

OS8900

6900 TO 8900 MHz VOLTAGE CONTROLLED OSCILLATOR

Typical Values @ +25 °C

Tuning Voltage Limits
Power Output
Power Flatness
Standard Size SMTO-8 Package

OS8900

0-15 V
+1.0 dBm
2.0 dB

SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency		6800-9100 MHz	6900-8900 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	-3.0 dBm
Power Flatness[^] (Max.)	2.0 dB	3.5 dB	4.0 dB
Modulation Sensitivity (Min.-Max.)	80 to 290 MHz/V	75 to 300 MHz/V	60 to 310 MHz/V
Modulation Sensitivity Ratio (Max.)	3.1:1	3.5:1	4.0:1
SSB Phase Noise (Max.)			
at 10 kHz offset	-70 dBc/Hz	-60 dBc/Hz	-60 dBc/Hz
at 100 kHz offset	-95 dBc/Hz	-92 dBc/Hz	-92 dBc/Hz
Frequency Drift (Max.)	-	100 MHz	200 MHz
Harmonics (Max.)	-17.0 dBc	-12.0 dBc	-10.0 dBc
Spurious (Max.)	-60.0 dBc	-60.0 dBc	-60.0 dBc
Frequency Pulling (Max.)			
Load VSWR = 1.67:1	47.0 MHz	55.0 MHz	65.0 MHz
Frequency Pushing (Max.)			
Vdc ± 0.5 V	21.0 MHz/V	30.0 MHz/V	40.0 MHz/V
Bias Voltage (Vdc)	5.0 V	5.0 V	5.0 V
DC Current (Max.)	24 mA	30 mA	30 mA

* Specifications are measured in 50-ohm system at +5 Volts bias unless otherwise specified.
^ Power Flatness is defined as power variation over frequency band at any given temperature.

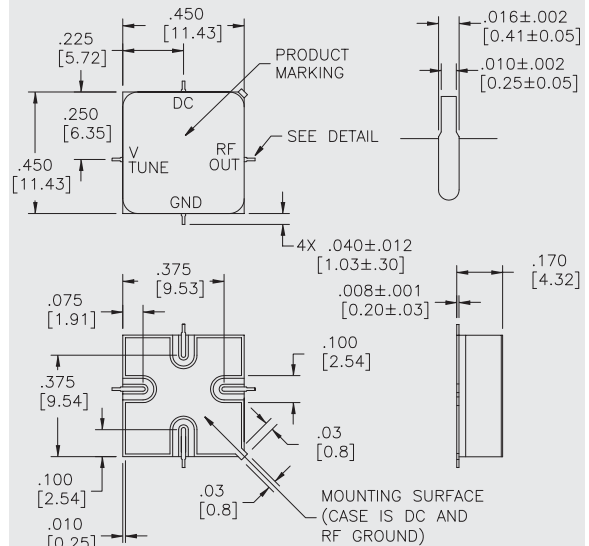
ABSOLUTE MAXIMUM RATINGS

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.

