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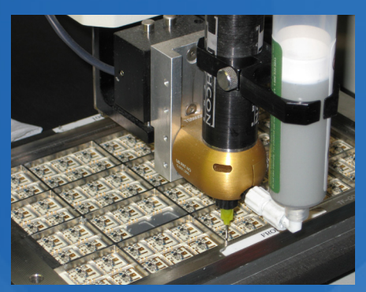

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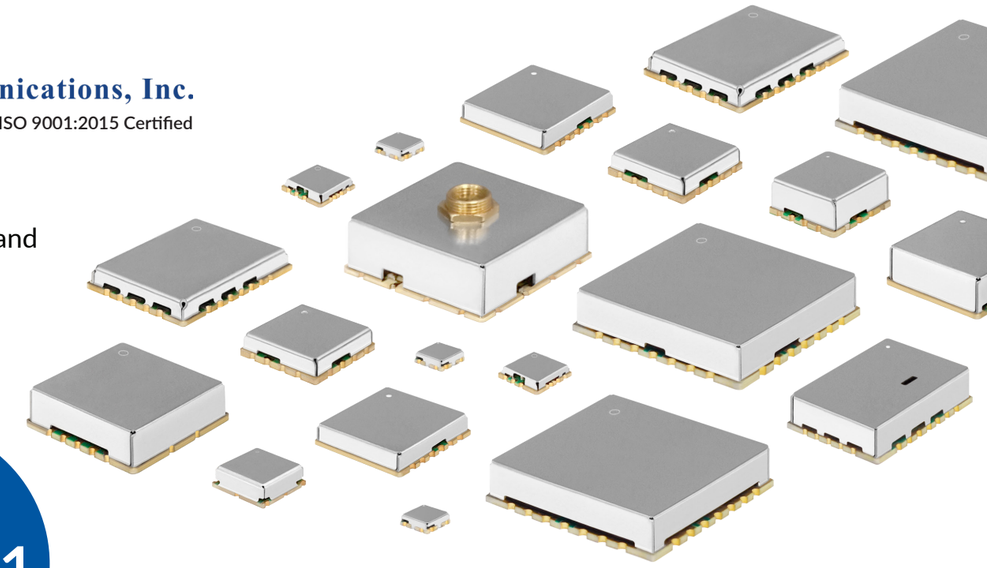
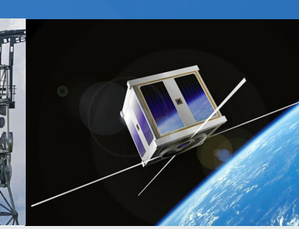


2020/21

PRODUCT SELECTION GUIDE

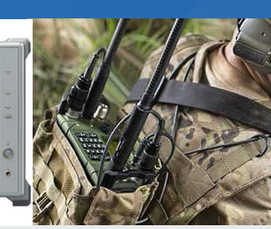
Voltage Controlled Oscillators | Phase-Locked Loops | 40 MHz - 15 GHz

Microwave Radio



Satellite Communications

Test & Measurement



Military Communications

Defense/Aerospace

CLV Series VCOs | 400 MHz - 4 GHz

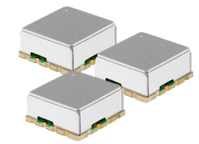
Wide Frequency Range • Low Phase Noise • Low Harmonics

The CLV series VCOs utilize a microstrip topology that is based on a patented high-Q distributed resonator design which delivers low phase noise and linear tuning spanning over a wide range of frequency bands covering 400 MHz to 4 GHz. They exhibit excellent tuning linearity and superior harmonic suppression making them the ideal choice for test equipment and satellite communication applications.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
CLV0600A-LF	530	670	1 - 4.5	52	1.5	-109	-15	5	24	2	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0625B-LF	540	710	0.5 - 11.5	20	1	-114	-15	3.3	27	1	1	0.5 x 0.5 x 0.16	MINI-14S-LOW
CLV0625H-LF	575	675	0.5 - 4.5	43	0	-111	-8	5	25	2	1	0.5 x 0.5 x 0.22	MINI-14S
CLV0700E-LF	680	720	0.5 - 4.5	35	2.5	-109	-10	5	18	2	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0730A-LF	713	748	1 - 4	32	5.5	-112	-14	5	22	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0787E-LF	725	850	0.5 - 4.5	49	4	-104	-10	5	18	3	2	0.5 x 0.5 x 0.13	MINI-16-L
CLV0798A-LF	730	920	1 - 15	28	2.25	-108	-15	5	19	2	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV0795B-LF	730	860	0.5 - 4.5	45	3.5	-105	-10	5	18	4	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV0860A-LF	730	990	1 - 15	28	2.5	-105	-15	5	19	1	1	0.5 x 0.5 x 0.22	MINI-16
CLV0769E-LF	734	804	1 - 4	40	2.5	-109	-9	5	16	2	0.5	0.5 x 0.5 x 0.22	MINI-16
CLV0768A-LF	750	786	0.5 - 4.5	22	3	-108	-15	5	19	2	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV0750E-LF	750	830	0.5 - 4.5	31	3.5	-110	-14	5	18	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0810B-LF	797	823	1 - 4	20	3	-113	-15	5	20	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0795E-LF	797	803	1 - 4	18	-6.5	-111	-28	5	23	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV0835E-LF	800	835	.5 - 4.5	25	2	-111	-17	5	21	1	0.2	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0975B-LF	820	1170	0.5 - 15	31	0.25	-109	-12	5	20	2	0.5	0.5 x 0.5 x 0.22	MINI-14S
CLV0915A-LF	830	1000	1 - 12	25	6	-112	-15	5	25	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV0868E-LF	850	896	0.5 - 4.5	25	-1.25	-111	-20	5	20	0.6	0.2	0.5 x 0.5 x 0.22	MINI-14S
CLV0865A-LF	855	875	1 - 4	19	3	-113	-15	4.5	25	2	2	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1025E-LF	865	1180	1 - 14	30	6	-107	-12	5	24	2	2	0.5 x 0.5 x 0.22	MINI-14S
CLV0950E-LF	865	1035	1 - 10	30	7	-111	-15	5	25	2	2	0.5 x 0.5 x 0.22	MINI-14S
CLV0910B-LF	890	930	0.5 - 4.5	25	1.5	-112	-20	5	25	0.5	3	0.5 x 0.5 x 0.22	MINI-14S
CLV1000B-LF	900	1100	0.5 - 4.5	60	5.5	-104	-20	5	20	4	1	0.5 x 0.5 x 0.22	MINI-14S
CLV0945E-LF	936	953	0.5 - 4.5	33	3	-110	-18	5	18	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV0989H-LF	939	1039	0.5 - 4.5	40	0.5	-109	-15	5	25	3	1	0.5 x 0.5 x 0.22	MINI-14S
CLV0986E-LF	971	1002	0.5 - 4.5	18	0.5	-113	-20	5	20	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1015E-LF	987	1032	0.6 - 5	21	-4	-109	-36	4.5	15	2	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1030E-LF	990	1070	1 - 4.5	33	5.5	-106	-15	5	25	3	1	0.5 x 0.5 x 0.22	MINI-14S
CLV1080A-LF	1020	1150	0.5 - 4.75	40	2.5	-107	-15	5	26	2	2	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1100E-LF	1035	1180	1 - 10	25	4	-107	-15	5	23	2	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1085E-LF	1050	1086	0.5 - 4.5	21	-1	-112	-20	5	23	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1150H-LF	1100	1200	0.3 - 4.7	39	3	-109	-20	5	18	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV1137A-LF	1100	1175	0.5 - 4.5	37	1.5	-109	-16	5	17	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV1225A-LF	1180	1270	0.5 - 4.5	37	2.5	-109	-25	5	26	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1277A-LF	1213	1341	0.5 - 4.5	38	3.5	-107	-20	5	28	3	2	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1320E-LF	1295	1335	1 - 5	18	-5	-109	-30	5	27	1	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1350E-LF	1295	1385	0.5 - 4.5	36	0	-107	-12	5	21	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV1370A-LF	1360	1380	.5 - 4.5	24	3	-108	-20	5	18	2	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1410E-LF	1390	1410	0.5 - 4.5	22	3.5	-110	-15	5	24	1	1.5	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1450A-LF	1400	1500	0.5 - 5	26	3	-110	-18	5	27	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1440E-LF	1400	1486	0.5 - 4.5	33	0	-107	-15	5	23	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1455E-LF	1440	1470	1 - 5	16	-2.5	-110	-27	5	22	1	1	0.5 x 0.5 x 0.22	MINI-14MS
CLV1625B-LF	1445	1820	2 - 25	23	0.5	-105	-22	5	25	2	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV1585E-LF	1487	1587	0.25 - 4.5	36	4.5	-108	-17	5	24	2	3	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1525E-LF	1500	1550	0.3 - 4.7	25	0.5	-108	-20	5	25	1	1	0.5 x 0.5 x 0.22	MINI-14S
CLV1545E-LF	1500	1580	0.5 - 4.5	35	0.5	-108	-20	5	23	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1596A-LF	1507	1685	0.5 - 4.5	42	1.5	-100	-18	5	20	5	4	0.5 x 0.5 x 0.22	MINI-14MS
CLV1580A-LF	1520	1635	0.5 - 4.5	55	4	-104	-18	4.75	22	4	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1605E-LF	1572	1635	0.25 - 4.5	32	3.75	-107	-20	5	22	1	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1630A-LF	1593	1654	0.5 - 4.5	31	3.5	-111	-15	5	24	1	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV1635A-LF	1600	1670	0.5 - 4.5	33	3	-108	-25	5	22	2	1	0.5 x 0.5 x 0.13	MINI-14S-L
CLV1670A-LF	1640	1700	0.5 - 4.5	30	2.5	-111	-21	5	23	1.5	1	0.5 x 0.5 x 0.13	MINI-16-L
CLV1720A-LF	1680	1760	0.5 - 4.5	50	5	-106	-15	5	27	4	2	0.5 x 0.5 x 0.16	MINI-14S-LOW
CLV1750A-LF	1690	1810	0.5 - 4.5	50	5	-104	-15	5	27	4	2	0.5 x 0.5 x 0.22	MINI-14S
CLV1835A-LF	1805	1865	2 - 4.4	50	0	-99	-10	5	18	3	6	0.5 x 0.5 x 0.13	MINI-14S-L

