

# VOLTAGE CONTROLLED OSCILLATORS



## SURFACE-MOUNT PACKAGE

124SL

FREQUENCY RANGE (MHz)	NOMINAL TUNING VOLTAGE (Volts)	DC BIAS REQUIREMENTS		OUTPUT POWER		AVERAGE TUNING SENSITIVITY MHz/Volt	TYPICAL PHASE NOISE dBc/Hz Offset at 10 KHz/100 KHz	TYPICAL HARMONIC SUPPRESSION (dBc)	PUSHING (MHz/Volt) (Typ)	PULLING (@ 1.75:1 VSWR) MHz (Typ)	MODEL
		VOLTAGE (Volts)	CURRENT (mA)	dBm	Tolerance (dB)						
170 - 220	0 - 10	+7	<13	+3	±3	5 - 8	-95/-115	10	5	15	VCO-S-A12
180 - 220	0 - 5	+7	<35	0	±1	9 - 14	-95/-115	10	5	15	VCO-S-A17
200 - 400	0 - 17	+12	<35	+14	±2.5	10 - 20	-90/-115	10	5	15	VCO-S-200
210 - 270	1 - 12	+12	<35	+10	±3	5 - 6	-94/-118	10	5	15	VCO210SA
225 - 450	1 - 17	+7	<13	+4	±2.5	20 - 30	-95/-115	9	5	15	VCO225SA
250 - 500	2 - 22	+12	<35	+14	±2.5	10 - 20	-95/-120	10	5	15	VCO-S-250
350 - 410	2 - 10	+8	<35	+7	±2	7.5 - 15	-100/-125	10	1	15	VCO-S-A23
400 - 450	2 - 10	+8	<35	+7	±2	6.0 - 15	-98/-120	10	1	15	VCO-S-A22
400 - 650	0.5 - 5	+5	<20	+7	±3.5	50 - 80	-95/-120	10	5	15	VCO400SA
400 - 800	0.5 - 15	+12	<35	+15	±2.5	20 - 30	-95/-120	10	1	15	VCO-S-400
470 - 650	1 - 11	+12	<35	+12	±2.5	20 - 30	-97/-112	10	1	15	VCO470SA
500 - 600	0 - 5	+7	<35	0	±1	20 - 30	-90/-115	10	5	15	VCO-S-A18
500 - 1000	0.5 - 30	+12	<35	+14	±2.5	25 - 50	-95/-120	10	1	15	VCO-S-500
550 - 890	1 - 18	+12	<35	+14	±2.5	25 - 50	-95/-120	10	1	15	VCO550SA
600 - 1200	0.5 - 25	+12	<35	+12	±2.5	25 - 45	-95/-120	10	1	15	VCO-S-600
700 - 1400	0.5 - 25	+12	<35	+15	±3	35 - 60	-95/-120	10	5	15	VCO-S-700
750 - 830	1 - 4	+12	<30	+14.5	±1.5	35 - 45	-90/-117	10	5	15	VCO-S-A06
800 - 1600	0 - 25	+12	<35	+14	±3.5	40 - 60	-95/-120	10	1	15	VCO-S-800
844 - 919	1 - 4	+12	<35	+14	±1.5	25 - 40	-85/-110	18	2	4.5	VCO844SA
900 - 1800	0.5 - 20	+12	<35	+11	±3	40 - 60	-95/-120	10	5	15	VCO-S-900
900 - 2200	0 - 25	+12	<35	+12	±2.5	55 - 80	-85/-110	10	8	15	VCO900SA
950 - 1175	4 - 15	+12	<35	+13	±3	21 - 27	-95/-118	10	1	15	VCO-S-A27
1000 - 2000	0.5 - 22	+12	<35	+11	±3	40 - 60	-95/-120	10	5	15	VCO-S-1000
1000 - 2000	0.5 - 22	+12	<35	+6	±2.5	50 - 70	-98/-126	10	5	15	VCO1000SA
1100 - 2200	0.5 - 25	+12	<35	+13	±3	40 - 60	-95/-120	10	5	15	VCO-S-1100
1200 - 2400	0 - 26	+5	<35	+10	±3	40 - 100	-90/-110	10	5	15	VCO1200SA
1500 - 2100	1 - 12	+12	<35	+10	±3	40 - 60	-88/-115	10	5	15	VCO1500SA
1600 - 2000	0 - 5	+5	<35	+10	±3	80 - 100	-90/-115	10	13	10	VCO1600SA
1600 - 2600	0 - 26	+5	<35	+10	±3	40 - 60	-90/-120	10	5	15	VCO-S-A24
1750 - 2000	1 - 9	+9.6	<30	+10	±3	35 - 60	-82/-110	10	8	30	VCO1750SA
2000 - 3000	0 - 25	+12	<35	+9	±2	40 - 70	-88/-116	10	8	15	VCO-S-2000

### COMMON SPECIFICATIONS

Output Impedance: 50 ohms  
VSWR: 1.5:1 (Typ)  
Specifications are at +25°C

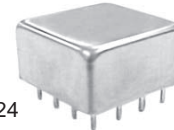
Operating Temperature: -30°C to +70°C  
**Contact the factory for more stringent operating temperature range**

For pin location and package outline drawings, see back pages.

