

Crystal Oscillators LVPECL/LVDS 3.3V

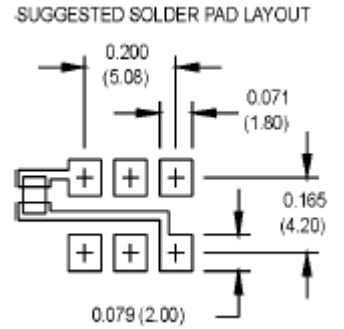
5X7 mm Surface Mount High Reliability 750 KHz to 800 MHz

ELECTRICAL SPECIFICATIONS	PARAMETER	Min.	Typ.	Max.	Units
	Frequency Range	0.75		800	MHz
	Input Voltage, V _{DD}	3.15	3.3	3.45	Volts
	Frequency Stability	±25	±50	±100	ppm
	Storage Temp.	-55		+125	°C
	Jitter Period jitter RMS				
	19.44MHz		5		ps
	77.76MHz		8		ps
	155.52MHz		9		ps
	622.08MHz		10		ps
Integrated jitter RMS 12KHz to 20 MHz@ 155.52MHz		3	5	ps	
Symmetry at (V_{DD-1.3}) V_{DC} (PECL) At (1.25 V_{DC}) (LVDS)			45/55	percent percent	
Aging First year After first year		3 1		ppm ppm/yr	
PECL Output Models					
RL=50 Ω to (V _{DD} -2V) Out put High Voltage, V _{OH} Output Low Voltage, V _{OL}			V _{DD} -1.025 V _{DD} -1.620	V V	
Input Current, PECL 0.75 – 24MHz 24 – 160MHz 160 – 800MHz			25 65 100	mA mA mA	
Switching Characteristics Clock Risk Time, tr @20/80% Clock Fall time, tf @80/20%		0.3 0.3	0.35 0.35	ns ns	
LVDS Output Models					
RL=100 Ω Output Differential Voltage, V _{OD} Output High Voltage, V _{OH} Output Low Voltage, V _{OL} Offset Voltage, V _{OS}	247 0.9 1.125	355 1.4 1.1 1.2	454 1.6 1.375	mV V V V	
Input Current, LVDS 0.75 – 24MHz 24 – 96MHz 96 – 800MHz			25 45 80	mA mA mA	
Switching Characteristics Differential Clock Rise Time, tr Differential Clock Fall Time, tf		0.3 0.3	0.4 0.4	ns ns	

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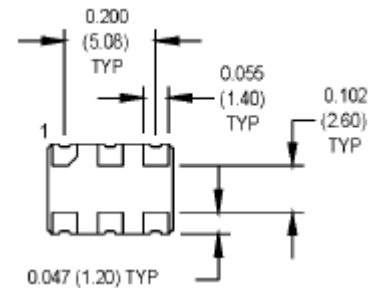
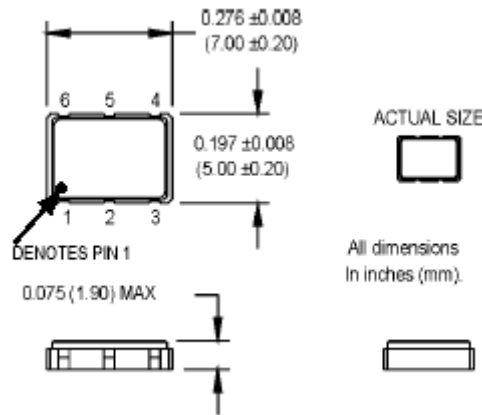
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ENVIRONMENTAL SPECIFICATIONS	Operating Temperature Range	-55°C to +125°C
	Shock	MIL-STD-883, Method 2002, Test Condition B (1500 peak g, 0.5 ms duration, 1/2 sine wave, 5 shocks in 6 planes)
	Vibration	MIL-STD-883, Method 2007, Test Condition A
	Humidity	Resistant to 85°C R.H. at 85°C
MECHANICAL SPECIFICATION	Leak	MIL-STD-883, method 1014, condition A1 and C1
	Case	Hermetically sealed ceramic LCC
	Pads	60 microinch of gold over nickel
	Marking	Epoxy ink or laser engraved
	Resistance to Solvents	MIL-STD-202, Method 215



Pin Connections

PIN	FUNCTION
1	N/C
2	N/C
3	Ground
4	Output 1:Q
5	Output 2:Q
6	+V _{DD}



Typical Phase Noise (dBc/Hz)	10Hz	100Hz	1KHz	10KHz	100KHz
Oscillator Frequency					
19.44MHz	-60	-90	-112	-140	-140
106.25MHz	-60	-90	-112	-128	-125
155.52MHz	-60	-90	-112	-125	-123
622.08MHz	-60	-90	-112	-110	-109

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This 5x7mm SMD package weighs less than 0.2 grams and has a hermetic seal, thus ensuring the integrity of each oscillator. These high reliability oscillators are mechanically robust; they provide PECL/LVDS waveforms for applications subjected to the most stringent environmental conditions. Each oscillator is burned-in at 125°C for 168 hours, temperature cycled and centrifuged then fully tested in accordance with MIL-STD-883B.

Features

- ✓ Small SMD package (5×7mm)
- ✓ Stability options form +/-25ppm to +/-100ppm
- ✓ High speed-Low jitter LVPECL or LVDS output with tristate
- ✓ Tristate option available Serialized test data available Crystal angle controlled to +/-0.5 for excellent temperature stability
- ✓ 168 hour Class B burn-in and extensive environmental testing for best performance in rugged field environments
- ✓ Leadless chip carrier package is hermetically sealed for superior aging and field performance
- ✓ Serialized test data available
- ✓ Calculated MTBF is 3.8×10^6 hours at 125°C

Ordering Information