LF Suffix = Pb-Free RoHS compliant. All specifications are subject to change without notice. Visit our website at www.zcomm.com for additional parts and specifications.

CRO Series VCOs | 400 MHz - 8 GHz



Low Tuning Sensitivity • Ultra-Low Phase Noise • Low Frequency Drift

The CRO or ceramic resonator family of oscillators are renowned for offering superior phase noise performance. They are available in ranges anywhere from 400 MHz to 8 GHz while providing very low tuning sensitivities for performance optimization. The unique construction of CRO oscillators and the implementation of the 'tabless' resonator design provides additional microphonic immunization and reduced phase hits in high data rate backhaul radio systems.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
CRO0905A-LF	896	915	0.5 - 4.5	6	0	-123	-15	5	13	0.5	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO1000B-LF	1000	1000	0 - 3.3	4	3	-121	-15	5	18	0.5	0.5	0.5 x 0.5 x 0.13	MINI-16HL-SM
CRO1070A-LF	1070	1070	0 - 5	3	10	-120	-10	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO1344A-LF	1342	1346	0.5 - 4.5	3	3	-118	-20	5	25	0.5	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO1600H-LF	1600	1600	0.5 - 4.5	5	-3.5	-119	-22	5	19	0.5	0.5	0.5 x 0.5 x 0.13	MINI-16HL-SM
CRO1728A-LF	1691	1765	0.5 - 4.5	30	3	-110	-15	5	25	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO1820A-LF	1818	1822	0.5 - 4.5	5	4.5	-119	-25	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO1940A-LF	1910	1970	0.5 - 4.5	21	3.5	-112	-30	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2065B-LF	2005	2065	0.5 - 4.5	20	0	-112	-25	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2120B-LF	2080	2158	0.5 - 4.75	22	4	-110	-22	5	23	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2125A-LF	2125	2125	1.5 - 3.5	3	7	-121	-12	8	31	0.05	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2242A-LF	2200	2285	0.5 - 4.5	25	4.5	-110	-15	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2273B-LF	2265	2280	0.5 - 4.5	6	3	-115	-13	5	20	0.5	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2330A-LF	2300	2360	0.5 - 4.5	19	0	-111	-27	5	21	2	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2390A-LF	2360	2420	0.5 - 4.5	27	0	-110	-20	5	19	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2377A-LF	2370	2385	0.5 - 4.5	7	3	-116	-25	5	30	0.5	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2500K-LF	2400	2600	0.5 - 18	15	3	-110	-15	8	30	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2490B-LF	2430	2550	0.5 - 4.5	40	3.5	-107	-20	5	19	1	2	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2570A-LF	2520	2620	0.5 - 4.5	38	3	-107	-20	5	18	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2605B-LF	2560	2650	0.5 - 4.5	30	4	-107	-15	5	25	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2700K-LF	2600	2800	0.5 - 18	15	3	-110	-13	8	30	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2645A-LF	2615	2675	0.5 - 4.5	23	4	-109	-15	5	19	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2665D-LF	2640	2710	0.5 - 4.5	30	3	-109	-15	5	21	2	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2700B-LF	2670	2730	0.5 - 4.5	20	6.5	-108	-21	5	18	2	2	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2845A-LF	2770	2920	0.5 - 4.5	52	10	-106	-20	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2800B-LF	2800	2800	0.5 - 4.5	3	7.5	-115	-18	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2840A-LF	2810	2870	0.5 - 4.5	34	0	-109	-18	4	12	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2850A-LF	2845	2855	0.5 - 4.5	9	6.5	-117	-10	5	19	0.5	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO2960A-LF	2945	2975	0.5 - 4.5	13	7	-112	-16	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3000B-LF	3000	3000	0.5 - 4.5	11	9	-115	-20	5	20	0.5	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3060A-LF	3050	3070	0.5 - 4.5	14	4	-115	-8	5	20	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3200A-LF	3200	3200	0.5 - 4.5	7	11	-116	-15	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3300K-LF	3200	3400	0.5 - 18	15	3	-107	-25	8	26	1.5	1.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3294A-LF	3281	3307	0.5 - 4.5	15	6	-113	-15	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3375A-LF	3370	3380	0.5 - 4.5	7	2.5	-112	-20	5	21	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3425C-LF	3425	3425	0.5 - 4.5	5	3	-112	-11	5	25	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3475B-LF	3475	3475	0.5 - 4.5	5	9	-113	-20	5	25	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3500A-LF	3495	3505	0.5 - 4.5	8	4	-111	-13	5	24	0.5	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3700K-LF	3600	3800	0.5 - 18	18	3	-106	-20	8	30	3	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3625C-LF	3625	3625	0.5 - 4.5	6	3.5	-112	-20	5	24	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3725A-LF	3715	3735	0.5 - 4.5	15	3	-110	-15	5	24	0.5	0.3	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3815A-LF	3810	3820	0.5 - 4.5	6	3	-110	-18	8	30	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3850B-LF	3850	3850	0.5 - 4.5	4	2.75	-109	-39	5	18	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO3900C-LF	3900	3900	0.5 - 4.5	15	3	-110	-35	5	25	1	0.5	0.5 x 0.5 x 0.22	MINI-16-SM
CRO4187E-LF	4187	4188	0.5 - 4.5	6	3.5	-108	-15	8	30	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO4300A-LF	4300	4300	0 - 5	7	6	-105	-15	5	22	1	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO4580X2-LF	4580	4580	0.5 - 4.5	15	2.5	-103	-25	5	30	3	1	0.5 x 0.5 x 0.22	MINI-16-SM
CRO5550Z-LF	5450	5650	0.5 - 15	20	3	-103	-30	5	130	1	1	0.86 x 0.63 x 0.22	VCO-24H
CRO5950X2-LF	5890	6010	0.5 - 4.5	50	2	-102	-25	5	24	1	2	0.5 x 0.5 x 0.22	MINI-16-SM
CRO6000Z-LF	5990	6010	0.5 - 4.5	15	3.5	-108	-40	5	72	0.5	1	0.86 x 0.63 x 0.22	VCO-24H
CRO6330Z-LF	6329	6331	0.5 - 4.5	7	3	-106	-40	5	70	1	1	0.86 x 0.63 x 0.22	VCO-24H
CRO6550X2-LF	6550	6550	0.3 - 4.7	10	0	-102	-22	8	25	2	2	0.5 x 0.5 x 0.22	MINI-16-SM
CRO6750X2-LF	6750	6750	0.5 - 4.5	5	0	-101	-25	5	30	2	2	0.5 x 0.5 x 0.22	MINI-16-SM
CRO7100Z-LF	7090	7110	0.5 - 4.5	10	4	-102	-40	5	75	1	1	0.86 x 0.63 x 0.22	VCO-24H
CRO7530Z-LF	7510	7550	0.5 - 4.5	10	3	-100	-40	5	65	1	1	0.86 x 0.63 x 0.22	VCO-24H

