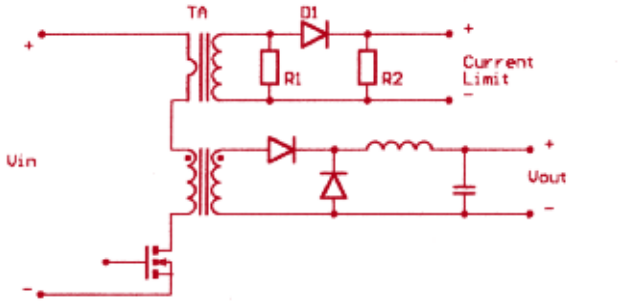


Current sense transformer and secondary circuit for the measure of unipolar pulses. Voltage on resistor R2 gives a good measure of the primary current. Diode D1 blocks inverse voltage during core demagnetization. Resistor R1, with its high value, allows a fast core recovery to detect very closely spaced pulses without core saturation.

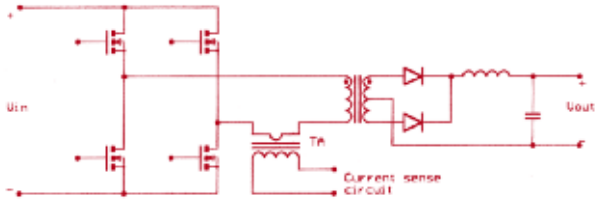


Current sense transformer and secondary circuit for the measure of bipolar pulses. The circuit can detect positive and negative current pulses thanks to diode bridge.





Current measure circuit in a single-ended forward power conversion stage.



Current measure circuit in a full-bridge power conversion stage.

Reference parameters

Winding ratio — n

Turns ratio of the primary winding to the secondary. The primary winding is usually a single turn of high cross sectional area supplied by the user. A high winding ratio provides high secondary inductance, more accurate measures and lower insertion losses on the primary circuit.

Primary current — Ip

Nominal value of the primary current, mainly related to the cross sectional area of the windings.

Voltage time area — ∫udt

Voltage time Integral on the secondary winding, or voltage time area. In case of measure of unipolar pulses, ∫udt shows the maximum permitted value for the integral of secondary voltage, to avoid saturation of the magnetic core. Expressed in Vμs. Measuring circuits should provide adequate mechanisms for core demagnetization, also with very closely spaced pulses.

Secondary Inductance — Ls

Nominal value of inductance on secondary winding. The maximum deviation from the nominal value (tolerance) is +\-25%. Measured with LCR meter at the primary winding (Ambient temp 25°C, frequency 10KHz, drive UAC,rms=250mV). The higher the inductance value, the lower the magnetizing current and more accurate the measure. Usually a magnetizing current equal to 10% of the primary current at the end of on time, gives a high quality measure in most applications.

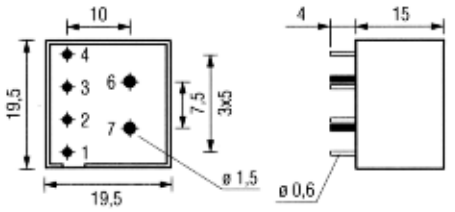
Winding resistance — Rs

Resistance measured with LCR meter at the secondary winding.

