

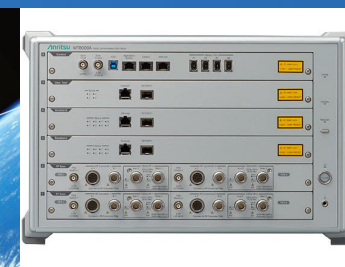
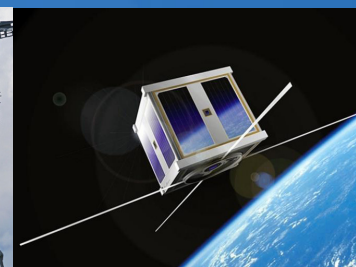
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PRODUCT SELECTION GUIDE

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



AS9100D / ISO 9001:2015

Microwave
Radio

Satellite
Communications

Test &
Measurement

Military
Communications

Defense/Aerospace

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 addition 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

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

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.

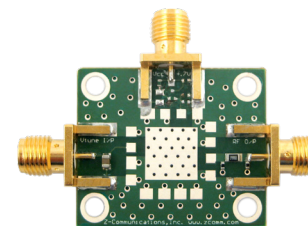


Part Number	Freq (MHz)	Output Power (dBm) (typ)	Spurs (dBc)	PN @10kHz (dBc/Hz) (typ)	2nd Harm (dBc) (typ)	Vcc (Vdc)	Icc (mA) (typ)	Reference Input (MHz)	Size (Inches)	Package
SFS0515A-LF	515	0	-65	-111	-10	5/3	30/10	10	0.6 x 0.6 x 0.13	PLL-V12N
SFS0640A-LF	640	0	-70	-105	-13	5/3	25/9	10	0.6 x 0.6 x 0.13	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

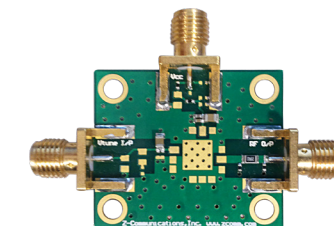
SFS Series Fixed Frequency PLLs | 500 MHz - 15 GHz

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

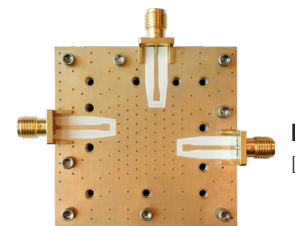
Evaluation Boards | For Z-Comm VCOs & PLLs



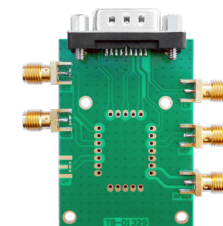
MINIEVAL
V, CRO and CLV
Series VCOs



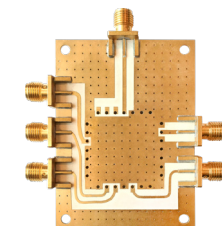
SMVEVAL
SMV Series VCOs



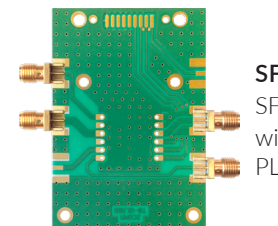
DROEVAL
DRO Series VCOs



PLLEVAL
PSA and PSN
Series PLLs

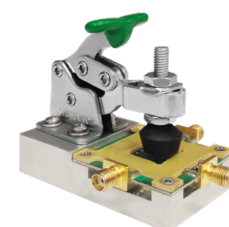


SFS1EVAL
SFS Series PLLs with
SFS-L1 package

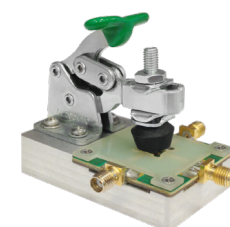


SFSFEVAL
SFS Series PLLs
with PLL-V12C or
PLL-V12N packages

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

VCO & PLL Outlines

VCO & PLL Outlines

MINI-XX

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

PACKAGE	H	PACKAGE	H
MINI-14S	0.220	MINI-16	0.220
MINI-14S-LOW	0.160	MINI-16-LOW	0.160
MINI-14S-L	0.130	MINI-16-L	0.130
MINI-14S-UL	0.100	MINI-16-UL	0.100
		MINI-16-EL	0.085

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 Vt
P2 RF OUT
P3 Vcc
REST GROUND

SDRO

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 Vt
P2 RF OUT
P3 Vcc
REST GROUND

VCO-24H

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 RF OUTPUT
P2-12 GROUND
P13 Vcc
P14-16 GROUND
P17 Vtune
P18-24 GROUND

RFS-V12N

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

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	0.086 2.00

PIN OUT DETAILS
P1 GROUND
P2 GROUND
P3 GROUND
P4 NC
P5 GROUND
P6 GROUND
P7 VCC/VCO
P8 GROUND
P9 GROUND
P10 RF OUT
P11 VCO-PLL
P12 LOCK DETECT

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

SUB-L

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 Vt
P2 RF Out
P3 Vcc
REST GROUND

PLL-24

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

PACKAGE	H
PLL-24H	0.220
PLL-24	0.140

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
1 RF OUT
5 REF IN
7 CLOCK
8 DATA
10 LOAD ENABLE
12 LOCK DETECT
13 Vcc
17 N/C
REST GROUND

USSP

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 Vt
P2 RF OUT
P3 Vcc
REST GROUND

PLL-V12N

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
1 Vcc(VCO)
3 RF OUT
5 MUX OUT
6 Vcc(CHIP)
7 CLOCK
8 DATA
9 ENABLE
10 REF IN
REST GROUND

FOR SFS MODELS:
P7, P8 AND P9 SHALL BE N/C
P5 PROGRAMMED AS DIGITAL LOCK DETECT

ZMX-14-SM

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
P1 Vt
P2 RF OUT
P3 Vcc
REST GROUND

SFS-L1

NOTE: ALL DIMENSIONS ARE IN INCHES
TOL: XXX: +/- 0.010

RECOMMENDED FOOTPRINT
SEVERAL HOLES OF ϕ 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

PIN CONFIGURATION
6 RF OUT
11 LOCK DETECT
12 N/C
13 N/C
14 N/C
17 REF IN
23 N/C
24 Vcc CHIP
26 Vcc VCO
REST GROUND