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DRO Series VCOs | 7 GHz - 12 GHz

Exceptional Spectral Purity • Low Power Consumption • Ultra-Fine Tuning Precision

The DRO series Voltage Controlled Oscillator is a fundamental, narrowband signal source utilizing a high-Q dielectric resonator for optimal phase noise performance. The DRO VCO solution is currently being offered for frequencies operating within 7 to 12 GHz. This customizable, ultra-low noise oscillator series is available with both electrical tuning and mechanical tuning for fine frequency precision.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
DRO7950A	7950	7950	0 - 12	1	0	-102	-22	5	15	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8000A	8000	8000	0 - 12	1	0	-102	-25	5	23	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8100A	8100	8100	0 - 12	1	0	-102	-25	5	25	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8115A	8115.47	8115.47	0 - 12	0.75	0	-102	-25	5	25	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8244A	8244	8244	0 - 12	0.75	0	-102	-25	5	25	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8450A	8450	8450	0 - 12	0.5	2	-103	-35	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO8800A	8800	8800	0 - 12	0.5	2	-104	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO9000A	9000	9000	0 - 12	0.6	1	-106	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO9180A	9180	9180	0 - 12	0.5	1	-105	-25	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO9192A	9192	9192	0 - 12	0.5	1	-106	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO9250A	9250	9250	0 - 12	0.6	1	-106	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO9375A	9375	9375	0 - 12	0.5	1	-105	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO10000A	10000	10000	0 - 12	0.5	0	-102	-25	5	20	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO10150A	10150	10150	0 - 12	0.5	0	-103	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO10240A	10240	10240	0 - 12	0.5	0	-103	-30	5	18	1	<1	0.91 x 0.91 x 0.51	SDRO
DRO10430A	10430	10430	0 - 12	0.5	2	-102	-30	5	26	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO10500A	10500	10500	0 - 12	0.5	2	-102	-30	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO11000A	11000	11000	0 - 12	0.8	0	-103	-30	5	25	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO11150A	11150	11150	0 - 12	0.6	1	-106	-35	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO11750A	11750	11750	0 - 12	0.5	0	-104	-30	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO12000A	12000	12000	0 - 12	0.5	0	-106	-35	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO12100A	12100	12100	0 - 12	0.5	0	-105	-35	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO
DRO12200A	12200	12200	0 - 12	0.5	0	-105	-35	5	23	1	<2	0.91 x 0.91 x 0.51	SDRO

USSP Series VCOs | 150 MHz - 4 GHz

Ultra-compact Size • Low Phase Noise • Low Power Consumption

The USSP series is the smallest VCO currently available which is housed in a package measuring 0.2" x 0.2" x 0.06". In additional to being uniquely characterized by their ultra-small size, they also provide exceptionally low power consumption, typically <30mW, making them ideal for mobile radio communication systems and portable satellite terminals.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
USSP1220-LF	1210	1230	0.5 - 3	52	3	-101	-15	3.3	13	6	3	0.2 x 0.2 x 0.04	USSP
USSP1325-LF	1250	1400	0.5 - 4.5	75	3	-100	-15	5	23	3	3	0.2 x 0.2 x 0.04	USSP
USSP1400-LF	1380	1420	0 - 3	101	1	-93	-25	3	8	5	4	0.2 x 0.2 x 0.04	USSP
USSP1570-LF	1540	1600	0.5 - 2.5	115	-1	-90	-25	2.7	7	5	4	0.2 x 0.2 x 0.04	USSP
USSP2350-LF	2300	2400	0.5 - 3	140	0	-82	-15	2.7	6	40	13	0.2 x 0.2 x 0.04	USSP
USSP2400-LF	2400	2485	0.5 - 2.5	120	-1.5	-83	-15	2.7	6	35	13	0.2 x 0.2 x 0.04	USSP

LF Suffix = Pb-Free RoHS compliant. All specifications are subject to change without notice. Visit our website at www.zcomm.com for additional parts and specifications.

SMV Series VCOs | 60 MHz - 6 GHz

Exceptional Spectral Purity • Low Power Consumption • Ultra-fine Tuning Precision

The SMV series VCO provides the ideal combination of phase noise, power and size. Residing in a 0.3" x 0.3" x 0.08" package, this oscillator series offers a wide range of products from 60 MHz to 6 GHz while providing exceptional phase noise performance. They are further heightened by consuming little power, making them a perfect fit for any remote wireless system.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
SMV0135A-LF	120	150	0.5 - 4.5	12	5	-100	-11	5	20	2	1	0.3 x 0.3 x 0.08	SUB-L
SMV0186A-LF	180	195	0 - 3	12	0	-101	-13	3.3	15	1	1	0.3 x 0.3 x 0.08	SUB-L
SMV0245A-LF	240	250	0 - 3	10	2.5	-110	-9	3	11	1	0.25	0.3 x 0.3 x 0.08	SUB-L
SMV0375B-LF	350	400	0 - 3	25	0	-95	-12	3	13	4	1	0.3 x 0.3 x 0.08	SUB-L
SMV0425A-LF	400	450	0 - 3	25	-0.5	-95	-12	3	14	3	1	0.3 x 0.3 x 0.08	SUB-L
SMV0432A-LF	430	435	0 - 3	25	-0.5	-105	-12	3	14	3	1	0.3 x 0.3 x 0.08	SUB-L
SMV0752A-LF	715	790	0.5 - 2.5	55	2	-103	-10	3	9	5	5	0.3 x 0.3 x 0.08	SUB-L
SMV0770A-LF	750	790	0 - 2.5	44	1	-106	-10	3	13	5	5	0.3 x 0.3 x 0.08	SUB-L
SMV0868A-LF	858	878	0.5 - 2.5	85	2.5	-98	-10	3	6	5	5	0.3 x 0.3 x 0.08	SUB-L
SMV1000A-LF	900	1100	0.5 - 5	66	0	-102	-15	5	15	3	2	0.3 x 0.3 x 0.08	SUB-L
SMV1100C-LF	980	1200	0.5 - 4.5	125	8	-98	-13	5	26	10	10	0.3 x 0.3 x 0.08	SUB-L
SMV1132B-LF	1112	1152	0.5 - 2.7	62	0.75	-103	-15	3	12	4	3	0.3 x 0.3 x 0.08	SUB-L
SMV1280A-LF	1270	1290	0.2 - 2.8	49	3	-98	-15	3	12	4	1	0.3 x 0.3 x 0.08	SUB-L
SMV1380A-LF	1330	1429	0.6 - 2.4	80	1	-98	-10	3	10	4	3	0.3 x 0.3 x 0.08	SUB-L
SMV1412A-LF	1390	1429	0.4 - 2.1	60	5	-96	-7	3	11	6	8	0.3 x 0.3 x 0.08	SUB-L
SMV1672A-LF	1550	1795	0.75 - 4.25	100	9	-94	-12	5	26	17	12	0.3 x 0.3 x 0.08	SUB-L
SMV1754A-LF	1734	1774	0 - 2.8	65	1	-95	-10	3	10	6	8	0.3 x 0.3 x 0.08	SUB-L
SMV2020L-LF	1860	2180	0.5 - 4.5	148	5	-91	-9	4.7	13	9	12	0.3 x 0.3 x 0.08	SUB-L
SMV2300A-LF	1900	2300	0.5 - 4.5	139	4	-93	-10	5	14	4	7	0.3 x 0.3 x 0.08	SUB-L
SMV2365C-LF	2180	2550	0.5 - 4.5	140	8	-88	-9	5	14	10	20	0.3 x 0.3 x 0.08	SUB-L
SMV2372A-LF	2265	2480	0.75 - 4.25	75	7.5	-95	-18	5	20	5	20	0.3 x 0.3 x 0.08	SUB-L
SMV3060A-LF	2560	3560	0.3 - 5.3	250	3	-77	-20	5	24	20	10	0.3 x 0.3 x 0.08	SUB-L
SMV3150A-LF	3000	3300	1 - 9	75	8	-85	-12	10	28	10	10	0.3 x 0.3 x 0.08	SUB-L
SMV3300A-LF	3200	3400	0.5 - 4.5	115	5	-91	-20	5	21	9	5	0.3 x 0.3 x 0.08	SUB-L
SMV3400A-LF	3220	3580	0.5 - 3	230	5	-80	-17	3.3	16	28	2	0.3 x 0.3 x 0.08	SUB-L
SMV3417B-LF	3415	3420	0 - 3	50	2	-83	-32	3	17	30	14	0.3 x 0.3 x 0.08	SUB-L
SMV4775A-LF	4350	5200	0.3 - 5	230	6	-80	-20	5	30	25	20	0.3 x 0.3 x 0.08	SUB-L
SMV5000E-LF	4780	5356	0.3 - 4.7	165	0	-81	-20	5	27	11	4	0.3 x 0.3 x 0.08	SUB-L
SMV5068A-LF	4780	5356	0.5 - 4.5	162	-1	-82	-20	4.1	20	8	3	0.3 x 0.3 x 0.08	SUB-L
SMV5600A-LF	5200	6000	0.3 - 5	230	6	-80	-25	5	30	27	20	0.3 x 0.3 x 0.08	SUB-L
SMV5750A-LF	5700	5800	1 - 4	90	0	-86	-30	5	26	4	5	0.3 x 0.3 x 0.08	SUB-L