### PIN-OUT TABLE

RF OUT	V <sub>cc</sub>	V <sub>tune</sub>	CASE GND
1	4	16	ALL OTHERS

# VOLTAGE CONTROLLED OSCILLATORS



124

## PLUG-IN PACKAGE

FREQUENCY RANGE (MHz)	NOMINAL TUNING VOLTAGE (Volts)	DC BIAS REQUIREMENTS		OUTPUT POWER		AVERAGE TUNING SENSITIVITY MHz/Volt	TYPICAL PHASE NOISE dBc/Hz Offset at 10 KHz/100 KHz	TYPICAL HARMONIC SUPPRESSION (dBc)	PUSHING (MHz/Volt) (Typ)	PULLING (@ 1.75:1 VSWR) MHz (Typ)	MODEL
		VOLTAGE (Volts)	CURRENT (mA)	dBm	Tolerance (dB)						
180 - 220	0 - 5	+7	<35	0	±1	9 - 14	-95/-115	10	5	15	VCO-P-A17
200 - 400	0 - 17	+12	<35	+14	±2.5	10 - 20	-90/-115	10	5	15	VCO-P-200
210 - 270	1 - 12	+12	<35	+10	±3	5 - 6	-94/-118	10	5	15	VCO210PA
225 - 450	1 - 17	+7	<13	+4	±2.5	20 - 30	-95/-115	9	5	15	VCO225PA
250 - 500	2 - 22	+12	<35	+14	±2.5	10 - 20	-95/-120	10	5	15	VCO-P-250
350 - 410	2 - 10	+8	<35	+7	±2	7.5 - 15	-100/-125	10	1	15	VCO-P-A23
400 - 450	2 - 10	+8	<35	+7	±2	6.0 - 15	-98/-120	10	1	15	VCO-P-A22
400 - 650	0.5 - 5	+5	<20	+7	±3.5	50 - 80	-95/-120	10	5	15	VCO400PA
400 - 800	0.5 - 15	+12	<35	+15	±2.5	20 - 30	-95/-120	10	1	15	VCO-P-400
470 - 650	1 - 11	+12	<35	+12	±2.5	20 - 30	-97/-112	10	1	15	VCO470PA
500 - 600	0 - 5	+7	<35	0	±1	20 - 30	-90/-115	10	5	15	VCO-P-A18
500 - 1000	0.5 - 30	+12	<35	+14	±2.5	25 - 50	-95/-120	10	1	15	VCO-P-500
550 - 890	1 - 18	+12	<35	+14	±2.5	25 - 50	-95/-120	10	1	15	VCO550PA
600 - 1200	0.5 - 25	+12	<35	+12	±2.5	25 - 45	-95/-120	10	1	15	VCO-P-600
650 - 700	0.5 - 11	+12	<35	+10	±1	4 - 7	-100/-120	10	5	15	VCO-P-A12
700 - 1400	0.5 - 25	+12	<35	+15	±3	35 - 60	-95/-120	10	5	15	VCO-P-700
800 - 1600	0 - 25	+12	<35	+14	±3.5	40 - 60	-95/-120	10	1	15	VCO-P-800
844 - 919	1 - 4	+12	<35	+14	±1.5	25 - 40	-85/-110	18	2	4.5	VCO844PA
900 - 1800	0.5 - 20	+12	<35	+11	±3	40 - 60	-95/-120	10	5	15	VCO-P-900
900 - 2200	0 - 25	+12	<35	+12	±2.5	55 - 80	-85/-110	10	8	15	VCO900PA
950 - 1175	4 - 15	+12	<35	+13	±3	21 - 27	-95/-118	10	1	15	VCO-P-A27
1000 - 2000	0.5 - 22	+12	<35	+11	±3	40 - 60	-95/-120	10	5	15	VCO-P-1000
1000 - 2000	0.5 - 22	+12	<35	+6	±2.5	50 - 70	-98/-126	10	5	15	VCO1000PA
1100 - 2200	0.5 - 22	+12	<35	+13	±3	40 - 60	-95/-120	10	5	15	VCO-P-1100
1200 - 2400	0 - 26	+5	<35	+10	±3	40 - 100	-90/-110	10	5	15	VCO1200PA
1425 - 2535	0 - 24	+8	<25	+7	±2	30 - 100	-80/-100	10	5	25	VCO-P-A06
1500 - 2100	1 - 12	+12	<35	+10	±3	40 - 60	-88/-115	10	5	15	VCO1500PA
1600 - 2000	0 - 5	+5	<35	+10	±3	80 - 100	-90/-115	10	13	10	VCO1600PA
1600 - 2600	0 - 26	+5	<35	+10	±3	40 - 60	-90/-120	10	5	15	VCO-P-A24
1750 - 2000	1 - 9	+9.6	<30	+10	±3	35 - 60	-82/-110	10	8	30	VCO1750PA
2000 - 3000	0 - 25	+12	<35	+9	±2.0	40 - 70	-88/-116	10	8	15	VCO-P-2000

## COMMON SPECIFICATIONS

Output Impedance:

50 ohms

Operating Temperature:

-30°C to +70°C

VSWR:

1.5:1 (Typ)

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