Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077
TEL: 281-870-8822EMAIL:Sales@DynamicEngineers.com

TCXO7500AR-122.88MHz-A-V
7x5x1.9mm SMD 122.88MHz TCXO

Features and Benefits

122.88MHz Frequency
3.3V Supply voltage
LVPECL Output
±20ppm Overall
7x5x1.9mm Size

Typical Applications

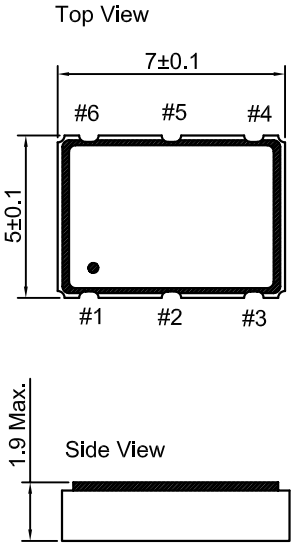
Synthesizers
SATCOM System
Portable Applications

Description

TCXO7500AR-122.88MHz-A-V offers good frequency stability and low phase noise performance.

Mechanical Drawing & Pin Connections

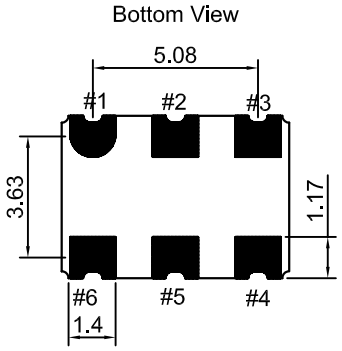
Drawing No:MD150071-2

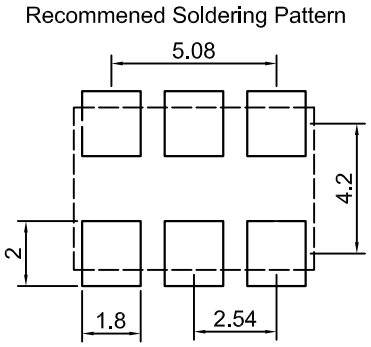


Pin Function

PIN	Function
PAD #1	Vcon
PAD #2	E/D
PAD #3	GND
PAD #4	Output
PAD #5	COutput
PAD #6	Supply Voltage

Unit in mm
1mm = 0.0394 inches





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Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency		F_{nom}			122.88		MHz	
Output					LVPECL			
Duty cycle			At 50%Vcc	45		55	%	
Rise/Fall time						1	nS	
	High Level				Vcc-0.95		V	
	Low Level				Vcc-1.7		V	
Power Supply								
Voltage		V_{cc}	±10%		3.30		V	
Current						90	mA	
Control Voltage Range				0.3		3	V	
Pull Range				±50			ppm	
Linearity						±5	%	
Start up time						10	mS	
Frequency Stability								
Overall			Inclusive of +25°C tolerance, operating temperature, input voltage change, load change and first year aging		±20		ppm	
Insulation Resistance			DC100±10V	500			Mohm	
Aging/Year						±3	ppm	
Phase Jitter RMS			12KHz-20MHz			1	pS	
Phase noise			1KHz		-118		dBc/Hz	
			10KHz		-131		dBc/Hz	
			100KHz		-145		dBc/Hz	
Environmental Conditions								
Operating temperature range		-40°C to 85°C						
Storage temperature range		-55°C to 125°C						
Ambient Temperature		25±3°C						
Relative Humidity		40%-70%						

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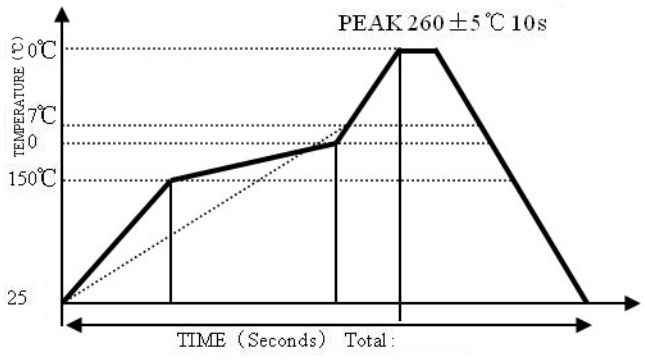
Mechanical Endurance: Provided that measurement shall be carried out afterletting it alone in the room temperature for 1 hour.

NO.	ITEM	SPECIFICATIONS	STANDARD Specification
1	***Dropping Test***	Fall freely from 100 cm of height 3 times on a firm wood .	MIL-STD-202F-203B
2	***Mechanical Shock***	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times.	MIL-STD-202F
3	***Vibration Test***	Vibration Frequency: 10~55Hz Cycle: 1 to 2 Min. Amplitude: 1.5mm P-P. Direction: X.Y.Z Time: 2 Hours / Each Direction	MIL-STD-883E
4	***Solder ability***	Pre-heat temperature : +150±10℃ Pre-heat time : 60~120s When the temperature of the specimen is reached at +215±3℃, it shall be left for 30±1sec. Peak temperature 240±5℃ Material: Pb-free (Sn-3.0Ag-0.5Cu) Flux : Rosin resin methyl alcohol solvent (1 : 4) The electrodes should be covered by a new solder at least 90% of immersed area.	MIL-STD-883E 2003
5	***Resistance to Soldering Heat***	The units should satisfy its frequency and resistance specifications after the units are subjected to stand following temperature profile. 	MIL-STD-202F

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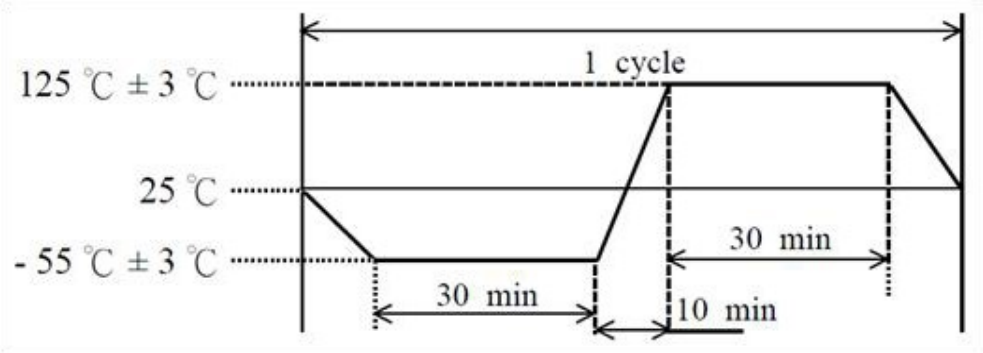
Environmental Endurance: Provided that measurement shall be carried out afterletting it alone in the room temperature for 1 hour.

NO.	ITEM	SPECIFICATIONS	STANDARD Specification
1	***Resistance to Damp***	+85℃±2℃,RH 80~85%, Duration of 500 hours. The units are then allowed to stand for approx 2 hours in room temperature before checking	MIL-STD-202F
2	***Resistance to Cold***	Temperature: -40±2℃ , Duration of 500 hours. The units are then allowed to stand at room temperature for approx 2 hours before checking.	MIL-STD-883E
3	***Resistance to Heat***	Temperature:+125℃±2℃, Duration of 500 hours. The units are then allowed to stand at room temperature for approx 2 hours before checking.	MIL-STD-883E
4	***Thermal Shock***	Temperature 1: -55℃±5℃ Temperature 2: 125℃±5℃ Temperature change between T1 and T2 at soonest Run 100 cycles, maintain T1 and T2 30minutes each in one cycle	MIL-STD-883E



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