TRO Series VCOs | 1300 MHz - 2400 MHz

Exceptional Phase Noise • Small Size • Low Power Consumption

The TRO series features the latest enhancement in new VCO development. This series utilizes ceramic resonator topology to deliver ultra-low phase noise performance, but its compact size is what distinguishes itself from other ceramic resonator designs and sets a new standard. The TRO provides nearly a 45% and 70% reduction in overall area and volume size, respectively, in comparison to other CRO models. This series is currently available in the range of 1300 to 2400 MHz and offers spectral purity that is unmatched in a size measuring 0.375" x 0.375" x 0.12".

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
TRO1333A-LF	1333	1333	0.5 - 4.5	5	3	-117	-25	5	25	1	1	0.375 x 0.375 x 0.12	375
TRO1350A-LF	1350	1350	0.5 - 4.5	5	3	-117	-25	5	25	1	1	0.375 x 0.375 x 0.12	375
TRO1790A-LF	1790	1790	0.5 - 4.5	5	4	-118	-12	5	25	1	1	0.375 x 0.375 x 0.12	375
TRO1800A-LF	1800	1800	0.5 - 4.5	4	4	-117	-10	5	25	1	1	0.375 x 0.375 x 0.12	375
TRO2000A-LF	2000	2000	0.5 - 4.5	5	6.5	-117	-17	5	28	1	1	0.375 x 0.375 x 0.12	375
TRO2400A-LF	2400	2400	0.5 - 4.5	4	5	-113	-20	5	25	1	2	0.375 x 0.375 x 0.12	375

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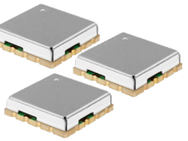
V Series VCOs | 40 MHz - 8 GHz



Low Phase Noise • Linear Tuning • Octave Bandwidth

The V series comes available in the industry standard 0.5" x 0.5" package size and offers the widest selection of products encompassing 40 MHz to 8 GHz. Utilizing lumped element or microstrip resonator technology, the V series are specially designed for applications requiring either narrowband tuning or frequency bandwidths covering more than an octave.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
V044ME01-LF	42	46	0.5 - 4.5	3	0	-117	-13	5	8	1	1	0.5 x 0.5 x 0.22	MINI-14S
V093ME01-LF	88	98.2	0.5 - 4.5	6.4	8	-127	-12	5	17	1	1	0.5 x 0.5 x 0.22	MINI-16
V150ME03-LF	100	200	0 - 12.5	10	8	-115	-10	12	19	0.2	0.5	0.5 x 0.5 x 0.13	MINI-16-L
V155ME05-LF	121	163	0.5 - 4.5	14	8	-121	-18	5	18	1	1	0.5 x 0.5 x 0.22	MINI-16
V240ME05-LF	134	246	0.5 - 4.6	31	0	-106	-9	5	7	2	1	0.5 x 0.5 x 0.13	MINI-16-L
V220ME02-LF	200	239	0.5 - 4.5	18	7.5	-121	-16	5	19	1	1	0.5 x 0.5 x 0.22	MINI-16
V330ME01-LF	320	340	1 - 4	23	6.5	-111	-10	5	14	3	5	0.5 x 0.5 x 0.13	MINI-14S-L
V350ME01-LF	350	700	0 - 10	45	4	-95	-10	5	13	4	2	0.5 x 0.5 x 0.22	MINI-14S
V395ME01-LF	380	420	0.3 - 3	25	0	-113	-12	3.3	12	3	1	0.5 x 0.5 x 0.16	MINI-16M-LOW
V560MC03-LF	400	800	0 - 12	56	6	-105	-5	5	18	4	3	0.5 x 0.5 x 0.22	MINI-14S
V450ME01-LF	430	920	1 - 16	45	4	-95	-9	10	20	4	2	0.5 x 0.5 x 0.22	MINI-14S
V495ME01-LF	485	505	0.5 - 4.5	10	1	-113	-7	5	8	2	2	0.5 x 0.5 x 0.16	MINI-16M-LOW
V500ME03-LF	500	1000	0 - 11	54	10	-105	-13	12	25	5	10	0.5 x 0.5 x 0.22	MINI-16-SM
V495ME05-LF	530	543	0.5 - 4.5	6	-2	-120	-20	4.5	15	1	1	0.5 x 0.5 x 0.16	MINI-16M-LOW
V585ME73-LF	600	1200	0 - 13	58	8.5	-100	-12	10	18	3	7	0.5 x 0.5 x 0.22	MINI-16-SM
V580ME15-LF	745	885	0.5 - 4.5	53	9.5	-108	-12	10	24	3	2	0.5 x 0.5 x 0.13	MINI-16-L
V585ME30-LF	800	1600	1 - 21	60	8	-101	-5	11.5	16	3	8	0.5 x 0.5 x 0.22	MINI-14S
V580ME13-LF	830	970	0.5 - 4.5	51	5	-109	-12	5	17	3	1	0.5 x 0.5 x 0.22	MINI-16
V585ME48-LF	950	2050	0 - 15	81	4	-98	-33	10	19	3	3	0.5 x 0.5 x 0.13	MINI-16HL-SM
V585ME46-LF	1000	2000	1 - 20	70	6	-100	-8	10	19	2	8	0.5 x 0.5 x 0.13	MINI-14S-L
V602ME55-LF	1000	1350	0.5 - 4.5	130	3.5	-98	-15	3	10	5	4	0.5 x 0.5 x 0.13	MINI-14S-L
V585ME66-LF	1100	2500	0.3 - 20	85	8.5	-95	-10	10	21	7	11	0.5 x 0.5 x 0.13	MINI-16-L
V602ME15-LF	1100	1400	0.5 - 4.5	130	7.5	-99	-15	5	15	3	13	0.5 x 0.5 x 0.13	MINI-14S-L
V585ME28-LF	1200	2200	1 - 20	75	8.5	-100	-18	5	25	6	11	0.5 x 0.5 x 0.13	MINI-14S-L
V602ME33-LF	1375	1700	0.5 - 4.5	97	1	-100	-14	5	14	2	5	0.5 x 0.5 x 0.13	MINI-14S-L
V600ME78-LF	1400	2400	1 - 16	95	8	-95	-20	12	33	10	10	0.5 x 0.5 x 0.13	MINI-16HL-SM
V602ME62-LF	1540	2140	1 - 10	95	2.5	-99	-20	5	22	3	5	0.5 x 0.5 x 0.13	MINI-14S-L
V600ME10-LF	1600	3200	0.5 - 20	108	8	-89	-25	5	26	16	10	0.5 x 0.5 x 0.13	MINI-16-L
V604ME08-LF	1680	1985	1 - 10	56	6.75	-99	-12	9	22	3	7	0.5 x 0.5 x 0.22	MINI-14S
V600ME20-LF	1700	2800	0.5 - 15	118	6.5	-95	-20	5	21	5	8	0.5 x 0.5 x 0.13	MINI-16-L
V674ME25-LF	1820	2480	0.5 - 9.5	98	4.5	-91	-19	10	13	5	18	0.5 x 0.5 x 0.22	MINI-14H
V626ME10-LF	2000	2500	1 - 14	53	3.5	-97	-7	9	18	2	12	0.5 x 0.5 x 0.13	MINI-14H-L
V600ME14-LF	2000	4000	0 - 24	100	5.5	-86	-15	5	27	10	14	0.5 x 0.5 x 0.16	MINI-16-LOW
V674ME28-LF	2250	2750	0.5 - 4.5	160	2	-86	-10	5	10	16	14	0.5 x 0.5 x 0.22	MINI-16
V674ME29-LF	2400	2900	0.5 - 4.5	220	3	-86	-20	5	23	6	8	0.5 x 0.5 x 0.22	MINI-16
V805ME12-LF	2600	3110	1.75 - 12	66	7.5	-92	-20	12	23	5	20	0.5 x 0.5 x 0.13	MINI-14H-L
V600ME31-LF	2700	5400	0 - 24	140	7	-75	-20	5	25	53	18	0.5 x 0.5 x 0.16	MINI-16-LOW
V810ME08-LF	2750	3500	0.5 - 9.5	120	6	-88	-15	10	24	6	13	0.5 x 0.5 x 0.13	MINI-14H-L
V846ME29-LF	2900	4400	1 - 22	90	8	-80	-18	8	26	8	26	0.5 x 0.5 x 0.13	MINI-16-L
V600ME45-LF	3000	6000	0 - 24	147	4	-74	-12	12	24	22	21	0.5 x 0.5 x 0.16	MINI-16-LOW
V844ME21-LF	3100	3600	0.25 - 4.75	165	6	-82	-15	5	21	14	10	0.5 x 0.5 x 0.22	MINI-14S
V600ME76-LF	3180	3710	1 - 12	65	0.5	-90	-15	5	18	3	12	0.5 x 0.5 x 0.13	MINI-16-L
V846ME30-LF	3350	4550	0 - 20	70	4	-85	-15	5	25	10	20	0.5 x 0.5 x 0.13	MINI-16-L
V844ME02-LF	3400	3600	1 - 5	94	3	-88	-15	5	18	4	6	0.5 x 0.5 x 0.13	MINI-14S-L
V900ME01-LF	3500	4000	2 - 18	70	5	-88	-45	8	24	9	12	0.5 x 0.5 x 0.22	MINI-14H
V910ME20-LF	3920	4520	1 - 7	168	4	-83	-23	5	30	14	10	0.5 x 0.5 x 0.13	MINI-14S-L
V950ME09-LF	4200	5000	1 - 12	124	13	-85	-18	12	35	10	28	0.5 x 0.5 x 0.13	MINI-14S-L
V950ME26-LF	4600	5400	0.3 - 9.5	110	5	-82	-20	5	28	10	14	0.5 x 0.5 x 0.22	MINI-14S
V940ME29-LF	4900	5500	0 - 10	87	4	-88	-25	5	28	5	15	0.5 x 0.5 x 0.22	MINI-14S
V950ME25-LF	5000	6000	0 - 22	56	1	-85	-17	5	22	15	10	0.5 x 0.5 x 0.13	MINI-16HL-SM
V950ME46-LF	5000	5850	0 - 10	122	5	-80	-25	12	40	22	15	0.5 x 0.5 x 0.13	MINI-16HL-SM
V940ME40-LF	5100	5200	0.5 - 4.5	70	5	-88	-25	5	30	5	15	0.5 x 0.5 x 0.22	MINI-14S
V940ME03-LF	5725	5875	0.5 - 4.5	85	2	-85	-30	5	26	10	8	0.5 x 0.5 x 0.13	MINI-14S-L
V940ME28-LF	5840	6040	0.5 - 4.5	85	0.5	-85	-15	5	28	10	8	0.5 x 0.5 x 0.22	MINI-14S
V965ME07-LF	6834	6835	0 - 2.8	140	-0.5	-80	-20	4.5	24	10	25	0.5 x 0.5 x 0.13	MINI-16HL-SM

