

OS5100

4300 TO 5100 MHz VOLTAGE CONTROLLED OSCILLATOR

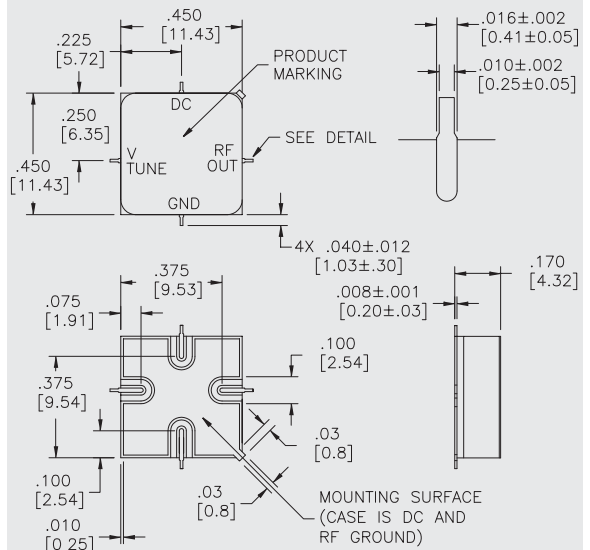
Typical Values @ +25 °C

Tuning Voltage Limits	0-15 V
Power Output	+1.0 dBm
Power Flatness	1.5 dB
Standard Size SMT0-8 Package	

OS5100

OS5100

SMT0-8 Package for Oscillators

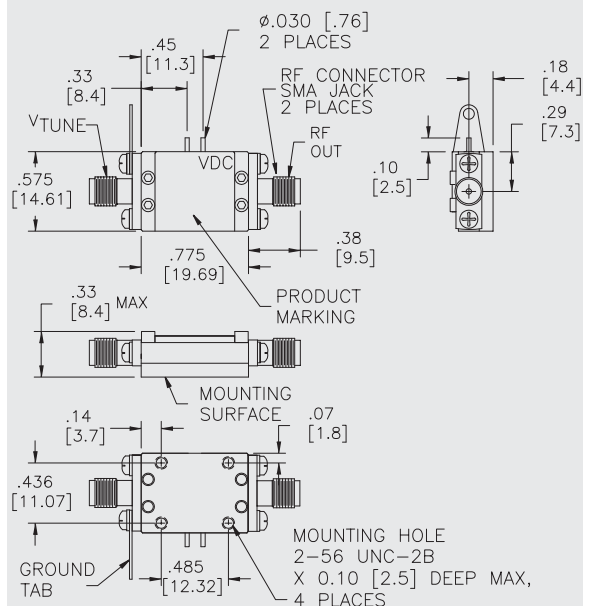


SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency		4250-5200 MHz	4300-5100 MHz
Tuning Voltage Limits			
Tuning Voltage at low end	0 V	0 V	0 V
Tuning voltage at high end	15 V	15 V	15 V
Power Output (Min.)	+1.0 dBm	-2.0 dBm	-2.5 dBm
Power Flatness[^] (Max.)	1.5 dB	2.0 dB	2.5 dB
Modulation Sensitivity (Min.-Max.)	50 to 85 MHz/V	45 to 90 MHz/V	40 to 95 MHz/V
Modulation Sensitivity Ratio (Max.)	1.5:1	1.7:1	1.7:1
SSB Phase Noise (Max.)			
at 10 kHz offset	-85 dBc/Hz	-75 dBc/Hz	-75 dBc/Hz
at 100 kHz offset	-108 dBc/Hz	-103 dBc/Hz	-103 dBc/Hz
Frequency Drift (Max.)	-	50 MHz	100 MHz
Harmonics (Max.)	-12.0 dBc	-10.0 dBc	-10.0 dBc
Spurious (Max.)	-60.0 dBc	-60.0 dBc	-60.0 dBc
Frequency Pulling (Max.)			
Load VSWR = 1.67:1	13.0 MHz	15.0 MHz	15.0 MHz
Frequency Pushing (Max.)			
Vdc ± 0.5 V	10.0 MHz/V	20.0 MHz/V	20.0 MHz/V
Bias Voltage (Vdc)	5.0 V	5.0 V	5.0 V
DC Current (Max.)	25 mA	30 mA	30 mA

