GSOX1208-100MHz-A
Low Noise 100MHz 20 x 20 x 12 mm

Features

12V supply
Optimized for 100MHz
5 to 11 dBm RFout
-127 dBc/Hz at 100 Hz
-155 dBc/Hz at 1 KHz
20 x 20 mm package

Part Picture

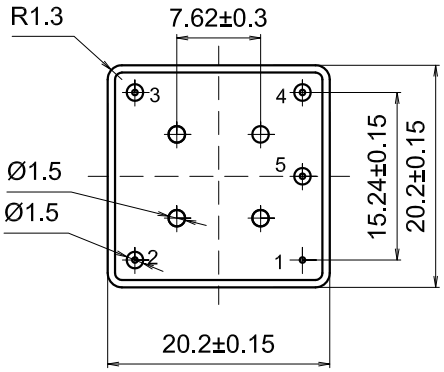
Typical Applications

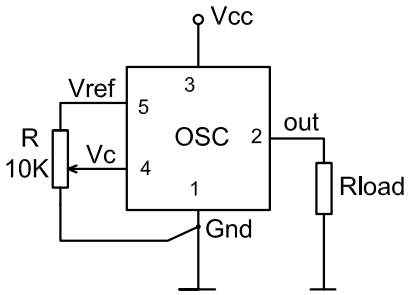
Portable and low Power
Low Noise Test Equipment, and synthesizers
Microwave Communications Systems

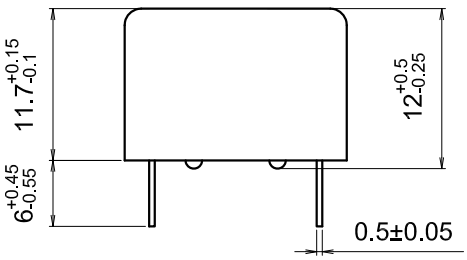
Description

The GSOX1208-100MHz-A is designed to utilize low noise 100 MHz crystals to deliver world class phase noise in a miniature solder-seal package.

Mechanical Drawing and PIN Connections







Pin	Signal
1	GND
2	RF Out
3	+V Supply
4	Electrical tuning
5	Reference voltage

Specification

OCXO Specification		Sym.	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Operating Frequency		f_0			100		MHz	
			Frequency Tol. at 25C after 180 seconds ON			+/- 100	ppb	With Vcontrol = 2.10V +/- 0.2V
Sine-wave option	Level	L		5	7	11	dBm	
	Load	R_L		45	50	55	Ohm	
	Harmonics					-25	dBc	
Subharmonics					-75		dBc	
Power supply								
Voltage		V_{cc}		11.4	12.0	12.6	V	
Power consumption			Warm-up state Steady state, +25℃		3.2 1.0	3.5 1.2	W W	
Warm-up time		tup	To within +/- 1e-7, at +25℃			180	sec	ref. to frequency after 30 min.
Frequency control*								
Control voltage range		Vc		0		4.2	V	Positive tuning slope
Tuning range				+/- 1.0			ppm	For 100 MHz
Reference voltage Output		V_{ref}			4.2		V V	
Frequency stability								
vs. temperature			-40℃ to +70℃, ref 25℃	-50		+50	ppb	
vs. 5% change in supply voltage			ref Vcc typ.	-5		+5	ppb	
vs. acceleration			Worst direction			1.0	ppb/G	
SSB Phase noise			10 Hz		-95		dBc/Hz	for 100 MHz operational freq.
			100 Hz		-127			
			1 kHz		-155			
			10 kHz		-165			
			100 kHz		-165			
Allan variance			1 s		30		e-12	
Aging	Per Day		Projected aging after 30 days operation			+/- 5	ppb	For 100 MHz fifth Overtone SC-cut
	Per Year					+/- 0.5	ppm	
Environmental, mechanical conditions.								
Operating temperature range			-40℃ to +70℃					
Storage temperature range			-60℃ to +90℃					
Humidity			Non-condensing 95%					
Mechanical shock			Per MIL-STD 202 30G half sine pulse, 11 ms					
Vibration			Per MIL-STD 202 10G swept sine 10 to 2000 Hz					
Soldering conditions			+260℃ for 10 seconds					

Ordering information

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