



### Features and Benefits

- Frequency range: 100MHz
- Supply voltage: 5.0V
- Steady current: 40mA Max
- Output waveform: Sinewave
- Frequency stability vs. operating temperature:  $\pm 0.28$ PPM
- Operating temperature: -40°C to +85°C
- Size: 14.3x9.6x6.5mm

### Typical Applications

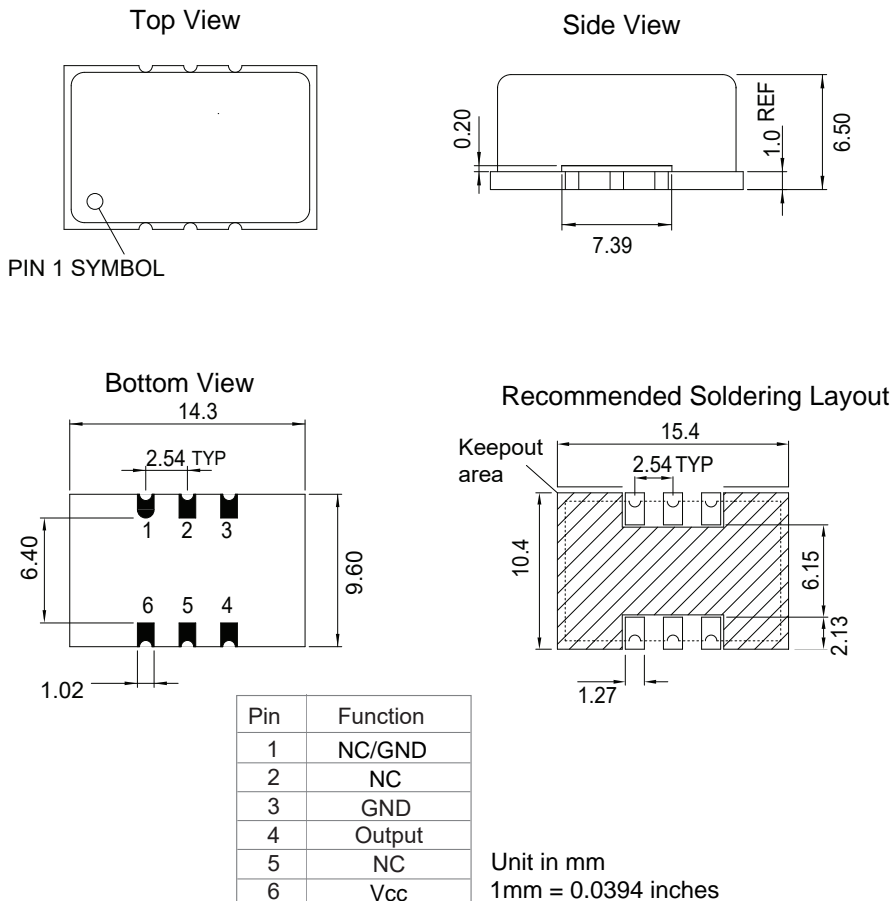
- SATCOM System
- Cellular Base Stations
- Radar Applications

### Description

TCXO1490BM-STR3-100MHz-A is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

### Mechanical Drawing & Pin Connections

Drawing No: MD230027-1





**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			100		MHz	
<b>RF Output</b>							
Signal Waveform			Sinewave				
Load	R <sub>L</sub>			50		ohm	
Output power			10			dBm	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>		4.75	5	5.25	V	
Current		At maximum supply voltage			40	mA	
<b>Frequency Stability</b>							
Frequency stability (Overall)		Includes of frequency tolerance@25°C and frequency stability versus operating temperature range and voltage variance and IR reflow and output load variation and 20 years aging	-4.6		+4.6	ppm	
Versus Operating Temperature Range		-40°C to +85°C	-0.28		+0.28	ppm	Referenced to the midpoint between minimum and maximum frequency value
Nominal Frequency Tolerance		Frequency at 25°C ,before reflow.	-0.5		+0.5	ppm	
Versus supply voltage		±5% change	-0.05		+0.05	ppm	
Versus load voltage		±10% change	-0.05		+0.05	ppm	
Holdover stability		Including 24 hours aging, supply voltage 3.3+-5% and frequency stability over temperature, load change +-5%	-0.37		+0.37	ppm	
Aging		24 hours at 25°C	-4		+4	ppb	
		First year at 25°C	-0.8		+0.8	ppm	
		20 years at 25°C	-2.5		+2.5	ppm	
SSB Phase noise		10Hz		-85		dBc	
		100Hz		-116		dBc	
		1kHz		-144		dBc	
		10kHz		-155		dBc	
		100kHz		-158		dBc	
<b>Environmental, Mechanical Conditions</b>							
Operating temperature range	-40°C to +85°C						
Thermal Shock	MIL-STD-883 1010 Condition B, JESD22-A104 Condition B under -55°C, 125°C; soak time is 10 mins, with total 200 cycles						
Vibration Test	MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1 under 10~2000Hz, 1.52mm, 20G, each axis for 4hrs						
Mechanical Shock	MIL-STD-883 2002 Condition B, JESD22-B104 Condition B under 1500G, half-sine, 0.5ms, each axis for 3 times						