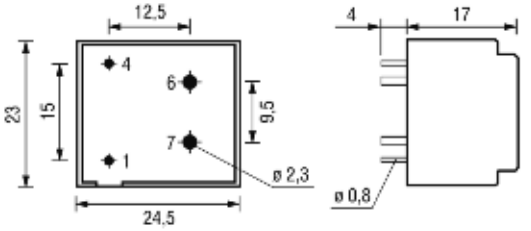
Code	n	Ip (A)	∫udt (μVs)	Ls (mH)	Rs (Ω)	Model	Pin Out
TA-314050	1:50	20	250	7	0,16	TA-314	A
TA-314100	1:100	20	450	28	0,63	TA-314	A
TA-314200	1:200	20	950	112	2,85	TA-314	A
TA-316050	1:50	30	250	7	0,16	TA-316	A
TA-316100	1:100	30	450	28	0,63	TA-316	A
TA-316200	1:200	30	950	112	2,85	TA-316	A
TA-326100	1:100	60	600	56	0,46	TA-326	A-Pin
TA-326110	1:100	60	600	56	0,46	TA-326	A-faston
TA-326200	1:200	60	2500	224	2,00	TA-326	A-Pin
TA-326210	1:200	60	2500	224	2,00	TA-326	A-faston
TA-331100	1:100	100	1900	24	0,35	TA-331	A-Pin
TA-331110	1:100	100	1900	24	0,35	TA-331	A-faston
TA-331200	1:200	100	3800	98	1,10	TA-331	A-Pin
TA-331210	1:200	100	3800	98	1,10	TA-331	A-faston
TA-116100	* 1:100	25	500	13	0,95	TA-116	A
TA-116200	* 1:200	25	1000	52	2,50	TA-116	A
TA-116500	* 1:500	25	2500	350	19	TA-116	A
TA-116800	* 1:800	25	4000	900	50	TA-116	A
TA-120100	* 1:100	50	650	21,5	0,6	TA-120	A
TA-120200	* 1:200	50	1300	86	2,1	TA-120	A

