

VCO commercial series - General purpose



GENERAL PURPOSE VCO

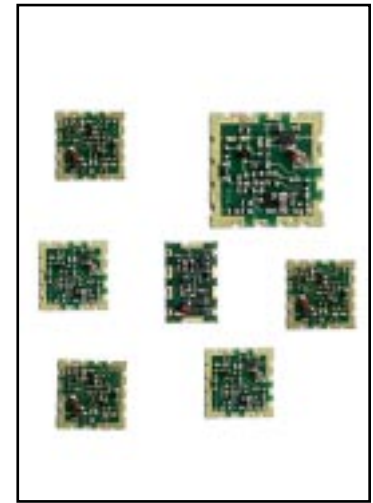
Features

This series proposes a wide range of standard VCO:

- frequency range: from 80 MHz up to 2500 MHz
- phase noise: as low as -102 dBc @ 10 kHz from the carrier
- output power: up to 8 dBm

Description

This product family offers a low cost and immediate solution to designers for multi purpose applications. VCO exhibits good specifications over the frequency range, high repeatability item to item and guaranteed performances. High runners, most of the VCO of this series are available from stock, please consult factory or local distributors.



All our parts are manufactured with lead free technology.

General purpose VCOs from few to 800 MHz:

Electrical characteristics @ 25° C

P/N	Frequency range	Tuning voltage	Phase noise @ 10kHz	Phase noise @ 100kHz	2nd harmonic	RF output power	Power supply	Case type	Pushing	Pulling	Input capacitance
	MHz min. - max.	V min. - max.	dBc/Hz max.	dBc/Hz max.	dBc max.	dBm typ.	V/mA typ.		MHz/V max.	MHz max.	pF
VLB80	80 - 90	0 - 5	-100	-125	-15	0	5 @ 25	SM1	±2.00	1.5 @ 2:1	100
VLB120	120 - 150	0 - 5	-95	-115	-10	7	5 @ 25	SM1	±1.00	1.5 @ 2:1	10000
VLB150	150 - 170	0 - 5	-80	-100	-15	0	5 @ 25	SM1	±1.00	2.0 @ 2:1	220
VLB240	240 - 260	0 - 5	-80	-100	-15	0	5 @ 25	SM1	±1.00	2.0 @ 2:1	150
VLB280	280 - 310	0.5 - 4.5	-100	-120	-15	3	4.5 @ 30	SM1	±11.00	15.0 @ 2:1	68
VLB330	330 - 380	0 - 10	-80	-100	-20	0	5 @ 25	SM1	±1.00	2.0 @ 2:1	68
VLB361	360 - 440	0 - 5	-100	-120	-10	5	5 @ 25	SM1	±5.00	5.0 @ 2:1	1000
VLB435	435 - 475	1 - 4	-112	-132	-12	1	5 @ 20	SM1	±1.10	0.5 @ 1.7	220
VLB490	490 - 540	0.5 - 4.5	-90	-110	-12	0	5 @ 15	SM1	±2.50	4.5 @ 2:1	68
VLB530	530 - 590	0 - 10	-95	-115	-15	1	5 @ 25	SM1	±2.50	2.5 @ 2:1	15
VLB560	560 - 580	1 - 4	-100	-130	-10	0	5 @ 15	SM1	±0.50	1.0 @ 2:1	150
VBL630	630 - 695	2 - 12	-97	-117	-10	5	5 @ 28	SM1	±2.50	7.0 @ 2:1	47
VLB670	670 - 700	0.5 - 4.5	-100	-124	-10	0	5 @ 20	SM1	±0.25	0.5 @ 2:1	70
VLB711	710 - 742	0.5 - 4.5	-100	-130	-10	0	5 @ 20	SM1	±0.25	0.5 @ 2:1	70
VLB730	730 - 750	0.5 - 4.5	-131 @ 50kHz	-136	-12	0	5 @ 22	SM1	±0.50	1.0 @ 2:1	150

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General purpose VCOs from 800 to 1800 MHz:

