

TO-8 Voltage Controlled Oscillators* Selection Guide

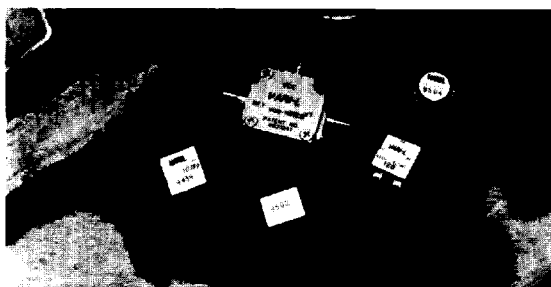
Product Number	Model Number	Frequency Range (MHz)	Phase Noise @ 10 kHz	dBc/Hz 100 kHz	Supply Voltage	Current MA	Product Number	Model Number	Frequency Range (MHz)	Phase Noise @ 10 kHz	dBc/Hz 100 kHz	Supply Voltage	Current MA
▲ 1	VCO-102	25-50	115	135	15	12.5	▲ 21	VCO-121	700-1400	88	114	15	15.5
▲ 2	VCO-202	25-50	115	140	15	14.0	▲ 22	VCO-108	800-1600	85	110	15	15.5
▲ 3	VCO-113	40-80	110	130	15	12.0	▲ 23	VCO-109	900-1800	85	110	15	16.0
▲ 4	VCO-103	50-100	110	135	15	12.5	▲ 24	VCO-110	1000-2000	85	110	15	17.5
▲ 5	VCO-114	60-120	108	130	15	13.0	▲ 25	VCO-111	1500-2750	80	100	15	17.5
▲ 6	VCO-104	100-200	100	125	15	12.5	▲ 26	VCO-112	2000-3200	80	105	14	18.0
▲ 7	VCO-204	100-200	112	135	15	13.5	▲ 27	VCO-115	2500-4000	70	98	15	18.0
▲ 8	VCO-116	150-300	102	125	15	12.5	▲ 28	VCO-119	3000-4800	72	100	15	18.0
▲ 9	VCO-216	150-300	110	133	15	13.5							
▲ 10	VCO-105	200-400	98	120	15	14.0							
▲ 11	VCO-205	200-400	106	130	15	13.5							
▲ 12	VCO-305	200-400	102	128	5	11.0							
▲ 13	VCO-206	400-800	100	125	15	17.5							
▲ 14	VCO-306	400-800	98	123	5	17.0							
▲ 15	VCO-118	250-500	100	125	15	14.5							
▲ 16	VCO-117	300-600	100	128	15	14.5							
▲ 17	VCO-317	300-600	100	125	5	13.0							
▲ 18	VCO-106	400-800	92	122	15	15.0							
▲ 19	VCO-107	500-1000	90	115	15	15.0							
▲ 20	VCO-120	600-1200	90	115	15	15.5							

NOTES:

- (1) All models above are rated 0 to +70°C
- (2) Suffix TC versions available rated -55 to +100°C
- (3) Power output is +13 dBm typical except VCO-305 output is +10 typical
- (4) Lower noise narrow band versions are available on special order
- (5) Lower supply voltage and dual polarity, tuning voltage designs are available on special order

All of the above VCOs are available in TO-8 as standard. Also available in Surface Mount, Flatpack and SMA Connectorized Packages.

*U.S. Patent #4621241, Canadian Patent #1267941, E.P.O. Patent #0,207,650



Vari-L Mixers Selection Guide (+7 dBm Lo Level)