Current sense transformers

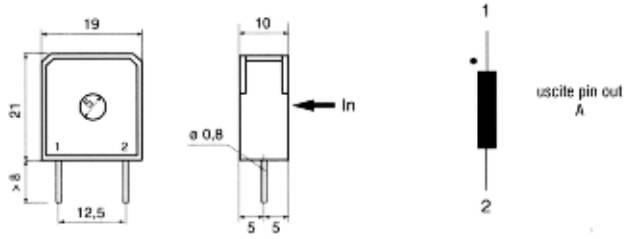
Modello
Model
TA-116
View pin-side



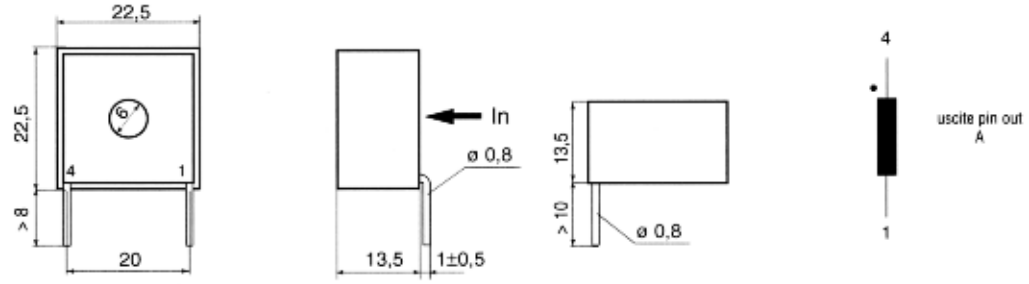
Modello
Model
TA-120
View pin side



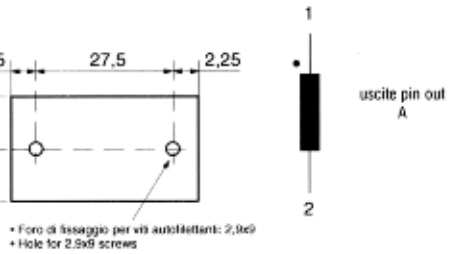
Modello
Model
TA-314
View pin-side



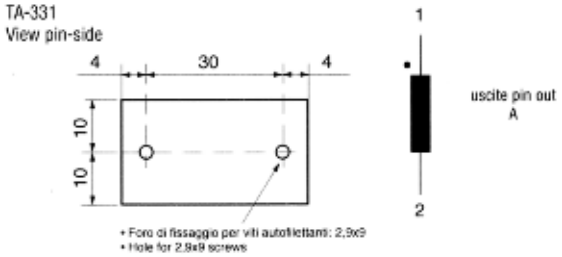
Modello
Model
TA-316
View pin-side

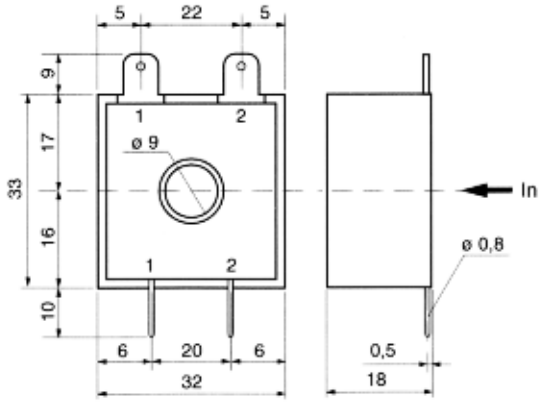


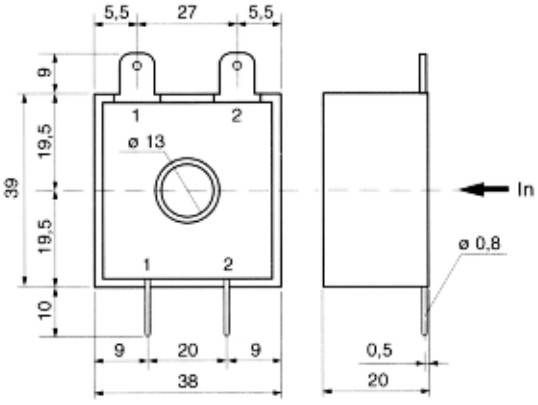
Modello
Model
TA-326
View pin-side



Modello
Model
TA-331
View pin-side







Features

- **Storage and filter chokes for low power switch mode power supplies.**
- **Wide range of standard products available.**
- **Wound on toroidal core, for vertical and horizontal PCB mounting.**
- **Compact size**

Technical description

Linear storage chokes are widely used in switching power supply circuits which operate in forward mode. Their task is to level the output current by storing the energy during the conduction time of the power semiconductors and by releasing it during the off time. The filter inductors are normally used in output circuits of the switching power supplies in order to reduce the voltage and current ripple. In both cases the inductors operate with high DC currents.

UTK switching inductors are designed for high storage energy values and low losses at high switching frequencies. In order to minimize the physical dimensions they are wound on iron powder toroidal cores and operate with flux density close to saturation. The windings on a single layer provide low interwinding capacitance and good noise immunity up to high frequencies.

A wide range of standard products is available for the most common applications. In order to satisfy specific requirements UTK Component can develop special products according to the customers' needs. Storage and filter chokes for single-chip DC/DC converters of the National Semiconductor SIMPLE SWITCHER, family (LM259X e LM267X) are also available.

UTK Component switching inductors have the following characteristics.

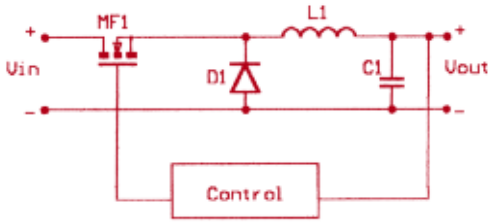
- Compact size, wound on iron powder toroidal cores, for vertical and horizontal PCB mounting.
- Nominal currents from 0.25A to 10 A.
- Inductance values from 15µH to 10000mH
- High working frequency, up to 100KHz
- Low losses

UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

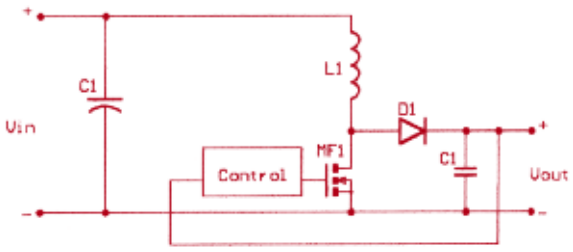
- Visual inspection
- Value of the reference parameters

Applications

Output choke in a Forward converter.



Buck DC/DC power conversion stage.



Boost DC/DC power conversion stage.

Reference parameters

Inductance **Ln**

Nominal value of the inductance without DC current. Measured with LCR meter (Ambient temp 25°C, frequency 10KHz, drive UAC,rms=0.5Vac). Tolerance +/- 25%.

Nominal current **In**

Nominal DC offset current.

