

Wide Mechanical Tuning Bandwidth Gunn Oscillators, SOF Series

FEATURES:

- ◆ Frequency coverage: Ka to W Band
- ◆ Tuning bandwidth near full waveguide band
- ◆ Low AM/FM noise and harmonics
- ◆ Bias tuning ability



APPLICATIONS:

- ◆ Test sources
- ◆ Lab test setups
- ◆ Broad band systems

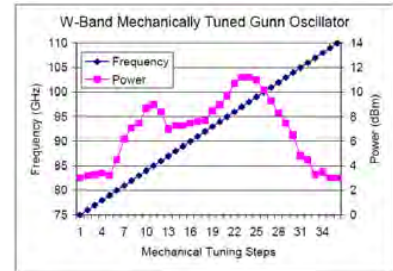
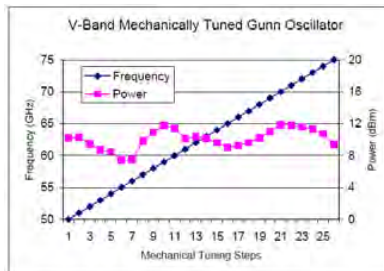
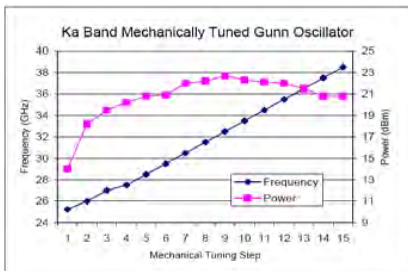
DESCRIPTION:

SOF series wide mechanical tuning bandwidth Gunn oscillators utilize high performance GaAs Gunn diodes and various cavity designs to yield near full band frequency coverage. Unlike dual-tuner oscillators, frequency and power optimization are accomplished by a single micrometer. Furthermore, these oscillators can be modified into electrically tunable oscillators by replacing the micrometer with an electrical actuator. The wide tuning bandwidth of these oscillators offers a low cost, high performance means of signal generation, making them ideal test sources for labs and antenna ranges. While standard models offer a waveguide interface, a coaxial interface is also available. When used with a Gunn oscillator regulator/modulator (SOR series), these oscillators can produce AM or FM modulated signals for many test applications.

CATALOG MODELS:

Model Numbers	SOF-2820-M1	SOF-2220-M1	SOF-1917-M1	SOF-1507-M1	SOF-1205-M1	SOF-1003-M1
Frequency Band	Ka	Q	U	V	E	W
Waveguide Size	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Frequency Coverage (GHz), Typical	27 to 37	33 to 43	44 to 56	56 to 72	65 to 85	80 to 110
Output Power Range (dBm), Typical	18 to 20	18 to 20	17 to 20	3 to 7	0 to 5	0 to 3
Harmonics (dBc), Typical	-20	-20	-20	-20	-20	-20
Phase Noise (dBc/Hz @ 100 KHz offset)	-90	-90	-90	-90	-90	-90
Bias Voltage (Volts), Typical	5.0	5.0	5.0	5.0	5.0	5.0
Bias Current (Amps), Typical	0.8	0.7	0.7	1.0	1.0	1.0
Outline	OF-MA	OF-MQ	OF-MU	OF-MV	OF-ME	OF-MW

TYPICAL TUNING CURVES:



CUSTOM MODELS:

SAGE Millimeter's wide mechanical tuning bandwidth Gunn oscillator model numbers are configured per the following format. Customers may refer to the format and specify their own model numbers accordingly when placing an order.

SOF - CO PP - XY

CO is the RF output connector type. For example: WR-28 = 28

PP is the output power in dBm. For example: 23 dBm = 23

X is the tuning type. "M" is for micrometer tuned and "S" is for screw tuned.

Y is for factory reserve.

Example: SOF-2813-M1 is a wide mechanical tuning bandwidth Gunn oscillator with an output power of 13 dBm. The oscillator has a WR-28 waveguide at the RF output port and is micrometer tuned. "1" is a factory assigned number.

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