OCP5100

CougarPak® Package for Oscillators



ABSOLUTE MAXIMUM RATINGS

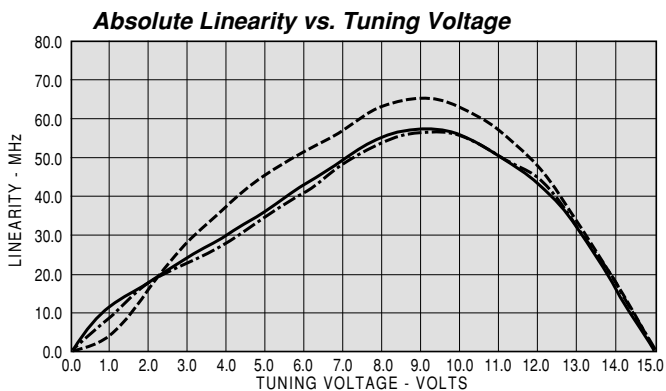
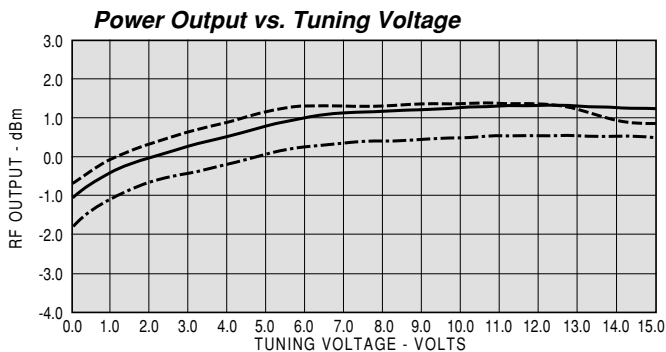
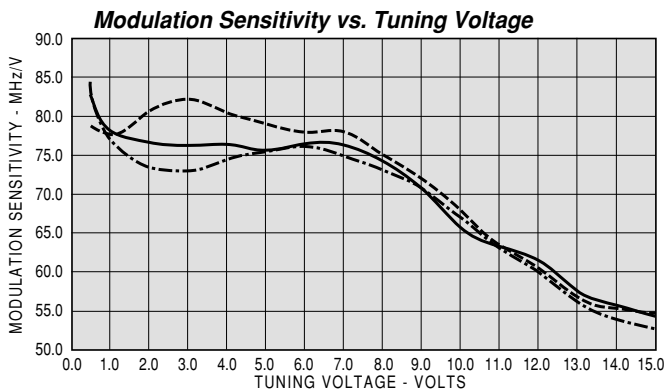
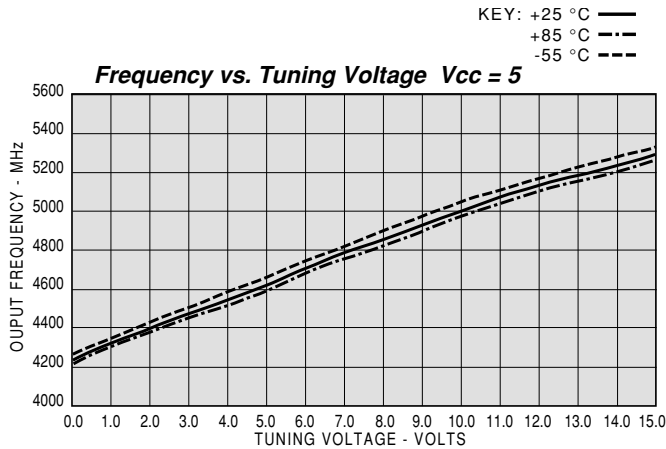
Storage Temperature	-62 °C to +125 °C
Maximum Case Temperature	125 °C
Maximum DC Voltage	+10 V
Maximum Tuning Voltage	+20 V
Burn-In Temperature	+125 °C
Thermal Resistance¹ (θjc)	+53.8 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+8.1 °C

¹ Thermal resistance is based on total power dissipation. Ratings based on +25 °C.

DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: OS5100	Vcc= +5V	Vstr mA = 25.85	Vstop mA = 25.9
TUNING VOLTAGE	FREQ.	POWER	MODULATION SENSITIVITY
V	MHz	dBm	MHz/V
0.0	4,231	-1.13	
0.5	4,273	-0.82	83.7
1.0	4,314	-0.56	78.6
1.6	4,353	-0.38	76.6
2.1	4,393	-0.23	75.6
2.6	4,432	-0.07	75.5
3.1	4,472	0.08	75.5
3.6	4,510	0.22	75.4
4.1	4,550	0.36	75.2
4.6	4,588	0.50	74.8
5.2	4,627	0.65	74.3
5.7	4,665	0.78	74.5
6.2	4,705	0.88	76.6
6.7	4,746	0.93	80.5
7.2	4,789	0.93	82.0
7.8	4,830	0.93	80.4
8.3	4,871	0.93	78.2
8.8	4,909	0.95	76.3
9.3	4,948	0.98	74.3
9.8	4,986	1.02	72.4
10.4	5,022	1.05	70.4
10.9	5,058	1.08	68.1
11.4	5,092	1.10	65.8
11.9	5,125	1.11	63.6
12.4	5,156	1.11	61.4
12.9	5,187	1.10	59.7
13.5	5,217	1.08	58.3
14.0	5,247	1.05	57.7
14.5	5,276	1.03	57.1
15.0	5,306	1.01	56.8
			LINEARITY
			MHz
			0.0
			6.1
			9.7
			12.2
			14.5
			16.4
			17.9
			20.0
			22.1
			23.6
			24.4
			25.8
			28.6
			33.4
			38.4
			42.8
			46.4
			48.7
			50.3
			50.2
			46.2
			45.9
			43.7
			41.0
			36.5
			31.9
			18.5
			12.9
			6.2
			0.0