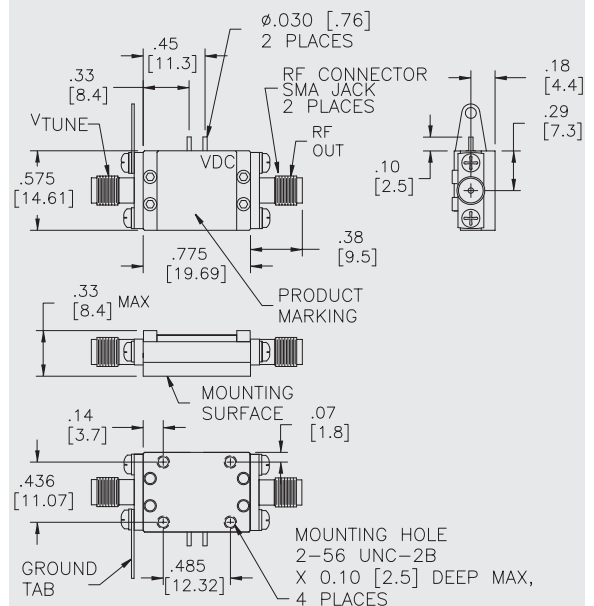
OS8900

SMTO-8 Package for Oscillators



OCP8900

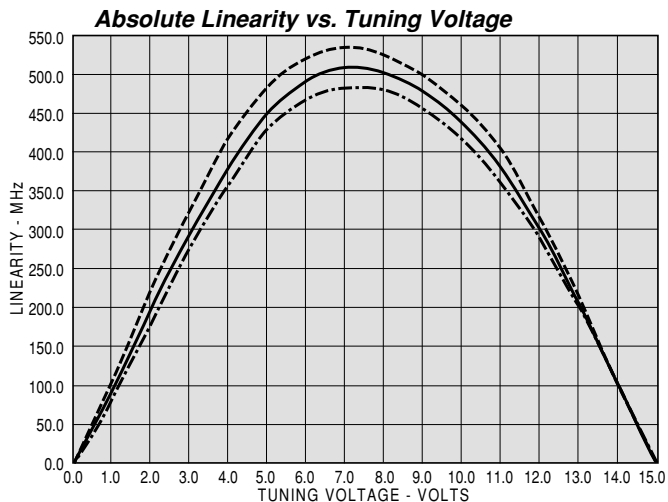
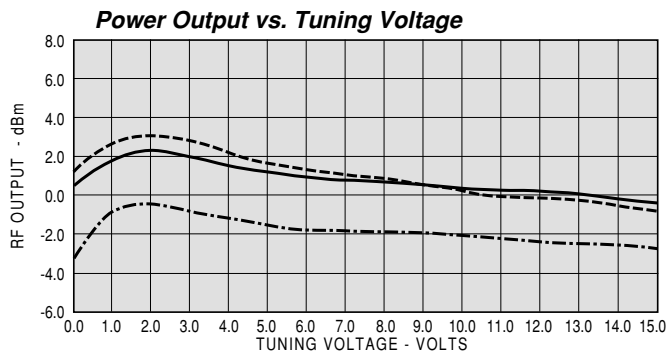
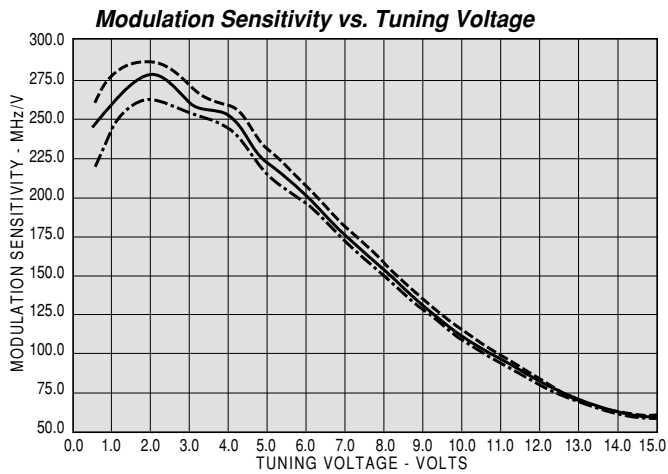
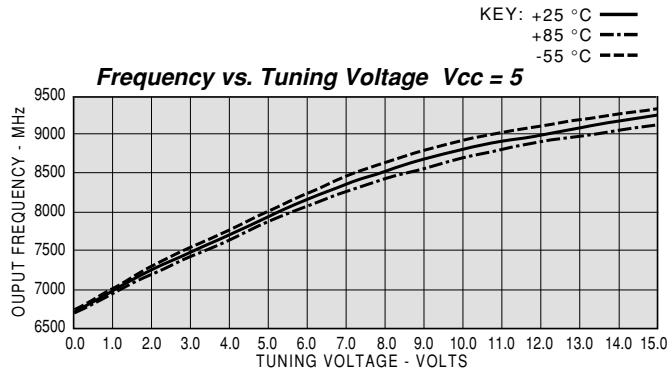
CougarPak® Package for Oscillators



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: OS8900	Vcc= +5V	Vstr mA = 24.13	Vstop mA = 24.1
TUNING VOLTAGE	FREQ.	POWER	MODULATION SENSITIVITY
V	MHz	dBm	MHz/V
0.0	6,794	0.31	0.0
0.5	6,930	1.21	266.3
1.0	7,072	1.60	271.2
1.6	7,210	1.76	270.4
2.1	7,352	1.83	270.9
2.6	7,486	1.77	263.4
3.1	7,622	1.68	259.0
3.6	7,749	1.61	247.5
4.1	7,872	1.61	235.6
4.7	7,987	1.46	226.5
5.2	8,098	1.31	211.5
5.7	8,199	1.24	198.2
6.2	8,297	1.21	186.5
6.7	8,387	1.10	176.0
7.2	8,473	0.93	163.3
7.8	8,549	0.78	149.9
8.3	8,622	0.67	138.8
8.8	8,688	0.57	129.7
9.3	8,751	0.47	120.6
9.8	8,809	0.36	111.5
10.4	8,862	0.25	102.3
10.9	8,910	0.16	92.7
11.4	8,953	0.08	84.1
11.9	8,993	0.00	76.0
12.4	9,028	-0.10	68.9
12.9	9,062	-0.23	64.3
13.5	9,093	-0.37	61.4
14.0	9,123	-0.49	57.9
14.5	9,152	-0.61	55.7
15.0	9,180	-0.73	53.0
LINEARITY	MHz		
0.0	0.0		
0.5	54.8		
1.0	113.4		
1.6	170.3		
2.1	228.8		
2.6	282.1		
3.1	334.3		
3.6	379.7		
4.1	419.9		
4.7	454.2		
5.2	481.7		
5.7	501.7		
6.2	516.1		
6.7	524.8		
7.2	527.0		
7.8	522.4		
8.3	511.8		
8.8	496.8		
9.3	476.7		
9.8	451.9		
10.4	422.8		
10.9	388.1		
11.4	349.8		
11.9	306.5		
12.4	260.4		
12.9	210.8		
13.5	161.1		
14.0	108.1		
14.5	55.6		
15.0	0.0		