Electrical characteristics @ 25° C

P/N	Frequency range	Tuning voltage	Phase noise @ 10kHz	Phase noise @ 100kHz	2nd harmonic	RF output power	Power supply	Case type	Pushing	Pulling	Input capacitance
	MHz min. - max.	V min. - max.	dBc/Hz max.	dBc/Hz max.	dBc max.	dBm typ.	V/mA typ.		MHz/V max.	MHz max.	pF
VLR740	740 - 788	1 - 4	-95	-139 @ 600kHz	-15	0	5 @ 30	SM4	±1.0	0.50 @ 2:1	47
VLB781	780 - 805	0.5 - 4.5	-90	-148 @ 800 kHz	-20	0	5.3 @ 45	SM1	±0.3	1.50 @ 2:1	100
VLR790	790 - 840	0 - 6	-100	-148 @ 800kHz	-15	0	5 @ 30	SM4	±1.0	0.40 @ 2:1	100
VLR800	800 - 850	1 - 4	-100	-148 @ 800kHz	-15	0	5 @ 30	SM4	±2.5	0.80 @ 2:1	100
VLB804	800 - 835	1 - 3.9	-100	-120	-10	0	5 @ 25	SM1	±0.3	1.00 @ 2:1	56
VL3-820	820 - 880	1.5 - 8	-100	-120	-12	5	9 @ 30	SM2	±2.5	0.80 @ 2:1	56
VLB840	840 - 970	0.5 - 5	-90	-110	-10	5	5 @ 25	SM1	±2.0	20.00 @ 2:1	56
VLB851	850 - 868	1 - 4	-100	-125	-10	0	5 @ 20	SM1	±0.5	1.40 @ 2:1	150
VL3-920	920 - 980	1.5 - 8	-100	-120	-12	6	9 @ 30	SM2	±0.3	2.50 @ 2:1	150
VLB990	990 - 1015	0.5 - 4.5	-100	-148 @ 800 kHz	-10	0	5 @ 30	SM1	±0.5	1.50 @ 2:1	100
VLB1001	1000 - 1025	1 - 4	-100	-148 @ 800kHz	-10	0	7.4 @ 25	SM1	±0.4	0.40 @ 2:1	70
VLB1052	1050 - 1085	0.5 - 4.5	-100	-148 @ 800kHz	-10	0	5 @ 30	SM1	±0.4	1.00 @ 2:1	56
VLB1051	1050 - 1200	1 - 4	-90	-110	-7	4	5 @ 25	SM1	±4.5	30.00 @ 2:1	47
VL3-1070	1070 - 1190	1.5 - 8	-100	-120	-12	5	9 @ 30	SM2	±1.5	6.00 @ 2:1	100
VLB1160	1160 - 1200	0.5 - 4.5	-102	-122	-12	0	5 @ 19	SM1	±0.5	1.00 @ 2:1	50
VL3-1190	1190 - 1250	1.5 - 8	-100	-120	-12	6	9 @ 30	SM2	±0.3	5.00 @ 2:1	150
VLB1210	1210 - 1235	0.5 - 4.5	-100	-144 @ 800kHz	-10	0	5 @ 30	SM1	±1.0	2.00 @ 2:1	100
VLB1270	1270 - 1307	0.5 - 4.5	-100	-144 @ 800kHz	-10	0	5 @ 30	SM1	±0.2	1.00 @ 2:1	100
VLB1280	1280 - 1338	0.5 - 4.5	-100	-125 @ 400kHz	-10	0	5 @ 30	SM1	±0.3	5.00 @ 2:1	56
VL3-1390	1390 - 1424	1 - 13	-82	-102	-20	2	15 @ 40	SM2	±2.5	10.00 @ 2:1	47
VL2-1450	1450 - 1455	0.5 - 4.5	-100	-142 @ 300kHz	-15	7	5 @ 35	SM2	±1.5	2.00 @ 2:1	33
VLB1460	1460 - 1536	2 - 8	-100	-141 @ 800kHz	-20	2.5	5 @ 30	SM1	±1.0	0.10 @ 2:1	150
VLB1470	1470 - 1545	0.5 - 4.5	-98	-138 @ 800kHz	-10	0	5 @ 16	SM1	±1.5	2.00 @ 2:1	100
VLR1500	1500 - 1595	1 - 4	-100	-137 @ 600kHz	-15	0	5 @ 30	SM1	±1.5	0.40 @ 2:1	100
VLR1510	1510 - 1650	3 - 9	-100	-137 @ 600kHz	-15	0	8 @ 30	SM4	±2.0	1.00 @ 2:1	100
VLB1530	1530 - 1670	0.5 - 4.5	-85	-105	-15	4	4.5 @ 25	SM1	±6.0	22.00 @ 2:1	100
VLB1531	1531 - 1606	1 - 4	-100	-141 @ 800kHz	-15	0	5 @ 30	SM1	±1.0	1.00 @ 2:1	100
VLB1542	1540 - 1815	1 - 4	-100	-141 @ 800kHz	-12	0	5 @ 30	SM1	±0.5	1.00 @ 2:1	22
VLB1570	1570 - 1645	1 - 4	-97	-129 @ 400kHz	-20	2.5	5 @ 30	SM1	±1.0	0.15 @ 2:1	150
VLB1590	1590 - 1650	0.5 - 4.5	-96	-136 @ 800kHz	-10	0	5 @ 30	SM1	±2.5	10.00 @ 2:1	100
VLB1601	1600 - 1800	1 - 8	-80	-105	-8	6	9 @ 30	SM1	±5.0	25.00 @ 2:1	12
VLR1610	1610 - 1725	3 - 9	-101	-140 @ 800kHz	-15	0	8 @ 30	SM4	±1.0	1.00 @ 2:1	10
VLR1630	1630 - 1698	3 - 9	-100	-140 @ 600kHz	-15	0	8 @ 30	SM4	±0.5	0.80 @ 2:1	100
VLR1650	1650 - 1755	3 - 9	-101	-140 @ 800kHz	-15	0	8 @ 30	SM4	±0.5	1.00 @ 2:1	22
VLB1660	1660 - 1721	0.5 - 4.5	-100	-120	-15	0	5 @ 30	SM1	±1.0	1.50 @ 2:1	100
VLB1670	1670 - 1730	1 - 4	-100	-141 @ 800kHz	-12	0	5 @ 30	SM1	±1.0	2.00 @ 2:1	100
VLB1680	1680 - 1740	0.5 - 4.5	-96	-142 @ 800kHz	-10	0	5 @ 30	SM1	±0.4	1.20 @ 2:1	100
VLB1701	1700 - 1800	1 - 6	-95	-115	-10	2.5	5 @ 25	SM1	±1.0	5.00 @ 2:1	33
VLB1722	1720 - 1780	1 - 4	-100	-136 @ 600kHz	-12	0	5 @ 30	SM1	±0.5	1.00 @ 2:1	100
VLB1730	1730 - 1790	0.5 - 4.5	-100	-139 @ 800kHz	-12	0	5 @ 16	SM1	±1.0	1.00 @ 2:1	100
VLB1761	1760 - 1821	0.4 - 4.5	-102	-143 @ 1MHz	-20	0	5 @ 25	SM1	±0.7	2.00 @ 2:1	70

