



### Features and Benefits

50MHz CMOS output  
 +3.3V; 7mA max.  
 Less than 1E-10 ADEV @ tau = 1s

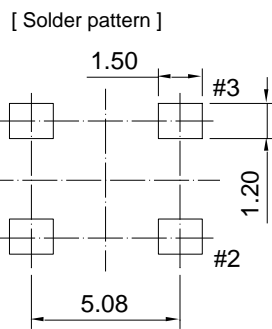
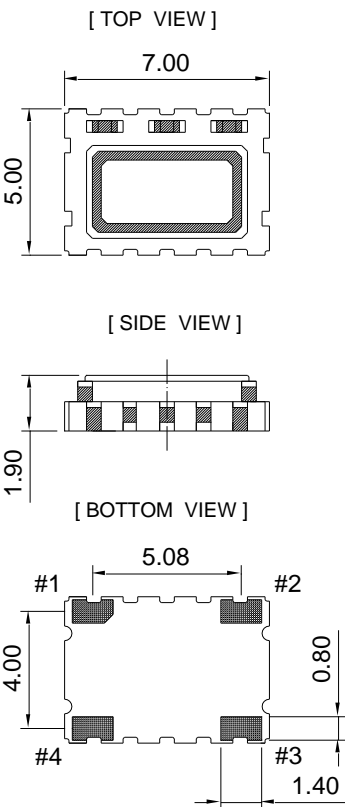
### Typical Applications

ELT Emergency Beacons  
 Other frequencies available for EPIRB and PLB beacon systems

### Description

5 x 7 mm smd. TCXO platform optimized for crystal angle and compensation technique to meet the specific stability requirements of ELT ( Emergency Locator Transmitter ) applications.

### Mechanical Drawing & Pin Connections

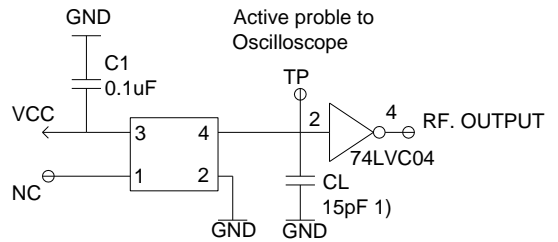


PIN	FUNCTION
#1	Do not connect
#2	GND
#3	RF output
#4	Vdc

Unit : mm  
 1mm=0.0394inch

Drawing No: MD150004-1

### [Test circuit ]



1) Total CL incl. test-jig and active probe



**Specifications**

TCXO Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F <sub>nom</sub>			50.0000		MHz	
Output Waveform			CMOS				
Output Level High			2.97			V	
Output Level Low					0.33	V	
Output Load				12	15	pF	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>			3.3		V	
Supply Current					7	mA	
<b>Frequency Stability</b>							
VS. Temperature		From -40°C to +85°C Ref. to (F <sub>MAX</sub> + F <sub>MIN</sub> )/2		+/-0.5	+/-1.0	ppm	
Tolerance at +25°C		@+25°C			+/-2.5	ppm	
Tolerance after One Reflow		@+25°C 24 hours after the reflow			+/-0.5	ppm	
VS. Supply Voltage		+/-5% change at 25°C			+/-0.3	ppm	
VS. Load Change		+/-10% change at 25°C			+/-0.02	ppm	Reference to frequency at nominal load
Year Aging		First year			+/-1.0	ppm	
		10 years			+/-4.0	ppm	
Allan Variance (ADEV)		@ τ = 1.0 sec		1x10 <sup>-10</sup>			
Frequency Slope		From -40°C to +85°C			0.05	ppm/°C	
Phase Noise @50MHz		@10Hz		-85		dBc/Hz	
		@100Hz		-120		dBc/Hz	
		@1KHz		-140		dBc/Hz	
		@10KHz		-150		dBc/Hz	
Jitter(rms)		@100KHz		-155		dBc/Hz	
		Fj=12KHz to 5MHz			200	fs	
<b>Environmental Conditions</b>							
<b>Parameter</b>	<b>Reference Std.</b>		<b>Test Condition</b>				
Operating Temperature range	-40°C to +85°C						
Storage Temperature range	-55°C to +105°C						
Vibration sinusoidal	IEC 60068-2-6	IEC 60679-1-5.6.7.1	Test Fc, 30 min per axis 10 Hz – 55 Hz 0.75mm, 55 Hz – 2 KHz 10g				
Shock	IEC 60068-2-27	IEC 60679-1-5.6.8	Test Ea, 3 x per axes 100 g, 6 ms half-sine pulse				
Soldering	IEC 60068-2-20 IEC 60068-2-58	IEC 60679-5.6.3	Test Ta Method 1				
Reflow Profiles	IPC/JEDEC	J-STD-020C	<=260°C over 10 sec. MAX.				