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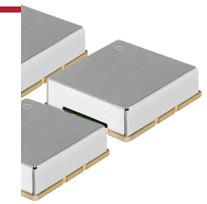
ZRO Series VCOs | 600 MHz - 3 GHz

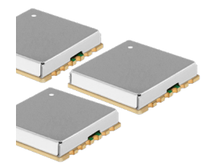


Ultra-low Phase Noise • Voltage Bias Stabilization • Temperature Compensated

The ZRO series VCOs are ceramic resonator based oscillators which have been designed with an innovative topology to help provide extremely low phase noise. Utilizing specialized voltage bias and temperature stabilization techniques, the ZRO oscillator maintains minimal tuning sensitivity and low harmonic suppression for maximum overall performance.

Part Number	Low Freq (MHz)	High Freq (MHz)	Vtune (Vdc)	Kvco (MHz/V) (typ)	Output Power (dBm)(typ)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc)(typ)	Vcc (Vdc)	Icc (mA) (typ)	Pushing (MHz/V) (max)	Pulling (MHz) (max)	Size (Inches)	Package
ZRO0700B-LF	699	701	0.5 - 4.5	2	9	-129	-21	5	18	0.06	0.3	0.75 x 0.75 x 0.22	ZMX-14-SM
ZRO0743B2LF	738	748	0 - 6	2	9	-130	-24	8	23	0.06	0.3	0.75 x 0.75 x 0.22	ZMX-14-SM
ZRO0750A-LF	745	755	0 - 8	2	9	-128	-24	8	23	0.06	0.3	0.75 x 0.75 x 0.22	ZMX-14-SM
ZRO0915C2LF	902	928	0 - 11	2	5	-128	-35	10	23	0.2	1.5	0.75 x 0.75 x 0.22	ZMX-14-SM
ZRO1000A-LF	1000	1000	1.5 - 3.5	2	7	-129	-18	8	25	0.2	0.5	0.75 x 0.75 x 0.22	ZMX-14-SM

RFS Series Fixed Frequency PLLs | 1 GHz - 6 GHz



Reference Signal Included • No External Programming • Fixed Frequency

The RFS series is a complete fixed frequency PLL solution incorporating a 10 MHz TCXO reference oscillator, phase detector, loop filter, VCO and PIC microcontroller. It simplifies any design requiring a highly stable, low cost single frequency signal source in the range of 1 GHz to 6 GHz by removing the need for any external programming. Operating off two DC supply voltages, the RFS series utilizes a microstrip topology and a loop filter bandwidth that is configured per each application to provide optimal phase noise performance.

Part Number	Freq (MHz)	Output Power (dBm) (typ)	Spurs (dBc)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc) (typ)	Vcc (Vdc)	Icc (mA) (typ)	Startup Lock Time (msec) (typ)	Size (Inches)	Package
RFS1030-LF	1030	3	-65	-98	-20	5/3	35/10	1	0.6 x 0.6 x 0.13	RFS-V12N
RFS1090A-LF	1090	3	-62	-98	-20	5/3	35/10	1	0.6 x 0.6 x 0.13	RFS-V12N
RFS1130-LF	1130	3	-65	-99	-25	5/3	35/10	1	0.6 x 0.6 x 0.13	RFS-V12N
RFS1500A-LF	1500	5	-65	-98	-25	5/3	35/10	1	0.6 x 0.6 x 0.13	RFS-V12N
RFS2950A-LF	2950	3	-65	-95	-20	5/3	30/12	3	0.6 x 0.6 x 0.13	RFS-V12N
RFS4300Z-LF	4300	3	-65	-85	-45	5	60	3	1.0 x 1.0 x 0.22	SFS-L1M
RFS4300A-LF	4300	3	-65	-87	-25	5/3	35/15	3	0.6 x 0.6 x 0.13	RFS-V12N
RFS4500A-LF	4500	2	-65	-86	-25	5/3	35/15	3	0.6 x 0.6 x 0.13	RFS-V12N
RFS5600A-LF	5600	0	-65	-86	-25	5/3	35/15	3	0.6 x 0.6 x 0.13	RFS-V12N
RFS12000C-LF	12000	0	-65	-86	-30	5/3.3	95/15	1	1.0 x 1.0 x 0.22	SFS-L1
RFS12800C-LF	12800	0	-65	-86	-30	5/3.3	95/15	1	1.0 x 1.0 x 0.22	SFS-L1
RFS15000C-LF	15000	-6	-65	-80	-20	5/3.3	95/15	3	1.0 x 1.0 x 0.22	SFS-L1

PLL Synthesizers | 80 MHz - 6 GHz

Integer-N & Fractional-N • Low Phase Noise • Compact Size

The programmable phase lock loop (PLL) solutions come in a selection of size and type. The PLLs are offered as either integer-N or fractional-N while utilizing a passive or active loop filter depending on the bandwidth. They can be quickly programmed through a 3-wire serial interface while providing very low spurious suppression and small step sizes. The PLL family of products are available in several different sizes ranging from 0.866" x 0.63" to as small as 0.5" x 0.5".

