

Broadband Voltage Tuned, 10.83 GHz, ± 2.5 GHz, +10 dBm

Description:

Model SOW-11305310-SM-U2 is a broadband, voltage tuned oscillator with a frequency tuning range of 8.33 to 13.33 GHz. The oscillator takes a DC bias of +8 V_{DC}/180 mA and delivers +10 dBm minimum output power with low phase noise and harmonic emissions. The tuning voltage range is from +0.5 to +15.5 V_{DC}. The oscillator measures 1.8" long, 1.0" wide and 0.7" tall. The RF output port is equipped with an SMA(F) connector and the tuning part is with an SMA(F) connector.



Features:

- Broad Tuning Bandwidth
- Flat Output Power

Applications:

- Test Sources
- Signal Generation
- Lab Test Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	8.33		13.33
Power Output	+10 dBm		
Electrical Tuning Range		± 2.5 GHz	
Phase Noise	$f_{\text{Out}} = 8.3 \text{ GHz: } -90 \text{ dBc/Hz @ } 100 \text{ KHz Offset}$ $f_{\text{Out}} = 10.0 \text{ GHz: } -90 \text{ dBc/Hz @ } 100 \text{ KHz Offset}$ $f_{\text{Out}} = 12.0 \text{ GHz: } -90 \text{ dBc/Hz @ } 100 \text{ KHz Offset}$ $f_{\text{Out}} = 13.3 \text{ GHz: } -90 \text{ dBc/Hz @ } 100 \text{ KHz Offset}$		
Bias Voltage	+7.0 V _{DC}	+8.0 V _{DC}	+10.0 V _{DC}
Bias Current		180 mA	
Tuning Voltage Range	+0.5 V _{DC}		+15.5 V _{DC}
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

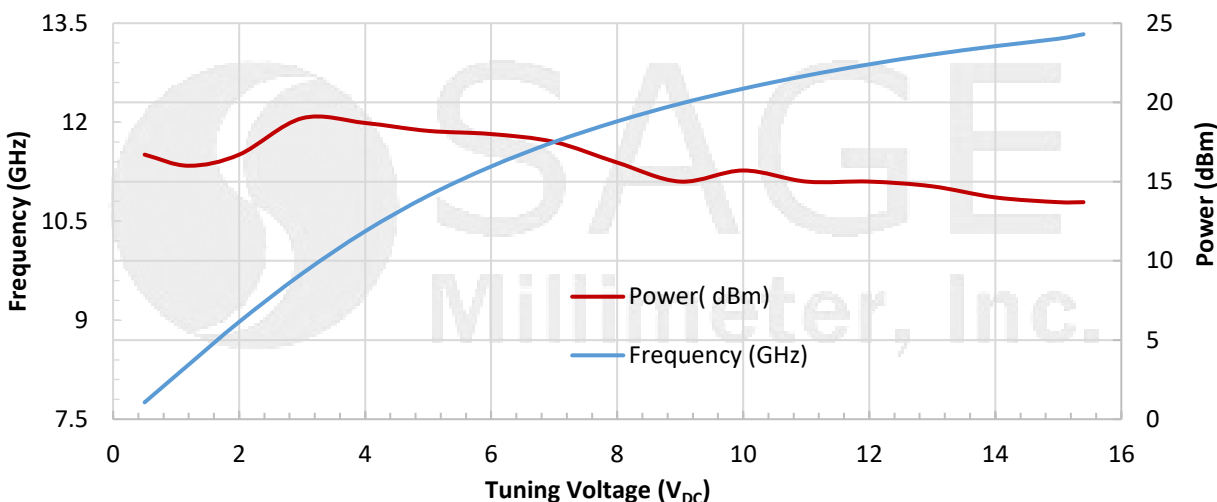
Item	Specification
RF Port	SMA (M)
Tuning Port	SMA (F)
Bias Port	Soldered Pins
Case Material	Aluminum
Finish	Gold Plated
Weight	1 Oz
Size	1.8" (L) x 1.0" (W) x 0.7" (H)
Outline	OW-PC-1



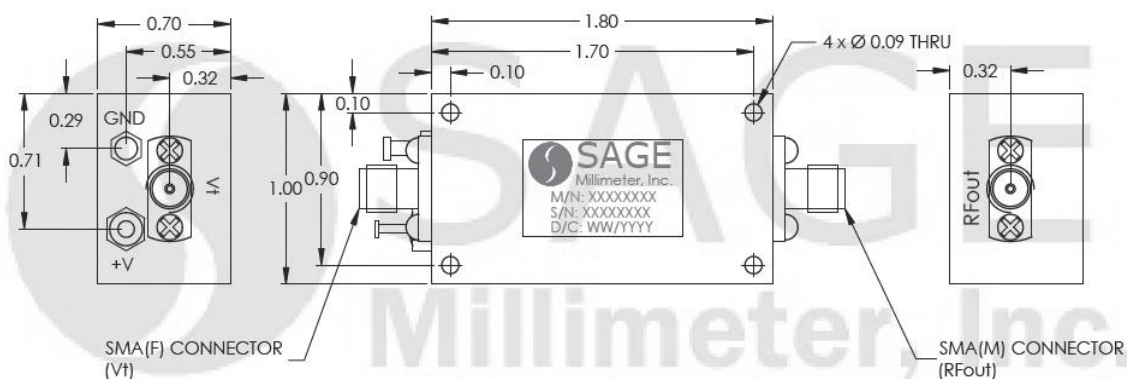
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Typical Frequency and Power Output vs. Tuning Voltage

(Bias: +9 V_{DC}/182 mA)



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches)



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- The data given above was tested under case temperature **35°C**.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Reversing polarity will destroy the device.
- The VCO bias voltage should never exceed **+10.0 Volts** and Varactor bias voltage should never exceed **+16 Volts**.
- The case temperature of the device should never exceed **+50°C**. Use an additional heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the waveguide will destroy the device.