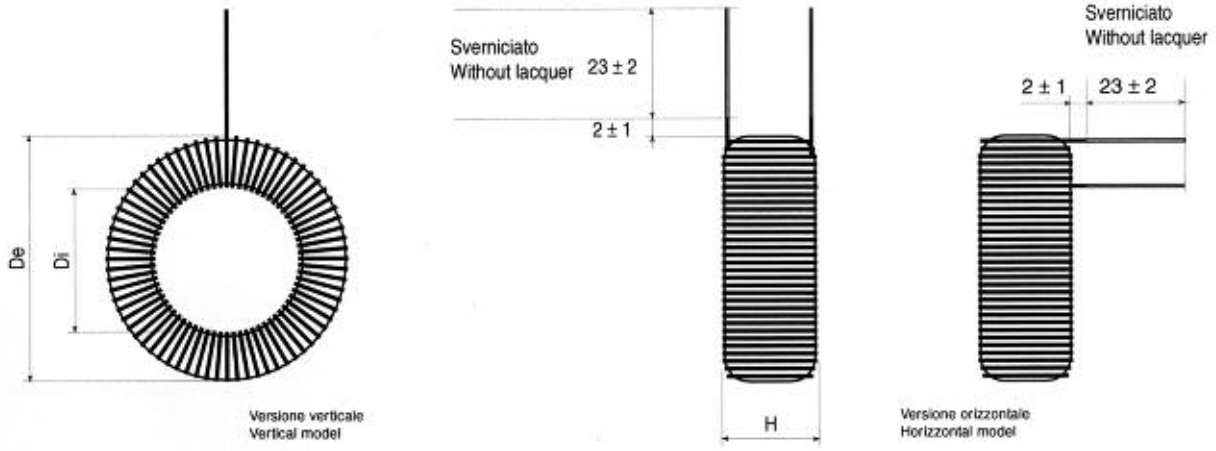
Winding resistance **R**

Winding resistance measured with LCR meter.

Frequency **Fmax**

Maximum working frequency.

Code	In (A)	Ln (µH)	f max (KHz)	Dimension (De x Di x H)	Terminals (ø)
B-500251	0.25	8000	60	17.5x6.5x8	0.25
B-500510	0.5	2000	60	17.5x6.5x8	0.32
B-500520	0.5	8000	60	23x10x9.2	0.32
B-501010	1	500	60	17.5x6.5x8	0.50
B-501020	1	2000	60	23.5x10x9.5	0.50
B-501030	1	4000	60	26x11x13	0.50
B-502510	2.5	60	60	17x7x7.5	0.75
B-502520	2.5	300	60	24x9.5x9.5	0.75
B-502530	2.5	600	60	26x11x13	0.75
B-502540	2.5	1200	60	30x11.5x14.5	0.75
B-502550	2.5	2400	60	42x18.5x14.5	0.75
B-503510	3.5	40	60	17x6.8x7.7	0.85
B-503520	3.5	80	60	22x11x8.5	0.85
B-503530	3.5	150	60	24.8x12.5x10	0.85
B-503540	3.5	220	60	29x12.8x12.8	0.85
B-503550	3.5	350	60	35x18x13	0.85
B-503560	3.5	470	60	40.5x20x13	0.85
B-503570	3.5	600	60	42x22.5x16.5	0.85
B-505010	5	25	60	17.5x6.5x8.2	1.1
B-505020	5	50	60	22.5x10.5x8.5	1.1
B-505030	5	100	60	25.5x11.5x12	1.1
B-505040	5	150	60	29.5x12.5x13.5	1.1
B-505050	5	200	60	35.5x18x13.5	1.1
B-505060	5	300	60	41x19.5x13.5	1.1
B-505070	5	500	60	42x22.5x16.5	1
B-505080	5	900	60	44.5x20x19	1.1
B-507510	7.5	20	60	23x10x9	1.30
B-507520	7.5	40	60	26x11.5x12.5	1.30
B-507530	7.5	70	60	30x12x14	1.30
B-507540	7.5	100	60	36x17x14	1.30
B-507550	7.5	150	60	41.5x19x14	1.30
B-507560	7.5	220	60	43x22x17.5	1.30
B-507570	7.5	400	60	46x19x20	1.30
B-507580	7.5	600	60	52x19x20	1.3
B-510010	10	15	60	23.5x9.5x9.5	1.60
B-510020	10	30	60	26x11x13	1.60
B-510030	10	50	60	30x11.5x14.5	1.60
B-510040	10	80	60	36.5x18.14.5	1.60
B-510050	10	100	60	41.5x19x14.5	1.60
B-510060	10	150	60	43x21x18	1.60
B-510070	10	300	60	50x21x18	1.60



50-60Hz Current transformers

Features

- **Current sense transformers used to detect 50-60Hz alternating currents up to 600A**
- **Wide range of standard products available.**
- **Special versions according to customers' requirements**
- **Manufactured according to EN61558 and EN60950 standards**

Technical description

Current transformers intended for measuring alternating currents at 50-60Hz, for overcurrent detection and protection in industrial applications.