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General purpose VCOs from 1800 MHz:

Electrical characteristics @ 25° C

P/N	Frequency range	Tuning voltage	Phase noise @ 10kHz	Phase noise @ 100kHz	2nd harmonic	RF output power	Power supply	Case type	Pushing	Pulling	Input capacitance
	MHz min. - max.	V min. - max.	dBc/Hz max.	dBc/Hz max.	dBc max.	dBm typ.	V/mA typ.		MHz/V max.	MHz max.	pF
VLB1800	1800 - 1875	1.5 - 8	-98	-135 @ 800kHz	-12	4.5	8.0 @ 16	SM1	±1.5	4 @ 2:1	22
VLR1810	1810 - 1915	0 - 12	-101	-121	-15	0	8.0 @ 30	SM4	±2.0	2 @ 2:1	47
VLB1850	1850 - 1910	0.5 - 4.5	-95	-115	-15	4	5.0 @ 30	SM1	±1.0	2 @ 2:1	100
VLB1880	1880 - 1890	0.5 - 4.5	-100	-120	-15	3	4.5 @ 30	SM1	±6.0	7 @ 2:1	47
VLB1930	1930 - 1990	0.4 - 4.5	-100	-135 @ 600kHz	-20	0	5.0 @ 25	SM1	±0.7	2 @ 2:1	70
VLB1951	1950 - 2200	2.5 - 20	-84	-115	-10	6	4.5 @ 25	SM1	±16.0	17 @ 2:1	100
VLB1980	1980 - 2055	0.6 - 4.5	-90	-110	-15	0	5.0 @ 20	SM1	±2.5	3 @ 2:1	47
VLB1990	1990 - 2045	0.4 - 4.5	-102	-137 @ 625kHz	-20	0	5.0 @ 25	SM1	±0.5	2 @ 2:1	70
VLB2020	2020 - 2220	0 - 20	-87	-118	-10	6	4.5 @ 25	SM1	±6.5	17 @ 2:1	47
VLB2050	2050 - 2265	0 - 16	-95	-115	-10	8	5.0 @ 25	SM1	±6.5	17 @ 2:1	47
VLR2090	2090 - 2195	0 - 12	-101	-121	-15	1	8.0 @ 30	SM4	±2.0	2 @ 2:1	47
VLB2102	2100 - 2375	0 - 20	-85	-116	-10	6	4.5 @ 25	SM1	±16	17 @ 2:1	100
VLB2110	2110 - 2170	0.5 - 4.5	-100	-120	-15	0	5.0 @ 30	SM1	±1.0	5 @ 2:1	100
VLB2270	2270 - 2515	0 - 16	-95	-115	-10	8	5.0 @ 25	SM1	±6.5	17 @ 2:1	47

Maximum ratings

Tuning voltage range	Maximum
0 - 3 V	5 V
0 - 5 V	7 V
0 - 8 V	10 V
0 - 10 V	12 V
0 - 12 V	14 V

Supply voltage range	Maximum
≤ 5 V	6 V
≤ 12 V	13 V

Operating temperature : -40° C + 80° C

Storage temperature: -65° C + 125° C

Solder assembly temperature: see recommended soldering profile here above