

Description

This model TCXO with IC compensation circuit, operating on the U1 crystal fundamental mode, has better frequency stability at various temperature ranges and high reliability.

Typical size : 7.0*5.0*2.0 mm

Feature

The frequency is 10.0MHz.

The output type: Clipped sine

SMD.

The supply power between 4.75 V and 5.25V.

Low current

Absolute Maximum Ratings

ITEM	Conditions	REMARK
0.1 Supply Voltage (Vcc)	+5.5V MAX	
0.2 Storage Temperature	-40°C ~+85°C	

Frequency Stability

ITEM	Specification	REMARK
1.1 Operating Temperature Range	-40°C ~+85°C	
1.2 Frequency Stability(overall)		
1.2.1 Initial tolerance @25±2°C	<±0.5PPM	@25±2°C,
1.2.2 Freq. Vs Operating Temp	<±0.5PPM	From -40°C to +85°C
1.2.3 Freq. Vs Vcc	<±0.2PPM	@Vcc±5%
1.2.4 Freq. Vs Load	<±0.2ppm	@Load±10%
1.2.5 Aging	<±1.0PPM/YEAR	

Supply & Output waveform

ITEM	Specification	REMARK
2.1 Supply Voltage	5.0V±5%	
2.2 Supply Current	2.0mA(max)	
2.3 Output waveform	Clipped sine	
2.3.1 Level	0.8Vp-p min	10Kohm//10pF
2.4 Start time	2ms	

SSB phase Noise & Jitter

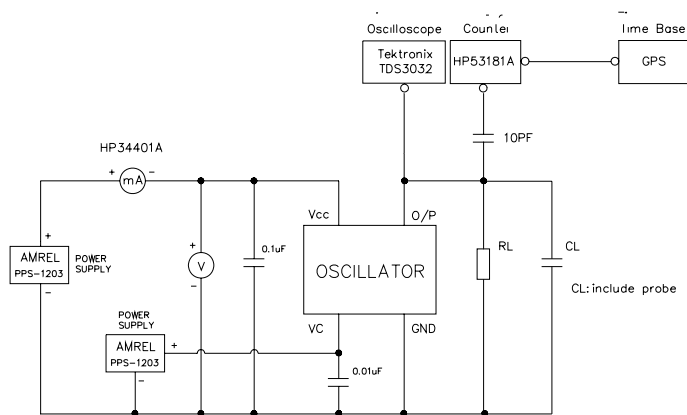
Item	Parameter	Test Condition	Max	Units
3.1	SSB Phase Noise	@100Hz	-115	DBc/Hz
3.2	SSB Phase Noise	@1KHz	-135	DBc/Hz
3.3	SSB Phase Noise	@10KHz	-140	DBc/Hz
3.4	SSB Phase Noise	@100KHz	-145	DBc/Hz

Reliability

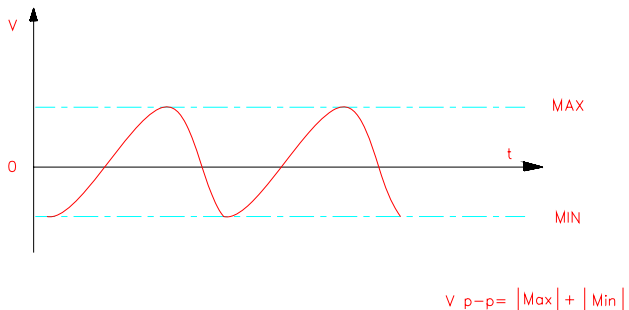
Item	Parameter	Test Condition	Reference STD.
4.1	Thermal Shock	-55°C to +125°C, each temperature 10 mins, 200 cycles.	MIL-STD-883D 1011.9, condition B
4.2	High Temperature & Humidity Storage	+85°C, 85% Relative humidity, 500hrs.	JIS-C 7022 B-5 Conditions C
4.3	Aging	+85°C, +125°C, test time period 1,2,4,7,10,20,50,100 days	MIL-STD-883D 1008JIS-C 6701 11.2 & 11.6
4.4	Low temperature Storage test	Temperature -40°C to -2°C, 500hrs.	MIL-STD-883D 1009,8, condition C
4.5	Mechanical Shock	1500g, half-sine, 0.5ms, 3 directions 3times	MIL-STD-883D 2002.3, condition B
4.6	Vibration	20~2000Hz, 1.5mm, 20g X,Y,Z each direction 4hrs, sinuate	MIL-STD-883D 2005.2, condition B
4.7	IR reflow	245°C +/-5°C, 5+/-0.5sec(max)	

TCXO3118
TCXO @ 10MHz (Clipped Sine Wave)

Test circuit and Wave shape

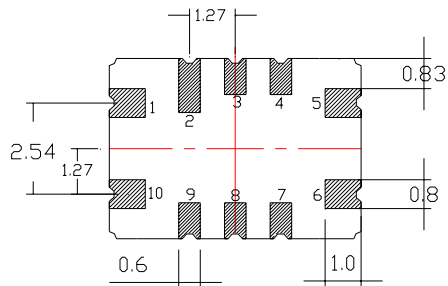
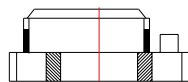
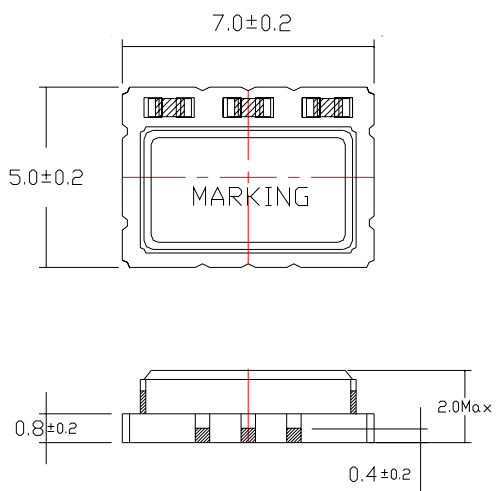


CLIPPED SINEWAVE TEST CIRCUIT



CLIPPED SINEWAVE SHAPE

Outline Drawing



UNIT: mm

PAD	FUNCTION
#1	VCON:VCTCXO NC: TCXO
#5	GND
#6	CMOS/CLIPPED SINE Output
#9	Tri State Control/NC
#10	VDD