Part Number	Low Freq (MHz)	High Freq (MHz)	Step Size (kHz)	Output Power (dBm) (typ)	Spurs (dBc)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc) (typ)	Vcc (Vdc)	Icc (mA) (typ)	Switch Speed (msec) (typ)	Size (Inches)	Package
PCA0090A-LF	85	95	50	0.5	-65	-101	-10	3.3	30	3	0.5 x 0.5 x 0.13	CPLL
PVA0797AF-LF	792	802	1	3	-55	-106	-10	5/3	35/15	3	0.6 x 0.6 x 0.13	PLL-V12N
PVA0865AF-LF	858	873	1	3	-55	-106	-10	5/3	25/15	4	0.6 x 0.6 x 0.13	PLL-V12N
PSA0965A-LF	880	1050	1000	-0.5	-70	-104	-15	5	35	3	0.86 x 0.63 x 0.14	PLL-24
PCA1292A-LF	1292	1298	1000	0	-70	-105	-15	5	30	2	0.5 x 0.5 x 0.13	CPLL
PCA1292B-LF	1292	1298	1000	0.5	-70	-105	-15	3.3	23	2	0.5 x 0.5 x 0.13	CPLL
PCA1330A-LF	1320	1340	1000	3	-70	-99	-15	5	40	2	0.5 x 0.5 x 0.13	CPLL
PCA1550A-LF	1500	1600	1000	1.5	-70	-101	-15	5	40	2	0.5 x 0.5 x 0.13	CPLL
PCA1550B-LF	1502	1510	1000	0	-70	-100	-15	3.3	30	2	0.5 x 0.5 x 0.13	CPLL
PSA1785AF-LF	1570	2000	1000	0.5	-77	-90	-15	12/5	30/20	1	0.86 x 0.63 x 0.14	PLL-24S1
PSA2050AF-LF	1800	2300	1000	0	-65	-90	-20	12/5	30/20	1	0.86 x 0.63 x 0.14	PLL-24S1
PCA2010A-LF	1990	2030	1000	2.5	-70	-100	-15	5	40	2	0.5 x 0.5 x 0.13	CPLL
PSA2275AF-LF	2075	2475	1000	0	-65	-90	-20	12/5	23/20	1	0.86 x 0.63 x 0.14	PLL-24S1

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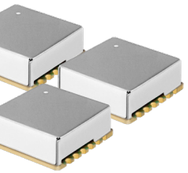
SFS Series Fixed Frequency PLLs | 500 MHz - 15 GHz



No External Programming • Ultra-Low Noise • Small Size

The SFS series is a fixed frequency PLL solution incorporating the phase detector, loop filter, VCO and PIC controller. It minimizes design complexities by eliminating the need for any external programming. It is ideal for any commercial application requiring a single frequency signal source within the range of 500 MHz to 15 GHz and it delivers superior phase noise performance by utilizing either a microstrip or ceramic resonator topology.

Part Number	Freq (MHz)	Output Power (dBm) (typ)	Spurs (dBc)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc) (typ)	Vcc (Vdc)	Icc (mA) (typ)	Reference Input (MHz)	Size (Inches)	Package
SFS0515A-LF	515	0	-65	-111	-10	5/3	30/10	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS0640A-LF	640	0	-70	-105	-13	5/3	25/9	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS0792C-LF	792.5	0	-70	-118	-15	5/3	25/14	40	0.6 x 0.6 x 0.22	PLL-V12C
SFS0800C-LF	800.5	0	-70	-118	-15	5/3	25/14	40	0.6 x 0.6 x 0.22	PLL-V12C
SFS0960C-LF	960	0	-65	-115	-15	5/3	25/14	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS0990C-LF	990	1	-70	-119	-12	5/3	25/14	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS1000D-LF	1000	0	-70	-118	-12	5/3	25/14	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS1350R-LF	1350	3	-65	-110	-22	5/3	25/14	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS1520C-LF	1520	3	-65	-110	-20	5/3	28/10	10	1.0 x 1.0 x 0.22	PLL-V12C
SFS1575D-LF	1575.42	5	-70	-102	-18	5/3	20/14	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS1600R-LF	1600	5.5	-70	-112	-20	5/3	25/14	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS1680A-LF	1680	6	-80	-106	-25	5/3	31/9	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS1685A-LF	1685	6	-80	-106	-25	5/3	31/9	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS1800C-LF	1800	5.5	-70	-112	-18	5/3	28/10	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS1800R-LF	1800	5.5	-70	-112	-22	5/3	28/10	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS1900A-LF	1900	3	-70	-98	-20	5/3.3	25/10	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS1910C-LF	1910	6	-70	-109	-0.2	5/3	28/14	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS1980A-LF	1980	6	-70	-95	-20	5/3	35/10	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS2000C-LF	2000	6	-70	-110	-18	5/3	30/10	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS2000G-LF	2000	6	-70	-110	-18	5/3	30/10	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS2200C-LF	2200	6	-70	-109	-10	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS2265C-LF	2265	3	-65	100	-10	5/3	30/14	9.0625	0.6 x 0.6 x 0.22	PLL-V12C
SFS2500C-LF	2500	6	-70	-111	-20	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS2500K-LF	2500	0	-70	-100	-20	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS2560A-LF	2560	6	-60	-95	-20	5/3	40/9	100	0.6 x 0.6 x 0.13	PLL-V12N
SFS2687D-LF	2687	0	-70	-110	-16	5/3	35/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS2810C-LF	2810	6	-70	-110	-17	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS2825D-LF	2825	0	-70	-107	-10	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3000E-LF	3000	0	-65	-103	-8	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3010C-LF	3010	6	-70	-108	-10	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3020C-LF	3020	3	-70	-105	-5	5/3	30/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3200D-LF	3200	0	-65	-107	-10	5/3	32/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3275C-LF	3275	0	-65	-107	-12	5/3	32/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3290C-LF	3290	3	-65	-107	-12	5/3	32/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3300C-LF	3300	3	-65	-107	-12	5/3	32/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3450C-LF	3450	2	-65	-104	-15	5/3	25/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3500K-LF	3500	0	-65	-100	-14	5/3	35/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS3694C-LF	3694	3	-65	-106	-15	5/3.3	32/11	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS4000C-LF	4000	0	-65	-102	-12	5/3.3	32/11	100	0.6 x 0.6 x 0.22	PLL-V12C
SFS4000R-LF	4000	0	-65	-99	-12	5/3.3	32/15	10	0.6 x 0.6 x 0.22	PLL-V12C
SFS4675C-LF	4675	-3	-70	-90	-20	5/3	140/15	10	1.0 x 1.0 x 0.22	SFS-L1
SFS4900A-LF	4900	0	-65	-90	-25	5/3	33/15	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS6040A-LF	6040	3	-65	-90	-20	5/3	35/11	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS6265A-LF	6265	3	-65	-90	-20	5/3	35/11	100	0.6 x 0.6 x 0.13	PLL-V12N
SFS6300B-LF	6300	6	-65	-89	-20	5/3	40/11	50	0.6 x 0.6 x 0.13	PLL-V12N
SFS6300K-LF	6300	6	-65	-89	-20	5/3	40/11	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS6400A-LF	6400	6	-65	-88	-20	5/3	40/11	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS6600C-LF	6600	-3	-70	-89	-20	5/3	140/14	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS6650A-LF	6650	3	-65	-90	-20	5/3	40/11	100	0.6 x 0.6 x 0.13	PLL-V12N
SFS6950K-LF	6950	6	-65	-87	-20	5/3.3	35/14	10	0.6 x 0.6 x 0.13	RFS-V12N
SFS7000A-LF	7000	3	-70	-85	-20	5/3.3	35/14	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS7100A-LF	7100	3	-65	-86	-20	5/3	35/11	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS7500D-LF	7500	-3	-65	-95	-25	5/3	120/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS7750C-LF	7750	-3	-70	-90	-30	5/3	120/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS7850C-LF	7850	-3	-70	-91	-30	5/3	120/11	80	1.0 x 1.0 x 0.22	SFS-L1

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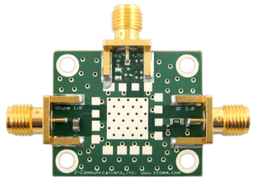
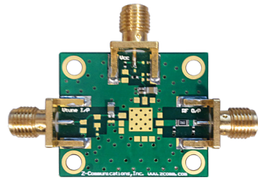
SFS Series Fixed Frequency PLLs | 500 MHz - 15 GHz

