

**Features**

Frequency 10 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

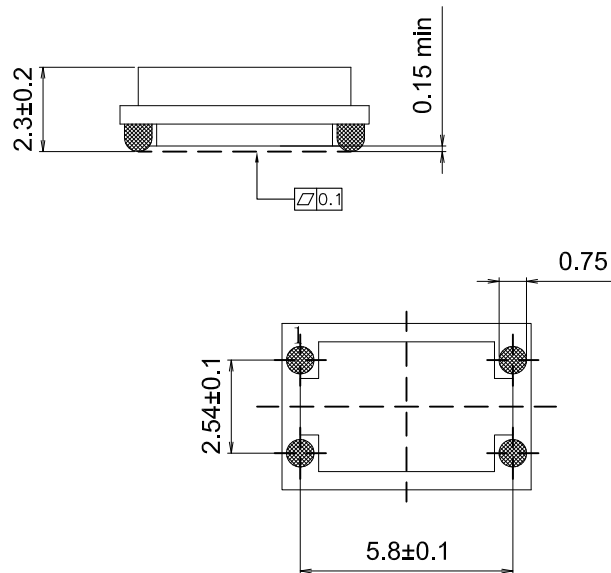
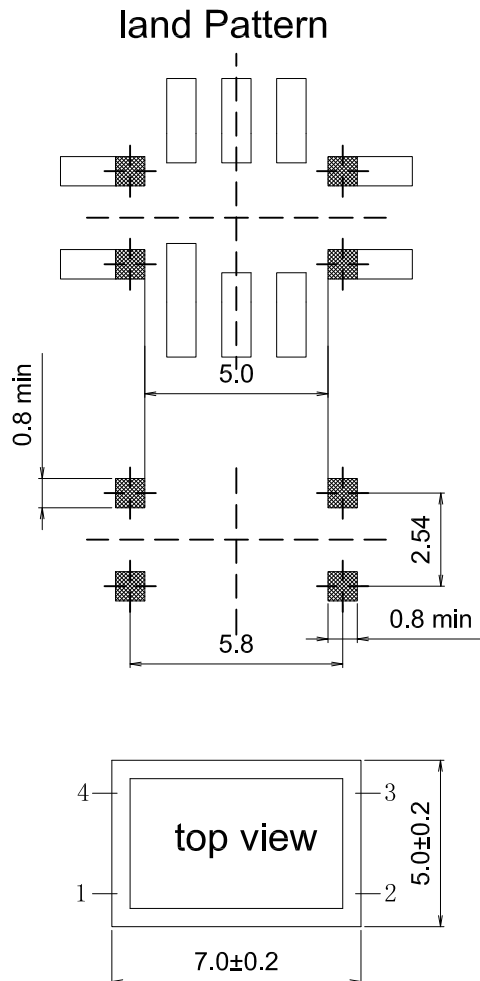
**Typical Applications**

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 10MHz.

**Mechanical Drawing and PIN Connections**



Pin Connections	
1	Voltage Control (Vc)
2	Ground (Case)
3	RF Output
4	Supply Voltage Input (Vs)

## Specification

TCXO Specification	Sym.	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
<b>Operational Frequency Range</b>	$f_0$			10.000000		MHz	
LVC MOS Output Square Wave	Load				15	pF	
	H - level voltage	$V_H$	3.0			V	For 3.3V supply
	L - level voltage	$V_L$			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	
<b>Power supply</b>							
Voltage	$V_{cc}$		3.15	3.3	3.45	V	
Current consumption	$I_{cc}$				10	mA	With 3.3V supply
<b>Frequency control*</b>							
Control voltage range ( Pin 1 )	$V_c$		0.300	1.650	3.000	V	With 3.3V supply
Tuning range		Positive Slope	+/- 8.0		+/- 20.0	ppm	
<b>Frequency stability</b>							
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
<b>SSB Phase noise For 10 MHz LVC MOS</b>		10 Hz			-90	dBc/Hz	for 10 MHz LVC MOS
		100 Hz			-118		
		1 kHz			-140		
<b>Aging</b>		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		<b>-40 °C to +85 °C maximum range available that is standard</b>					
Storage temperature range		<b>-55 °C to +105 °C</b>					