



### Features and Benefits

Frequency Range: 26MHz  
Supply Voltage: 3.3V  
Current: 4mA  
Output Waveform: CMOS.  
Frequency stability vs. temperature:  $\pm 0.2$ PPM  
Aging:  $\pm 1$ PPM first year  
Operating temperature: -40°C to +55°C  
Size: 7x5x1.75mm

### Typical Applications

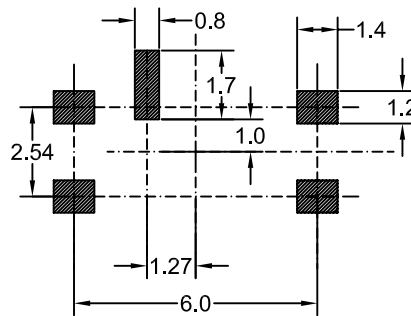
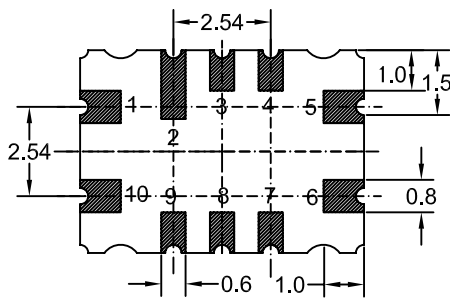
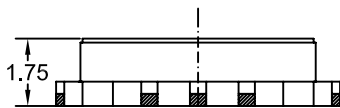
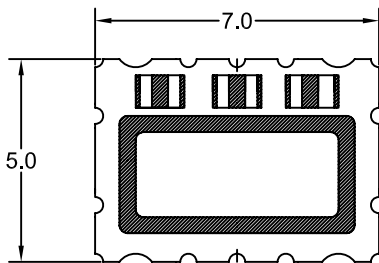
Emergency Beacon Class 1  
COSPAS/SARSAT System  
Aviation Emergency Positioning Transmitter (ELT)  
Marine Emergency Position Indicating Radio Beacons (EPIRBs)  
Personal Locator Beacon (PLB)

### Description

TCXO7500BT-CS-26MHz-A-V is a 26MHz high performance TCXO specifically designed for COSPAS-SARSAT emergency beacon.

### Mechanical Drawing & Pin Connections

Drawing No: MD150075-8



Solder pattern

#### Pin Function

- #1 Control Voltage
- #5 GND
- #6 Output
- #9 Tri-state
- #10 Vcc

Do not connect #2, #3, #4, #7, #8

Unit in mm  
1mm = 0.0394 inch



## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			26		MHz	
Output			CMOS				
Output Level			V <sub>OH</sub> > 0.9 x V <sub>CC</sub> V <sub>OL</sub> < 0.1 x V <sub>CC</sub>				
Output Load					15	pF	
Symmetry (Duty)		@ 1/2 V <sub>CC</sub>	45		55	%	
Tri-State Function		Pin #9 ≥ 2.3V or open	Pin#6 oscillator				
		Pin #9 ≤ 0.9V or GND	Pin#6 high impedance				
<b>Supply Voltage</b>							
Voltage	V <sub>CC</sub>	±10%		3.3		V	
Supply Current					4	mA	
<b>Control Voltage</b>							
Control Voltage		Positive slope	0.5	1.5	2.5	V	
Pulling Range			±5			ppm	
<b>Frequency Stability</b>							
Vs. Temperature		-40°C to +55°C, Ref to (F <sub>max</sub> +F <sub>min</sub> )/2			±0.2	ppm	Class 1 beacon
Tolerance at 25°C					±0.5	ppm	
Frequency Tolerance After Reflow		Measure after 12 hours			±0.5	ppm	
Versus Supply Voltage Change		Reference to frequency at nominal supply			±0.1	ppm	±10%
Versus Load Change		Reference to frequency at nominal load			±0.1	ppm	±10%
First Year Aging					±1.0	ppm	
10 Years Aging					±3.0	ppm	
Medium-Term Stability		According the IAW C/S T.007 and C/S IP TCXO					
Mean Slope ΔF/dt After 15 min Power-up:							
Steady State		T = const.			±0.7	ppb/min	
During Temperature Ramp		ΔT/dt = ± 5 °C/hour			±1.7	ppb/min	
Residual ΔF (r.m.s.) from slope		over 18 points			2.0	ppb	
Allan Variance (ADEV)		Tau = 0.1second			1E-9		
<b>Environmental Conditions</b>							
Operating Temperature Range		-40°C to +55°C					
Storage Temperature Range		-55°C to +105°C					
Reflow Conditions Per IPC/JEDEC J-STD-020		260°C maximum over 10 sec. Max.					
Moisture Sensitivity		Level 1(unlimited)					

## Environmental Conditions

Test	Reference STD.	Test conditions (IEC)
Vibration Sinusoidal	IEC 60028-2-6 IEC 60679-1-5.6.7	Test Fc, 30 min per axis 10 Hz – 55 Hz at 0.75 mm, 55 Hz – 2 kHz at 10 g
Shock	IEC 60028-2-27 IEC 60679-1-5.6.8	Test Ea, 3 x per axis at 100g, 6 ms, half-sine pulse
Soldering	IEC 60028-2-20 IEC 60679-5.6.3 IEC 60028-2-58	Test Ta 260°C Method 1 Test Tb Method 1A, 5s