Part Number	Freq (MHz)	Output Power (dBm) (typ)	Spurs (dBc)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc) (typ)	Vcc (Vdc)	Icc (mA) (typ)	Reference Input (MHz)	Size (Inches)	Package
SFS8440C-LF	8440	0	-65	-95	-30	5/3	120/15	10	1.0 x 1.0 x 0.22	SFS-L1
SFS8500H-LF	8500	0	-65	-100	-20	5/3	120/11	100	1.0 x 1.0 x 0.22	SFS-L1
SFS8700H-LF	8700	0	-65	-100	-20	5/3.3	120/11	100	1.0 x 1.0 x 0.22	SFS-L1
SFS8875C-LF	8875	0	-65	-95	-20	5/3	120/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS8935C-LF	8935	0	-70	-100	-35	5/3	90/11	100	1.0 x 1.0 x 0.22	SFS-L1B
SFS9000Y-LF	9000	0	-70	-100	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS9265C-LF	9265	0	-70	-100	-35	5/3	90/11	100	1.0 x 1.0 x 0.22	SFS-L1B
SFS9280C-LF	9280	0	-65	-100	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1B
SFS9750C-LF	9750	0	-65	-94	-25	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS10000D-LF	10000	0	-70	-99	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS10500K-LF	10500	0	-65	-97	-20	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS10500H-LF	10500	0	-70	-99	-30	5/3	90/45	100	1.0 x 1.0 x 0.22	SFS-L1
SFS10625H-LF	10625	0	-70	-105	-30	5/3.3	90/45	156.25	1.0 x 1.0 x 0.22	SFS-L1
SFS10640H-LF	10640	0	-65	-98	-30	5/3	90/45	100	1.0 x 1.0 x 0.22	SFS-L1
SFS10750C-LF	10750	0	-70	-92	-30	5/3.3	85/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS11000Y-LF	11000	0	-70	-95	-20	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS11160C-LF	11160	0	-65	-90	-20	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS11250C-LF	11250	0	-65	-90	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS11500K-LF	11500	0	-70	-93	-30	5/3	95/15	10	1.0 x 1.0 x 0.22	SFS-L1
SFS11800C-LF	11800	3	-70	-90	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS12000H-LF	12000	0	-65	-103	-30	5/3	85/40	100	1.0 x 1.0 x 0.22	SFS-L1
SFS12000C-LF	12000	0	-70	-90	-30	5/3	95/15	10	1.0 x 1.0 x 0.22	SFS-L1
SFS12500C-LF	12500	0	-65	-90	-30	5/3	90/11	10	1.0 x 1.0 x 0.22	SFS-L1
SFS12800C-LF	12800	0	-65	-88	-30	5/3	95/15	10	1.0 x 1.0 x 0.22	SFS-L1
SFS14000H-LF	14400	-3	-65	-96	-20	5/3.3	85/40	100	1.0 x 1.0 x 0.22	SFS-L1
SFS15000C-LF	15000	-3	-65	-78	-30	5/3	85/40	10	1.0 x 1.0 x 0.22	SFS-L1

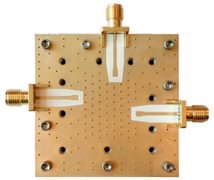
Evaluation Boards | For Z-Comm VCOs & PLLs



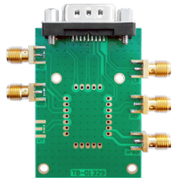
MINIEVAL
V, CRO and CLV Series VCOs



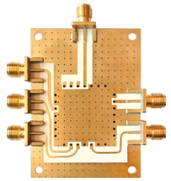
SMVEVAL
SMV Series VCOs



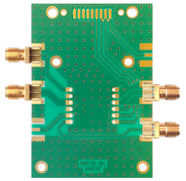
DROEVAL
DRO Series VCOs



PLLEVAL
PSA and PSN Series PLLs



SFSL1EVAL
SFS Series PLLs with SFS-L1 package



SFSEVAL
SFS Series PLLs with PLL-V12C or PLL-V12N packages

Test Fixtures | For Z-Comm VCOs & PLLs

MINI-16-TF
V, CRO and CLV Series VCOs

SMV-TF
SMV Series VCOs

PLL-24-TF
PSN and PSA Series PLLs

PLL-V12N-TF
SFS Series PLLs

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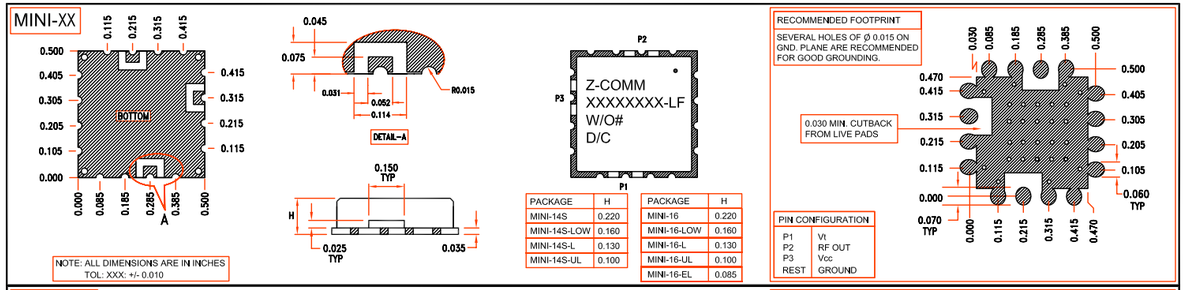
VCO & PLL Outlines

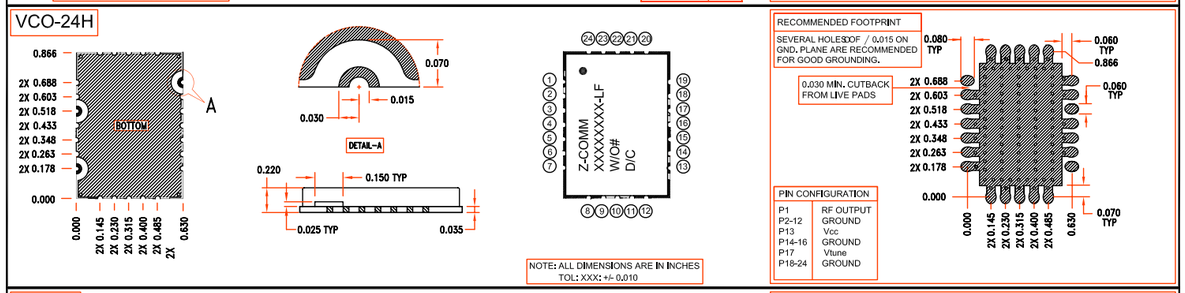
MINI-XX



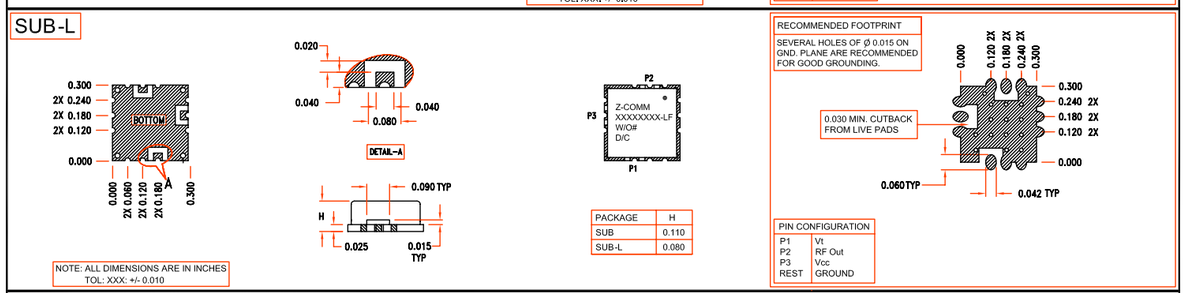
PACKAGE	H
MINI-14S	0.220
MINI-14S-LOW	0.160
MINI-14S-L	0.130
MINI-14S-UL	0.100

