

OAS5100

4300 TO 5100 MHz VOLTAGE CONTROLLED OSCILLATOR

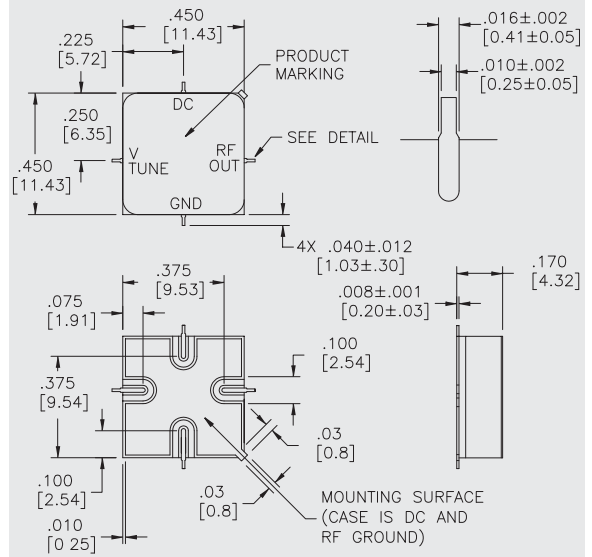
Typical Values @ +25 °C

Tuning Voltage Limits	0-15 V
Power Output	+13.0 dBm
Power Output Variation	2.0 dB
Standard Size SMTO-8 Package	

OAS5100

OAS5100

SMTO-8 Package for Oscillators

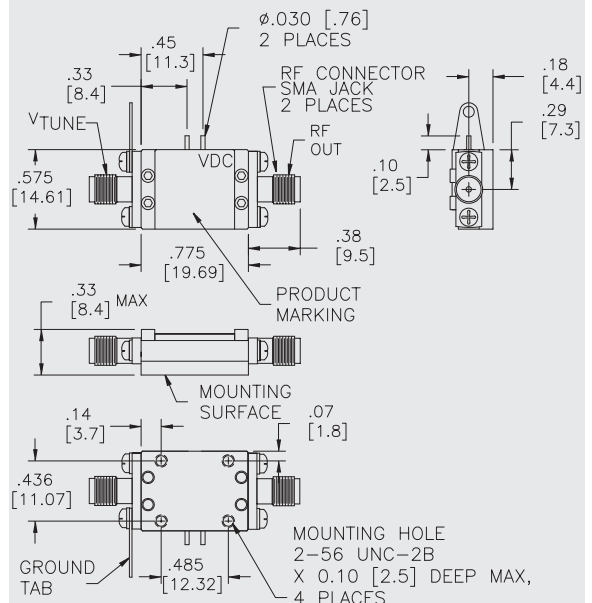


SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency	4250-5200 MHz	4300-5100 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.)	+13.0 dBm	+10.0 dBm	+9.0 dBm
Power Flatness[^] (Max.)	2.0 dB	2.5 dB	3.0 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	-84 dBc/Hz	-72 dBc/Hz	-72 dBc/Hz
at 100 kHz offset	-108 dBc/Hz	-103 dBc/Hz	-103 dBc/Hz
Frequency Drift (Max.)	—	50 MHz	100 MHz
Harmonics (Max.)	-22.0 dBc	-20.0 dBc	-20.0 dBc
Spurious (Max.)	-60.0 dBc	-60.0 dBc	-60.0 dBc
Frequency Pulling (Max.)			
Load VSWR = 1.67:1	0.1 MHz	0.5 MHz	0.5 MHz
Frequency Pushing (Max.)			
V _{dc} ± 0.5 V	10.0 MHz/V	20.0 MHz/V	20.0 MHz/V
Bias Voltage (V_{dc})	5.0 V	5.0 V	5.0 V
DC Current (Max.)	94 mA	105 mA	105 mA