The standard products range include transformers from 25A to 600A. Their toroidal structure makes them easy to insert into cables or other parts of the circuits without having to interrupt or modify the circuit itself. The conductor carrying the current to be measured serves as the one turn primary while the secondary is wound around the core. The voltage at the load resistor is proportional to the current flowing in the primary winding. Sensitivity can be enhanced by increasing the number of primary turns.

UTK current transformers provide the galvanic insulation and dielectric strength adequate for separation from a.c. mains potentials.

UTK Component current transformers have the following characteristics.

- Compact construction. They are vacuum-filled and encapsulated in plastic box made with self extinguishing material UL94-HB, suitable for the application on high density PCBs.
- Availability in a standard temperature range (0+85°) or an extended range
- Wound on toroidal cores
- Primary current from 25 to 600A
- Working frequency 50-60Hz
- Safe and reliable galvanic insulation (4KV)
- Low losses.

A wide range of standard products is available for the most common applications. In order to satisfy specific requirements UTK Component can develop special products according to the customers' needs.

UTK Component controls closely the production during the process and at the end of it, granting the quality and reliability of the product. The carried out tests include:

- Visual inspection
- Pinout and polarity check
- Value of the reference parameters
- Dielectric strength

Reference parameters

Primary and secondary current **Ip/Is**

RMS value of the alternating current on the primary (Ip) and secondary (Is) windings.

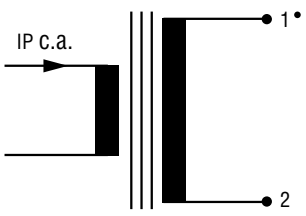
Load resistance **Ru**

Nominal load resistance on the secondary circuit.

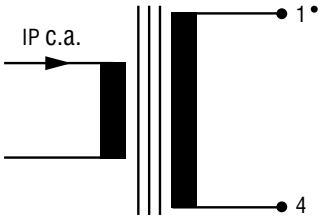
Output voltage **Vu**

Voltage measured at the load, proportional to the primary current value.