PACKAGE	H
MINI-16	0.220
MINI-16-LOW	0.160
MINI-16-L	0.130
MINI-16-UL	0.100
MINI-16-EL	0.085

VCO-24H

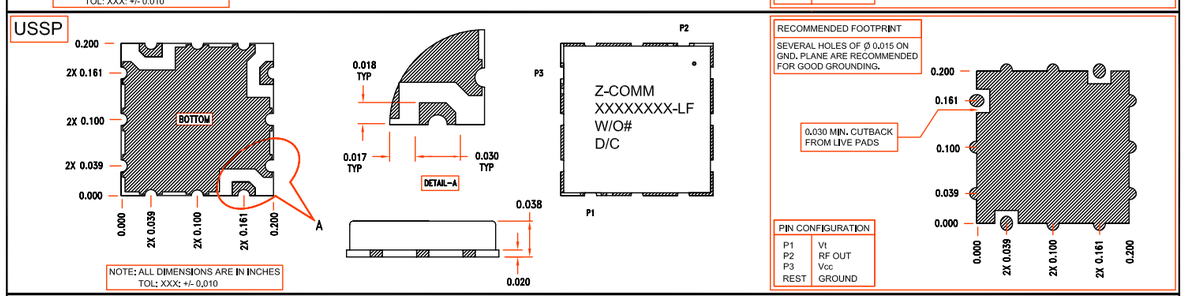


SUB-L

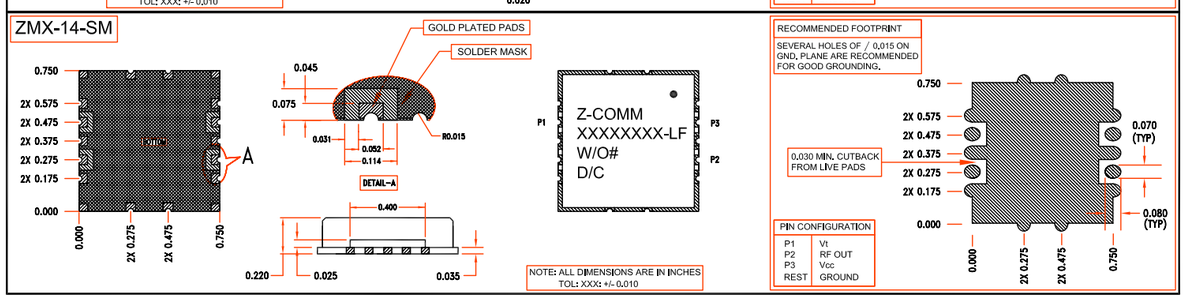


PACKAGE	H
SUB	0.110
SUB-L	0.080

USSP

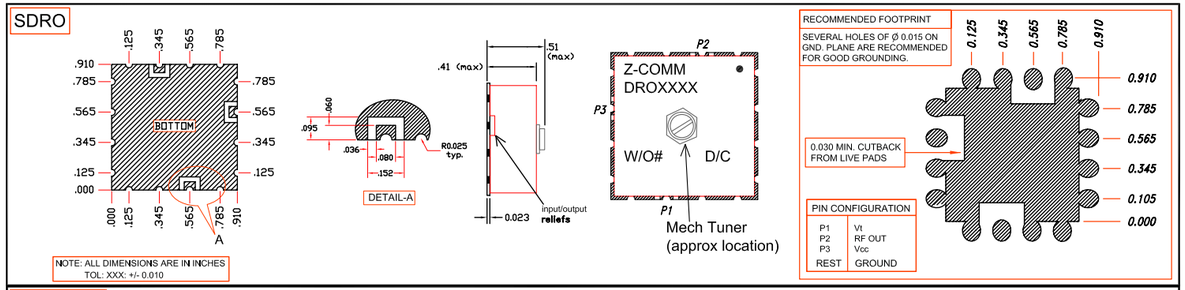


ZMX-14-SM

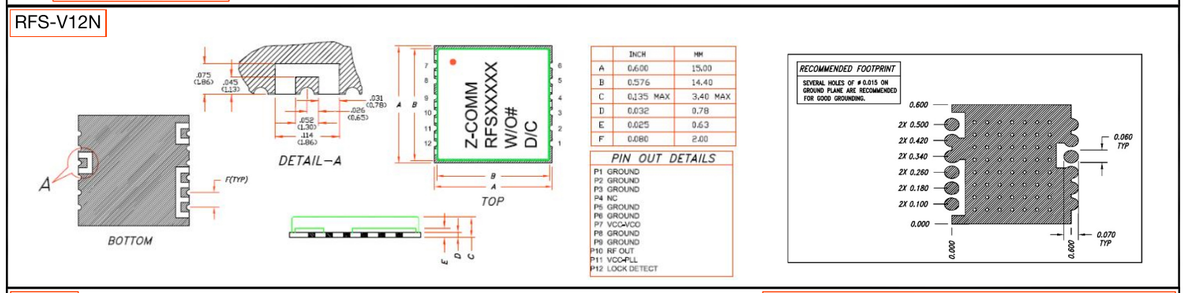


VCO & PLL Outlines

SDRO

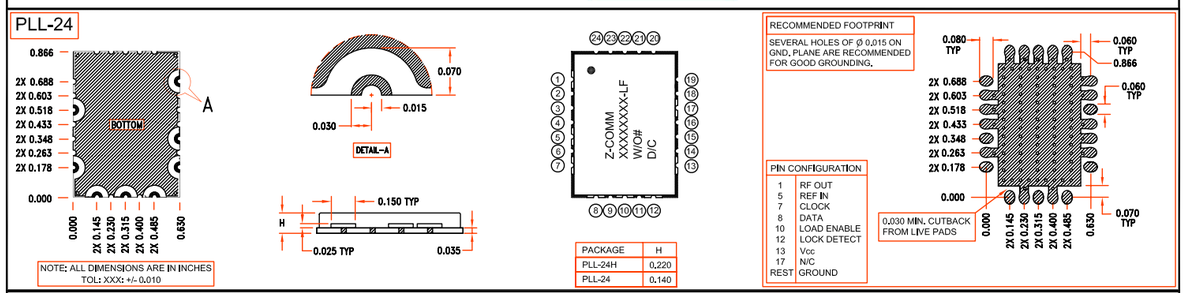


RFS-V12N



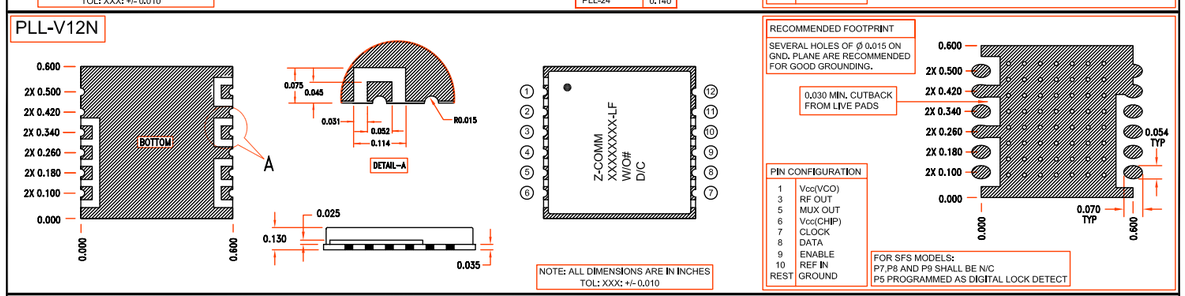
	INCH	MM
A	0.600	15.00
B	0.576	14.40
C	0.135 MAX	3.40 MAX
D	0.032	0.78
E	0.025	0.63
F	0.080	2.00

PLL-24

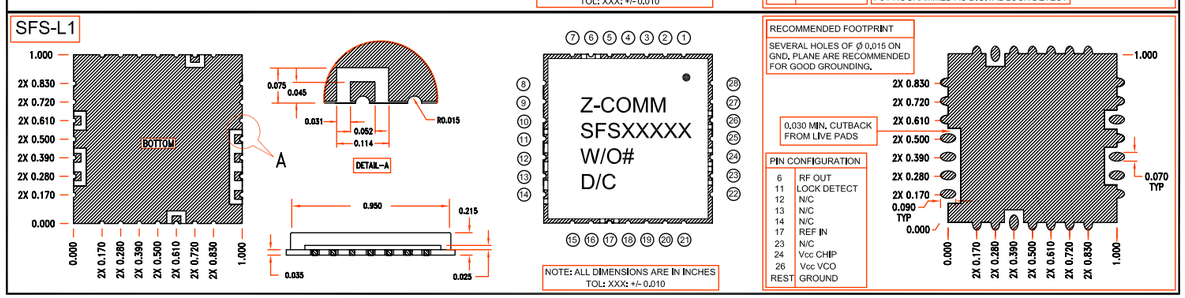


PACKAGE	H
PLL-24H	0.220
PLL-24	0.140

PLL-V12N



SFS-L1



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