OACP5100

CougarPak® Package for Oscillators



ABSOLUTE MAXIMUM RATINGS

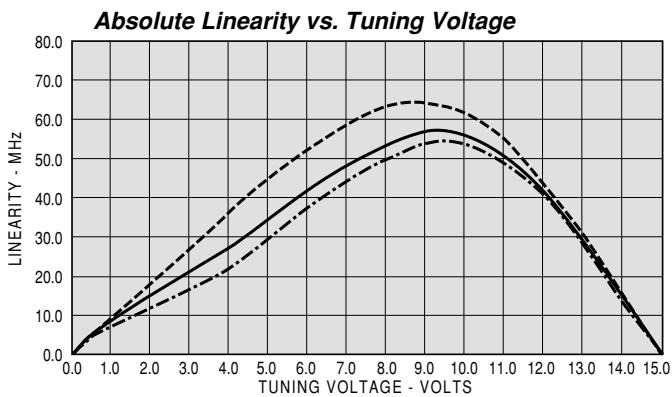
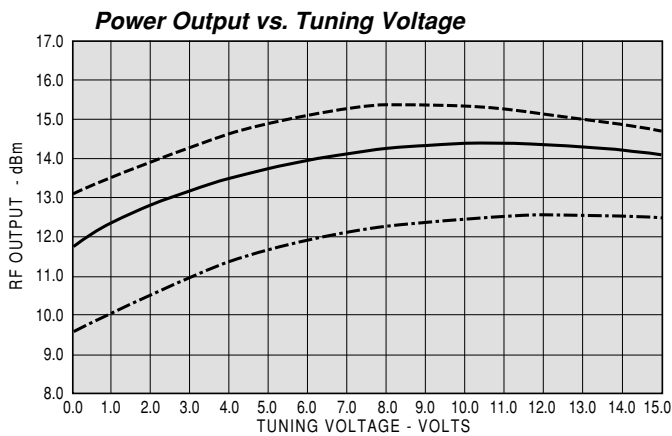
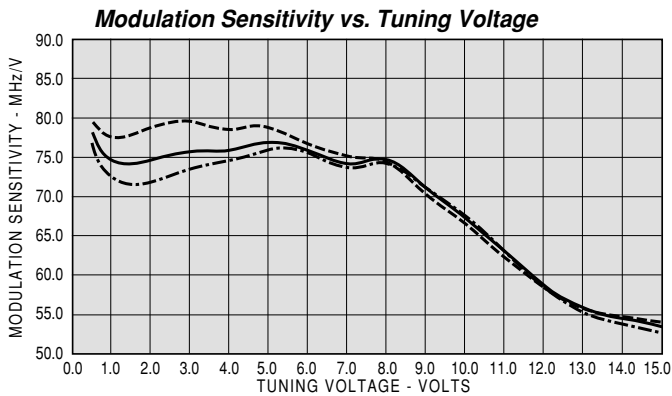
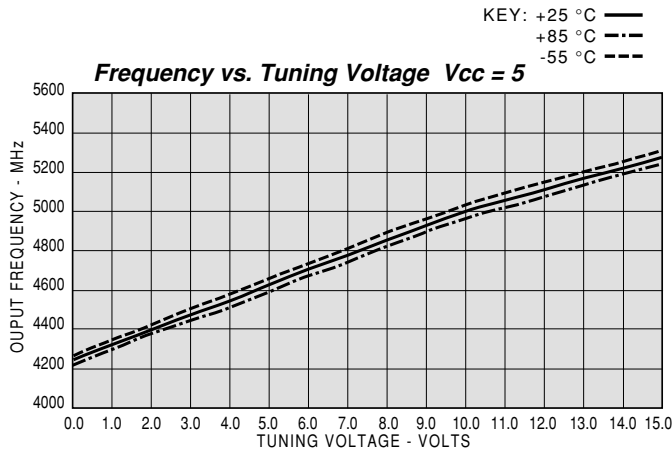
Storage Temperature	-62 °C to +125 °C
Maximum Case Temperature	125 °C
Maximum DC Voltage	+8 V
Maximum Tuning Voltage	+20 V
Burn-In Temperature	+125 °C
Thermal Resistance ¹ (θ _{jc})	+53.8 °C/Watt
Junction Temperature Rise Above Case (T _{jc})	+8.1 °C

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: OAS5100 Vcc= +5V Vstr mA = 93.81 Vstop mA = 94.7

TUNING VOLTAGE V	FREQ. MHz	POWER dBm	MODULATION SENSITIVITY MHz/V	LINEARITY MHz
0.0	4209.49	11.93		0.00
0.5	4251.42	12.26	84.20	6.04
1.0	4291.38	12.51	80.39	10.18
1.5	4330.97	12.74	79.72	13.99
2.0	4370.83	12.94	80.14	18.01
2.5	4411.93	13.12	80.73	22.42
3.0	4452.31	13.28	81.08	26.92
3.5	4493.00	13.43	81.46	31.61
4.0	4533.37	13.57	81.23	36.17
4.5	4573.58	13.70	80.91	40.57
5.0	4614.28	13.84	79.96	44.59
5.5	4653.41	13.98	78.57	47.83
6.0	4691.92	14.09	77.48	50.53
6.5	4729.81	14.19	76.24	52.61
7.0	4769.12	14.27	76.33	54.81
7.5	4808.30	14.30	78.99	58.25
8.0	4848.09	14.31	79.90	62.15
8.5	4886.39	14.34	77.06	64.64
9.0	4923.23	14.37	74.12	65.67
9.5	4959.89	14.37	71.74	65.50
10.0	4994.63	14.36	69.62	64.29
10.5	5028.00	14.33	67.14	61.84
11.0	5060.27	14.32	64.80	58.23
11.5	5091.30	14.29	62.56	53.52
12.0	5122.02	14.24	60.24	47.49
12.5	5151.05	14.20	58.41	40.70
13.0	5179.37	14.15	56.98	33.21
13.5	5207.32	14.10	56.12	25.28
14.0	5234.99	14.04	55.67	17.13
14.5	5263.26	13.95	55.43	8.65
15.0	5290.42	13.87	54.65	0.00