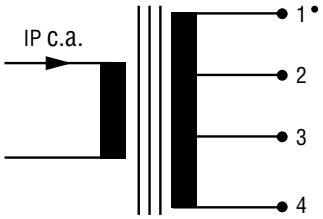
50-60Hz Current transformers



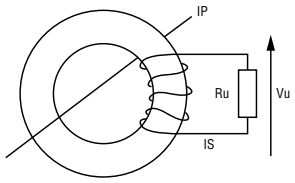
Circuit 1



Circuit 2

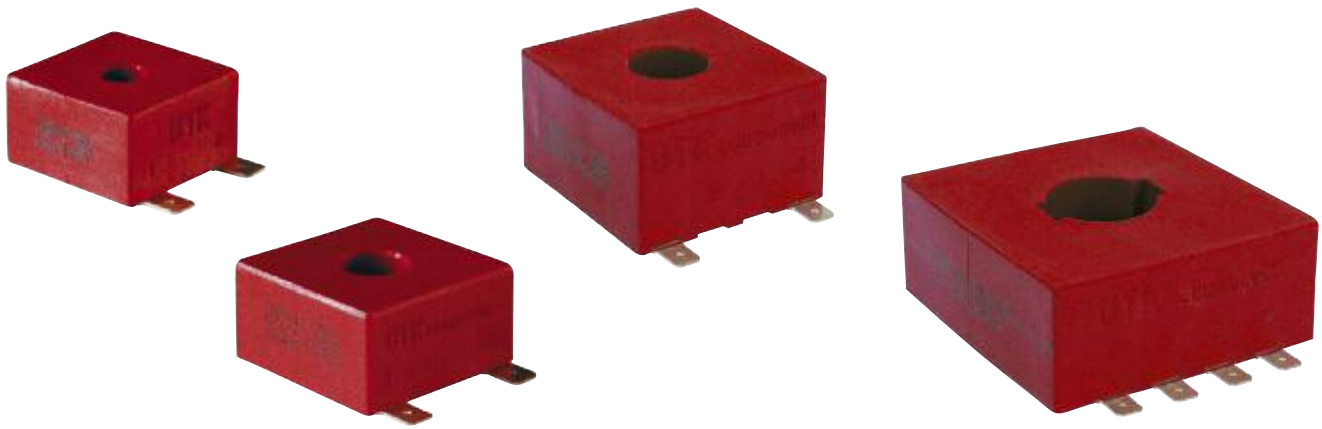


Circuit 3

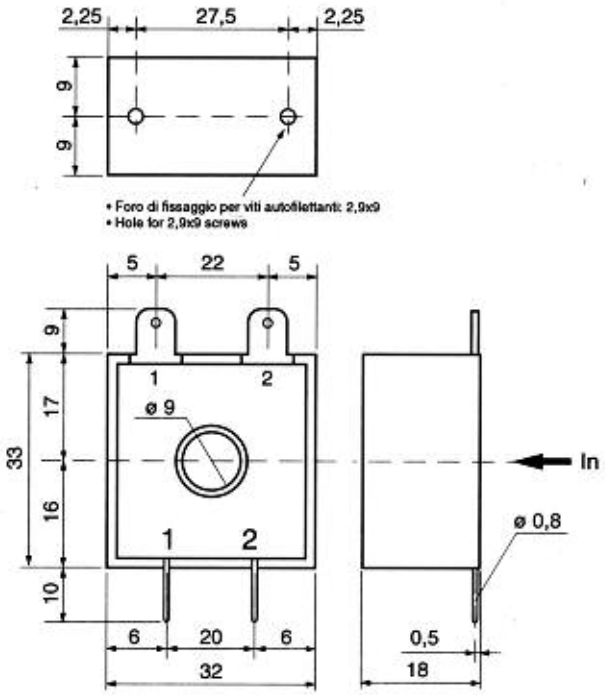


Connection diagram

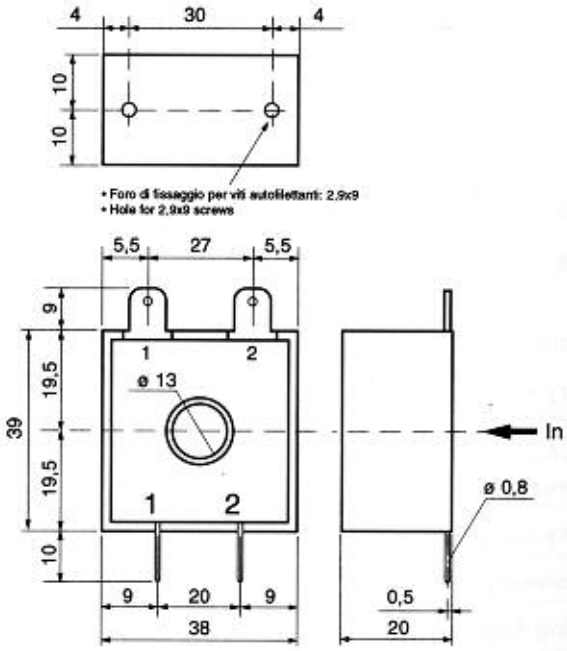
Code	Ip/Is	Circuit	Model	Output	Ru	Test Voltage	Vu	Accuracy
TA-526020	25/0,05 A	1	TA-526	PIN	40 Ω	4 KVac	2 Vac	2,1 %
TA-526025	25/0,05 A	1	TA-526	1-2	40 Ω	4 KVac	2 Vac	2,1 %
TA-531010	25/0,05 A	1	TA-531	1-2	40 Ω	4KVac	2 Vac	2,0 %
TA-531015	25/0,05 A	1	TA-531	PIN	40 Ω	4KVac	2 Vac	2,0 %
TA-531020	50/0,05 A	1	TA-531	PIN	80 Ω	4 KVac	4 Vac	1,0 %
TA-531050	50/0,05 A	1	TA-531	1-2	80 Ω	4 KVac	4 Vac	1,0 %
TA-540100	100/0,2 A	2	TA-540	1-4	20 Ω	4 KVac	4 Vac	0,8 %