Product Number	Model Number	Frequency Range (MHz)			Package Style	Typical Midband Electrical Performance			Isolations (dB)			Special Notes
		L	R	IF		Conversion Loss SSBNF (dB)	RF Level (1dB) Compression (dBm)	3rd Order Intercept Point (dBm)	L-R	L-X	R-X	
▲ 31	CM-1	.5-500	.5-500	DC-500	Metal PC Mount	6	0	+13	40	30	20	Low cost, shielded, general purpose
▲ 32	CM-2	10-1000	10-1000	DC-1000	Metal PC Mount	6	0	+13	35	25	20	Low cost, shielded, general purpose
▲ 33	CM-3	1-1000	1-1000	DC-1000	Subminiature	6	0	+13	40	35	30	Low cost, shielded, general purpose
▲ 34	CM-4	1-500	1-500	DC-500	Metal PC Mount Subminiature	6	0	+13	40	35	30	Low cost, shielded, general purpose
▲ 35	CM-5	1-500	1-500	DC-500	Surface Mount	6	0	+13	40	35	30	Low cost, surface mount substrate
36	DBM-100B	.2-600	.2-600	DC-600	BNC Connector (SMA Optional)	7	+2	+13	55	45	35	Shielded, connector package, low VSWR, high performance
37	DBM-141	.4-400	.4-400	DC-400	TO-5	6	0	+10	40	35	25	Miniature size, shielded, PC Mount
38	DBM-142	10-1000	10-1000	DC-1000	Metal Flatpack	6	0	+10	40	40	40	Shielded, PC or Microstrip Mount, high performance, general purpose
39	DBM-145	10-1500	10-1500	DC-1500	Subminiature	5	0	+12	40	40	30	Very small, high performance, hermetic package
40	DBM-177	5-1500	5-1500	DC-1500	Metal Flatpack TO-8	6.5	0	+10	40	35	30	High performance version, very high reliability
▲ 41	DBM-181	1000-2500	1000-2500	DC-1000	TO-8	7.5	0	+15	35	25	30	Miniature, shielded, PC Mount
42	DBM-182	600-2000	600-2000	DC-1000	Metal Flatpack	7	0	+13	45	35	35	Miniature, shielded, PC Mount
43	DBM-185	600-2000	600-2000	DC-1400	TO-5	6.5	0	+11	30	25	20	Miniature size, shielded, PC Mount
44	DBM-190	10-1000	10-1000	DC-1000	Metal Flatpack	8	-8	+7	35	35	35	Very low LO level type, shielded
45	DBM-300B	300-1500	300-1500	DC-700	SMA Connector	6	+2	+12	50	30	20	Shielded, SMA Connector, Tacan, DME
46	DBM-400	10-3000	10-3000	5-800	SMA Connector	8	0	+10	40	40	25	Shielded, SMA Package, high performance, replaceable diodes
47	DBM-500	1700-4200	1700-4200	DC-1500	SMA Connector	5	0	+8	35	30	25	Shielded, SMA Package, excellent L band and satellite band mixer
48	DBM-1100	2500-5000	2500-5000	DC-1500	SMA Connector	4.5	0	+8	35	28	25	Shielded, connector package, excellent for satellite receiver use, extremely low loss
49	DBM-1120	1000-2000	1000-2000	DC-800	SMA Connector	5	0	+8	40	35	25	Shielded, connector package, low loss
50	DBM-1150	1600-3500	1600-3500	DC-1000	SMA Connector	4.6	0	+8	42	22	30	Shielded, connector package, low loss
51	DBM-1160	2100-4200	2100-4200	DC-1000	SMA Connector	4.5	0	+8	35	30	20	Shielded, connector package, low loss
52	DBM-1180	3500-7000	3500-7000	DC-1500	SMA Connector	4.5	0	+8	35	30	25	Shielded, connector package, low loss
53	DBM-1600	3600-4300	3700-4200	DC-100	TO-8	4.0	0	+8	35	30	32	Single conversion satellite receiver use, small size, low loss
54	DBM-1650	2500-5000	2500-5000	DC-1000	TO-8	5.5	0	+8	30	15	35	Double conversion satellite receiver use, small size, low loss
55	DBM-1660	3000-6000	3000-6000	DC-1600	TO-8	5.0	0	+8	30	15	25	Special low loss Satcom applications 3-6 GHz
56	QM-248	Octave or 10% BW	1-1000 MHz		Metal Flatpack	10.5	+3	+15	30	30	20	Special Quadrature mixer with two outputs that are 90 DEG out of phase