

TC2 Series CMOS Output 5x7mm Surface Mount TCXO/VCTCXO

Features

- MIL-PRF-55310D Class S available
- Low Phase noise and low jitter
- Excellent Frequency Stability
- Low power consumption
- Wide frequency range up (1MHz to 250MHz)

Applications

- GPS Receivers
- Military/Avionics programs
- Timing Reference
- Measurement and Control

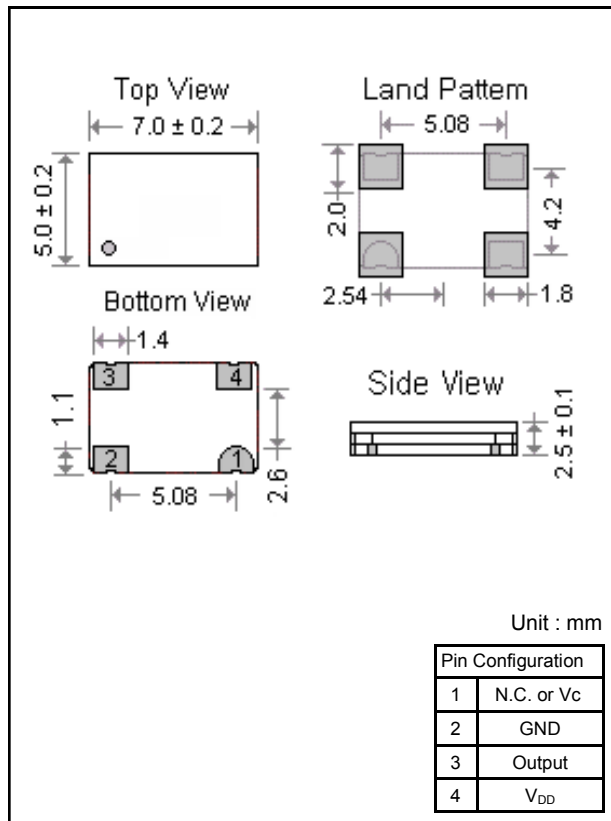
Rev. G

HOW TO ORDER

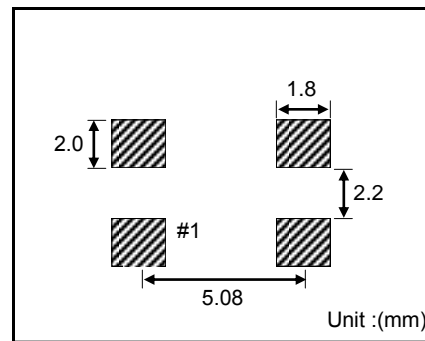
TC2	-	L	20	4	T	B /	100
Voltage		Initial Tolerance, Temp Stability		Temperature	Pull range	Screening Level	Frequency
K=+2.5V		02= ± 0.2ppm, ± 0.3ppm 03= ± 0.3ppm, ± 0.5ppm 05= ± 0.5ppm, ± 1.0ppm 10= ± 1.0ppm, ± 1.0ppm 15= ± 1.0ppm, ± 1.5ppm 20= ± 2.0ppm, ± 2.0ppm 25= ± 2.0ppm, ± 2.5ppm		1 = 0°C to +50°C 2 = -20°C to +70°C 3 = -30°C to +70°C 4 = -40°C to +85°C	T = TCXO, No Vc V = VCTCXO, Vc	N = No Screening I = Industrial Std B = MIL-PRF-55310D Class B S = MIL-PRF-55310D Class S, 40krad(Si)	MHz
L=+3.3V H=+5.0V							

Note: Initial Tolerance @ 25°C, specifications at time of shipment

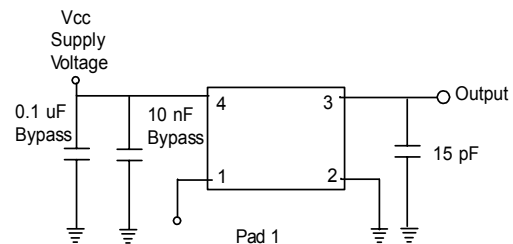
Package & Dimensions :



Soldering Pattern



Test Circuit



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Absolute Maximum Ratings

supply voltage (Vs)			6.0	V	
Output Load			50	pF	
Operable Temperature Range	-40		+85	°C	
Storage Temperature Range	-55		+125	°C	

Electrical Specifications

Supply Voltage (Vs)						
Parameter	Min	Typical	Max	Units	Condition	
Supply voltage (standard)	3.135	3.3	3.465	VDC	@LVCMOS	
Current consumption			60	mA		
Supply voltage	4.75	5.0	5.25	VDC	@HCMOS	
Current consumption			80	mA		
RF Output						
Signal [standard]	CMOS			1MHz~250MHz		
Load		15		pF		
Signal Level (Vol)			0.33	VDC	@Vs=3.3V and 15pF Load	
Signal Level (Vol)			0.5		@Vs=5.0V and 15pF Load	
Signal Level (Voh)	2.6			VDC	@Vs=3.3V and 15pF Load	
Signal Level (Voh)	4.00				@Vs=5.0V and 15pF Load	
Duty Cycle	45		55	%	@(Voh-Vol)/2	
Rise and Fall time			10	ns	@15 pF 10 to 90 %	
Frequency Stability						
@ operating Temperature	±0.3			ppm		
@ Voltage			±0.5	ppm		
@ Load			±0.5	ppm		
@ Year Aging			±1.0	ppm		
@Reflow			±1.5	ppm		
Additional Parameters						
Phase Noise		-90		dBc/Hz	10 Hz	@ 20 MHz HCMOS 3.3 V
		-130		dBc/Hz	100 Hz	
		-140		dBc/Hz	1 kHz	
		-150		dBc/Hz	10 kHz	
		-155		dBc/Hz	100 kHz	
Jitter		1		ps RMS	@12 kHz to 20 MHz	
Start time			10	ms		
Processing & Packing	Handling & Processing Note					

Environmental and Mechanical

Operating temp. range	0°C to 70°C , -40°C to 85°C,
Mechanical Shock	Per MIL-STD-202, Method 213B, Cond. F 1000g/0.5ms
Thermal Shock	Per MIL-STD-883, Method 1011, Cond. A
Random Vibration	Per MIL-STD-202G;Method 214A;Condition II-D 0.1g ² /Hz/30grms
Soldering Conditions	See MAX reflow profile
Hermetic Seal	Leak rate less than 1x10 ⁻⁸ atm.cc/s of helium (crystal only)