TA-540125	25/0,2 A			1-2	20 Ω	4 KVac	4 Vac	2,5 %
	50/0,2 A	3	TA-540	1-3	20 Ω	4 KVac	4 Vac	1,5 %
	100/0,2 A			1-4	20 Ω	4 KVac	4 Vac	0,8 %
TA-540150	100/0,1 A	2	TA-540	1-4	20 Ω	4 KVac	2 Vac	0,4 %
TA-540200	200/0,2 A	2	TA-540	1-4	10 Ω	4 KVac	2 Vac	0,4 %
TA-560100	400/0,4 A	2	TA-560	1-4	20 Ω	4 KVac	8 Vac	0,4 %
TA-560200	200/0,4 A			1-2	20 Ω	4 KVac	8 Vac	1,0 %
	400/0,4 A	3	TA-560	1-3	20 Ω	4 KVac	8 Vac	0,4 %
	600/0,4 A			1-4	20 Ω	4 KVac	8 Vac	0,2 %
TA-560300	400/0,2 A	2	TA-560	1-4	20 Ω	4 KVac	4 Vac	0,2 %
TA-560400	200/0,2 A			1-2	20 Ω	4 KVac	4 Vac	0,5 %
	300/0,2 A	3	TA-560	1-3	20 Ω	4 KVac	4 Vac	0,3 %
	400/0,2 A			1-4	20 Ω	4 KVac	4 Vac	0,2 %
TA-560500	600/0,6 A	2	TA-560	1-4	10 Ω	4 KVac	6 Vac	0,2 %
TA-560600	600/0,2 A	2	TA-560	1-4	20 Ω	4 KVac	4 Vac	0,5 %



