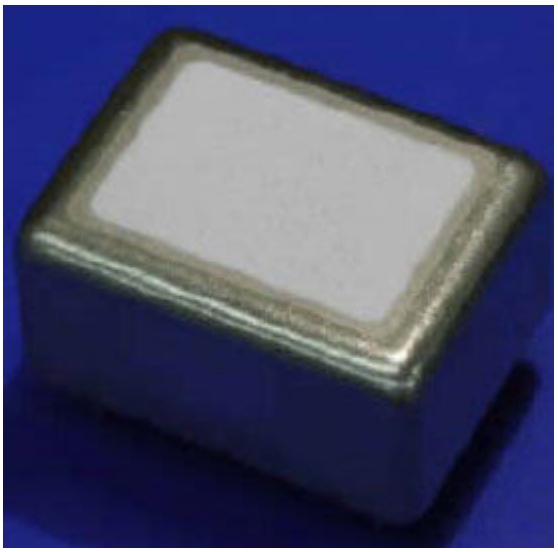
GSOX1209-10MHz-A

Ultra-low Close-in Noise; Best in class allan variance

Features

+/- 0.500 ppb over temperature
-40C to 70C Operation
Better than -100 dBc/Hz at 1 Hz
Better than 2E-12 AVAR (1 sec gate)
Low Power for double ocxo
Less than 700 mA peak current
Less than 150 mA steady-state at 25C

Picture of Part



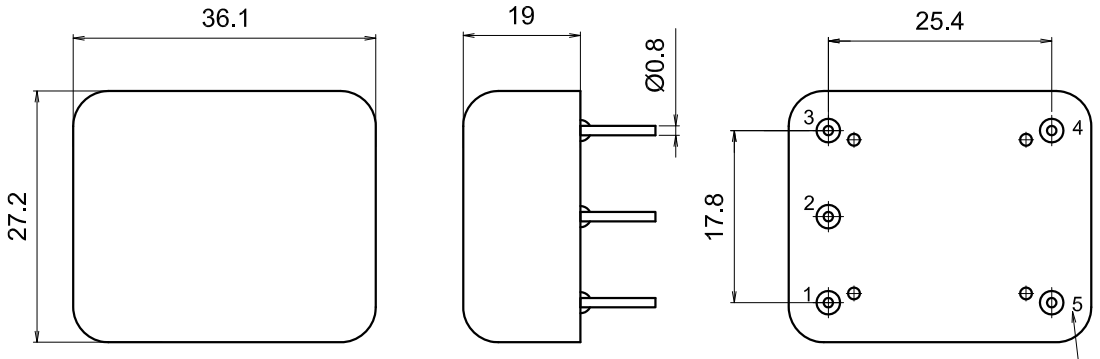
Typical Applications

Ideal for High Performance Frequency Source
Test and Measurement Equipment
Broadcast Reference Standard
WiMax , LTE base stations

Description

The GSOX1209-10MHz-A double oven oscillator has been specially optimized using very high Q 10 MHz SC-cuts in conjunction with proprietary crystal blank processing and advanced oscillator circuit design techniques to maximize oscillator " loaded Q " in order to deliver exceptional short term stability and close-in phase noise.

Mechanical Drawing and PIN Connections



UNIT:mm

PIN CONNECTIONS

1. VC Input
2. V REF.
3. +VDC
4. RFOutput
5. RF&Case Ground

Specification

OCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f_0			10.000		MHz	
RF output								
Sine-wave option	Level	L		0.40			volts	Peak to peak
	Load	R_L		45	50	55	Ohm	
	Harmonics					-30	dBc	
Power supply								
Voltage		V_{cc}		11.4	12.0	12.60	V	
Current Consumption			Warm-up state Steady state, +25℃			750 150	mA mA	
Warm-up time***		t_{up}	To within +/- 50 ppb at +25℃			10	min	ref. to frequency after 30 min.
Frequency control*								
Control voltage range		V_c		0.0		5.0	V	Positive tuning slope
Tuning range				±400			ppb	
Reference voltage		V_{ref}			5.0		V	
Frequency stability								
vs. temperature			-40℃ to +70℃, ref 25℃	-0.500		+0.500	ppb	
vs. 5% change in supply voltage			ref Vcc typ.	-0.100		+0.100	ppb	
vs. 5% change in load			Ref.frequency at 50 ohms	-0.100		+0.100	ppb	
SSB Phase noise			1 Hz			-100	dBc/Hz	for 10MHz operational freq.
			10 Hz			-130		
			100 Hz			-148		
			1000 Hz			-155		
			10 kHz			-160		
Short Term Stability			Tau = 1sec			2.0	E-12	
Aging			Projected first year aging after 30 days operation					
	first year					0.05	ppm	
Environmental, mechanical conditions.								
Operating temperature range			-40℃ to +70℃,					
Storage temperature range			-55℃ to +80℃,					
Shock			Acceleration : 150g : Duration : 3 msec +/- 1.0 msec					
Vibration			10 to 500 Hz ; 10g acceleration					