

Features

Frequency 20 MHz
 Rugged 7.0 mm x 5.0 mm x 2.3 mm
 Less than +/- 4.6 ppm over 20 years
 Overall stability from all causes
 +/- 0.28 ppm stability
 From -40C to 85C
 3.3V supply
 LVCMOS

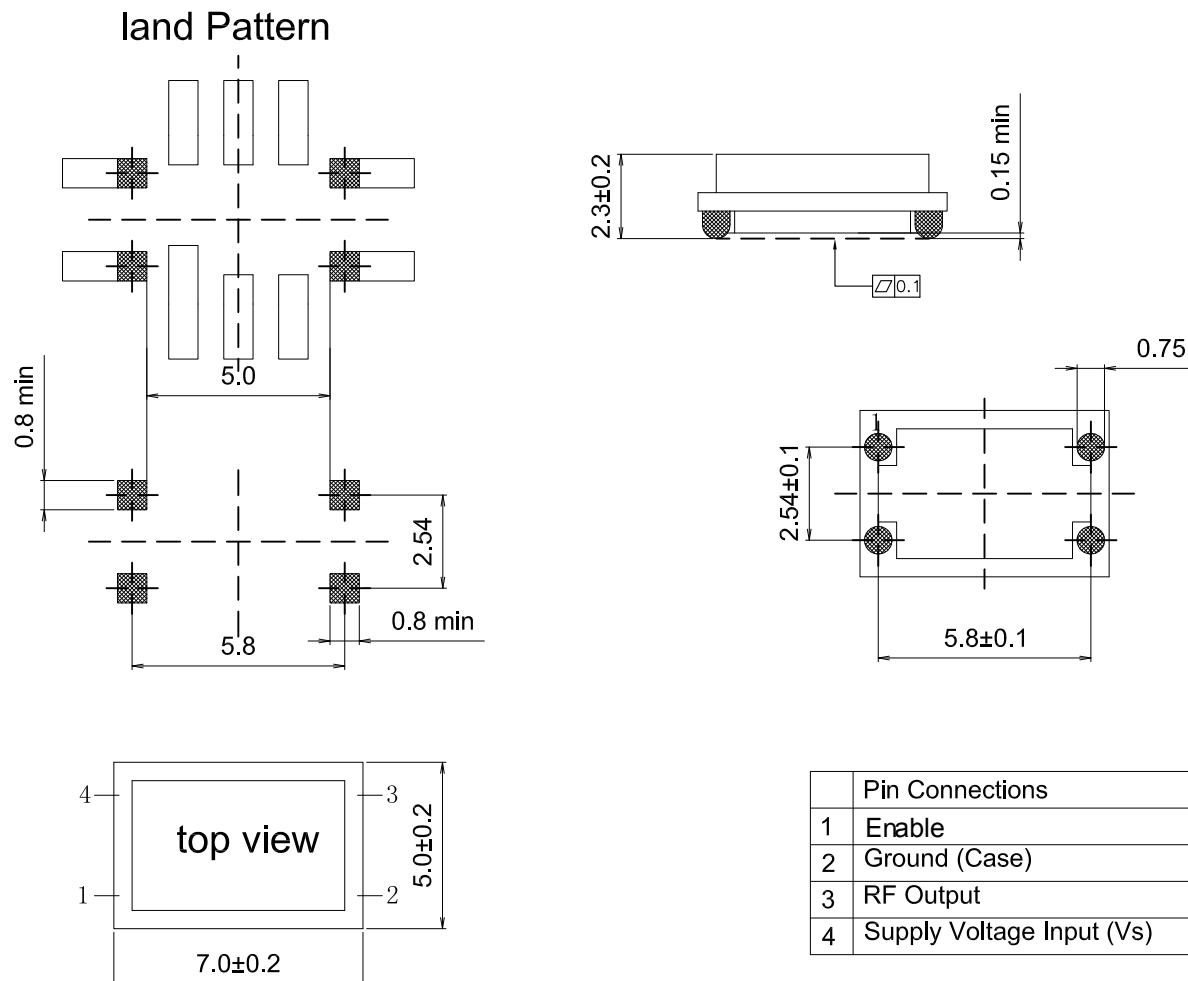
Typical Applications

Harsh environment Land Mobile Radio
 Portable Equipment in SATCOM, and GPS

Description

The TCXO3700 represents a product family specifically designed for superior stability and reliability over a 20 year operating life. Very specific resonator designs have been optimized over many years of production to deliver a highly capable process flow especially at standard frequencies such as 20MHz.

Mechanical Drawing and PIN Connections



Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f ₀			20.000000		MHz	
LVCMOS Output Square Wave	Load					15	pF	
	H - level voltage	V _H		3.0			V	For 3.3V supply
	L - level voltage	V				0.3	V	For 3.3V supply
	Rise / Fall Time					5	ns	10% to 90%
	Duty cycle			40	50	60	%	
	Output Load			13.5	15	16.5	pF	
Power supply								
Voltage		V _{cc}		3.15	3.3	3.45	V	
Current consumption		I _{cc}				15	mA	With 3.3V supply
Enable Function on Pin 1				3.0V	Or open			Output present on pin 3
						0.3V		No output present on pin 3
Frequency stability								
vs. temperature			-40 °C to +85 °C, ref 25 °C	-0.28		+0.28	ppm	Overall Tolerance includes
Overall Frequency Tolerance				-4.6		+4.6	ppm	Variation with room, temp, load,
Over 20 years								Supply, and 20 year aging
SSB Phase noise For 20 MHz LVCMOS			10 Hz			-85	dBc/Hz	for 20 MHz LVCMOS
			100 Hz			-110		
			1 kHz			-125		
			10KHz			-135		
			100KHz			-145		
Aging			Projected aging after 30 days operation					
	20 Years			-2.5		+2.5	ppm	
Frequency Changes versus voltage, load, room tolerance after reflow								
Frequency vs. 5% Supply Change				-0.2		+0.2	ppm	
Frequency vs. 5% Load Change				-0.1		+0.1	ppm	
Frequency Tolerance at 25C after reflow				-1.0		+1.0	ppm	
Operating temperature range			-40 °C to +85 °C maximum range available that is standard					
Storage temperature range			-55 °C to +105 °C					