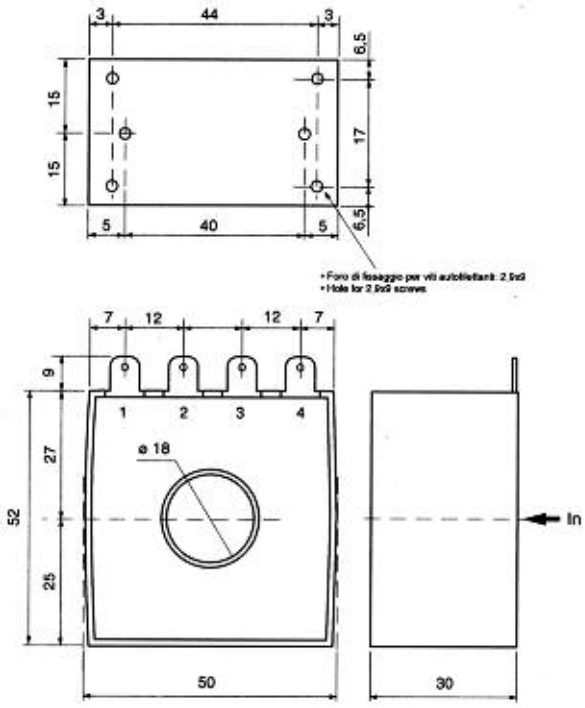
Modello
Model
TA-526
View pin-side



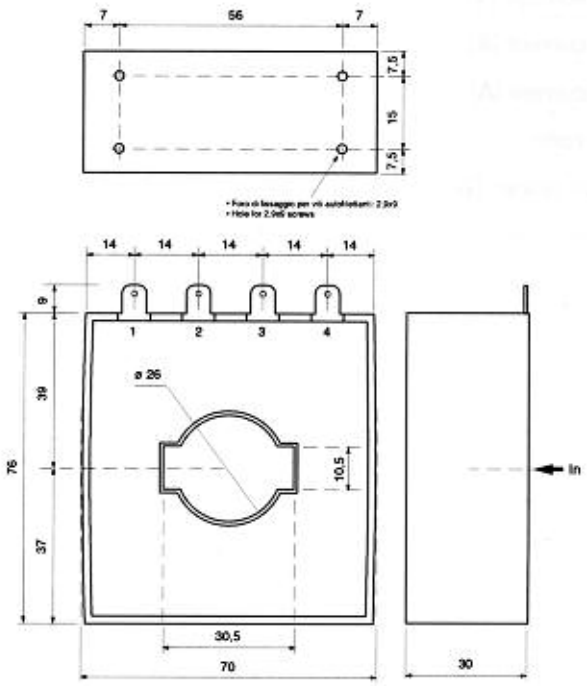
Modello
Model
TA-531
View pin-side



Modello
Model
TA-540
View pin-side



Modello
Model
TA-560
View pin-side



Custom designed inductive components

To meet customer's special requirements, UTK Component designs, develops and produces special inductive components, offering its experience and technological competence and a high qualified designing staff.

In the following you can find a technical data sheet including reference parameters useful for the design of pulse and drive transformers, current sense transformers, switching inductors and transformers for low and high power. To request the design of a special product, please fill in the form and sketch the application circuit diagram.

Power conversion transformers

Data sheet

Switching power supply circuit used		
Primary voltage **(Vdc)**	**min.:**	**max.:**
Primary inductance **(mH)**		
Tolerance on inductance **(%)**		
Primary current r.m.s. **(mA)**		
Max primary over current **(mA)**		
Working frequency **(kHz)**		
Switching time **(µs)**	**ton max.:**	**ton min.:**
Rated power **(W)**		

For each secondary

	1	**2**	**3**	**4**
Peak voltage **(V)**				
Peak current **(A)**				
RMS current **(A)**				
Turns ratio				
Output power **(W)**				
Working voltage between different windings **(V)**				
Test voltage between different windings **(V)**				
Operating temperature **(°C)**				
Open construction or box version				
Size limitations **(mm)**				
Standards to comply with				
Quantity				
Target price				

50/60 Hz Current transformers

Data sheet

Primary current r.m.s. **(mA)**	
Max primary over current **(mA)**	
Working frequency **(kHz)**	
Secondary inductance **(mH)**	
Load resistance **(Ω)**	
Accuracy **(%)**	
Working voltage between primay and secondary **(V)**	
Test voltage between primay and secondary **(V)**	
Operating temperature **(°C)**	
Size limitations **(mm)**	
Passing through hole model (show the dimensions)	
Inside primary wire model	
Standards to comply with	
Quantity	
Target price	

HF Current sense transformers

Data sheet

Primary current r.m.s. **(mA)**	
Max primary over current **(mA)**	
Working frequency **(kHz)**	
Secondary inductance **(mH)**	
Load resistance **(Ω)**	
Primary vs. secondary current linearity **(%)**	
Working voltage between primay and secondary **(V)**	
Test voltage between primay and secondary **(V)**	
Operating temperature **(°C)**	
Size limitations **(mm)**	
Passing through hole model (show the dimensions)	
Inside primary wire model	
Standards to comply with	
Quantity	
Target price	

Pulse and drive transformers

Data sheet

Turns ratio _____

Min. voltage time area at winding **(µVs)** _____

Primary inductance **(mH)** _____

Tollerance on inductance **(%)** _____

Primary current r.m.s. **(mA)** _____

Max. primary over current **(mA)** _____

Working frequency **(kHz)** _____

Max. coupling capacity between windings **(pF)** _____

Max. admitted value of leakage inductance **(µH)** _____

Working voltage between different windings **(V)** _____

Test voltage between different windings **(V)** _____

Operating temperature **(°C)** _____

Size limitations **(mm)** _____

Standards to comply with _____

Quantity _____

Target price _____

Inductors

Data sheet

Inductance value at nominal rated current **(µH)** _____

Tollerance on inductance **(%)** _____

Rated current r.m.s. **(mA)** _____

Max. over current **(mA)** _____

Working voltage **(V)** _____

Working frequency **(kHz)** _____

Rated power **(W)** _____

Operating temperature **(°C)** _____

Open construction or box version _____

Size limitations **(mm)** _____

Standards to comply with _____

Quantity _____

Target price _____

Circuit

Rapresentatives

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