



frequency control solutions

T1215

HERMETIC TCXO
TIGHT TEMPERATURE STABILITY

texo

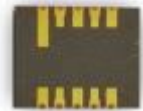
Product Description

Greenray Industries' T1215 TCXO offers outstanding, reliable performance under high shock & vibration conditions



Features

- 9.1 x 7.5 mm, ruggedized, hermetic package
- +3.3 or +5 VDC Supply
- Wide Frequency Range from 750 kHz to 800 MHz
- CMOS, Clipped Sine, LVPECL or LVDS output
- MIL Screening to MIL-PRF-55310 available
- High reliability and long-term stability performance
- Reduced Acceleration Sensitivity to 0.7 ppb/g



Applications

- Telecommunications
- RF telemetry systems
- Multiband terminal
- Upconverter
- GNSS
- Satellite communications
- Instrumentation

REV: J



Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
www.greenrayindustries.com

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Electrical Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency	@ +25°C, CMOS/CLIPPED SINE	10.0		50	MHz	(FREQ.)
	@ +25°C, CMOS	0.75		150		
	@ +25°C, LVPECL/LVDS	20.0		800		
Frequency Stability	-40°C to +85°C		± 0.5		ppm	T57
	-40°C to +85°C		± 1.0		ppm	T16
	-55°C to +85°C		± 2.0		ppm	U26
	-55°C to +95°C		± 3.0		ppm	V36
Aging	1 st year		± 0.5	± 1.0	ppm	
	10 years		± 4.0	± 6.0	ppm	
	20 years			± 10.0	ppm	
Acceleration Sensitivity	Worst axis tested @ 90 Hz, 10 g			3.0	ppb/g	SG
				2.5	ppb/g	LG
				0.7	ppb/g	ULG
Frequency vs Voltage	± 2%			0.3	ppm	
Frequency Adjust (EFC)	0 to Supply, Positive Slope		± 7.0		ppm	
DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage	± 5%	3.0	3.3	3.6	Vdc	B
	± 5%	4.75	5.0	5.25	Vdc	E
Supply Current	CMOS/Clipped Sine (10 to 50 MHz)			6	mA	C / CS
	CMOS (750 KHz to 150 MHz)			45	mA	C
	LVPECL			80	mA	LP
	LVDS			65	mA	LD



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RF Output						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
CMOS						C
Load			15		pF	
Level	Supply Voltage = 3.3V 750 KHz to 150 MHz	+ 3.0 "1" Level		+ 0.3 "0" Level	V	
	Supply Voltage = 5.0V 10 MHz to 50 MHz	+ 4.7 "1" Level		+ 0.3 "0" Level	V	
Symmetry		45	50	55	%	
Rise / Fall Time			2.4	4	nSec	
Clipped Sine						CS
Output Voltage	Into 10 pF // 10 k Ω	0.3	1.0		V p-p	
LVPECL						LP
Output Voltage	Load 50 Ω to Vcc (or equiv.)	Vcc -1.025 "1" Level		Vcc.-1.62 "0" Level	V	
Symmetry		45	50	55	%	
Rise / Fall Time			0.7	1.0	nSec	
LVDS						LD
Differential Output Voltage	Load 100 Ω , 5 pF, (See fig. 1)	250	350	450	mV	
Offset Voltage	LVDS Compatible	1.125	1.250	1.375	V	
Symmetry		45	50	55	%	
Rise / Fall Time			0.8	1.5	nSec	



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Environmental and Mechanical Specifications				
Test	Standard	Method	Condition	Description
Vibration	MIL-STD-202	214	II-A	0.2 PSD, 6.21 g RMS
Shock	MIL-STD-202	213	C	100 g, 11 ms duration, half-sine
Fine Leak	MIL-STD-202	112	C	

Recommendations and General Information	
Parameter	Notes
Operating Temperature	-55°C to +95°C
Storage Temperature	-55°C to +125°C
Terminal Finish	Au (RoHS) (SnPb 63/37 (non-RoHS) Available upon request)
Package Weight	< 1 gram
Package Finish	Ceramic & Metal Lid
Soldering Instruction	Reflow
Shipping	Tray Pack, Tape & Reel
Marking	GRI Logo, Model #, Frequency, Serial #, Date Code Addition marking upon request if space is available

Ordering Example														
T1215	-	T		57	-	CS	-	B	-	SG	-	B	-	10.0 MHz
Model		Temp. Range		Stability		Output		Supply Voltage		G-Sensitivity		Screening		Freq.
		T: -40 to +85°C U: -55 to +85°C V: -55 to +95°C		57: ±0.5ppm 16: ±1ppm 26: ±2ppm 36: ±3ppm		C: CMOS CS: Clipped Sine LP: LVPECL LD: LVDS		B: 3.3V E: 5V		SG: < 3.0 ppb/g LG: < 2.5 ppb/g ULG: < 0.7 ppb/g HG: Customer-specific		X: None B: MIL-PRF-55310, Class 2 Level B		750 KHz to 800 MHz

The Order ID (T1215-T57-CS-B-SG-B-10.0MHz) is only used to issue the preliminary quote. The Part Number (T1215-1) for the quoted Electrical Characteristics, Screenings, and other options, will be provided with the Greenray Sales Order.

Other specification options are available, please use the contact information below for more information.



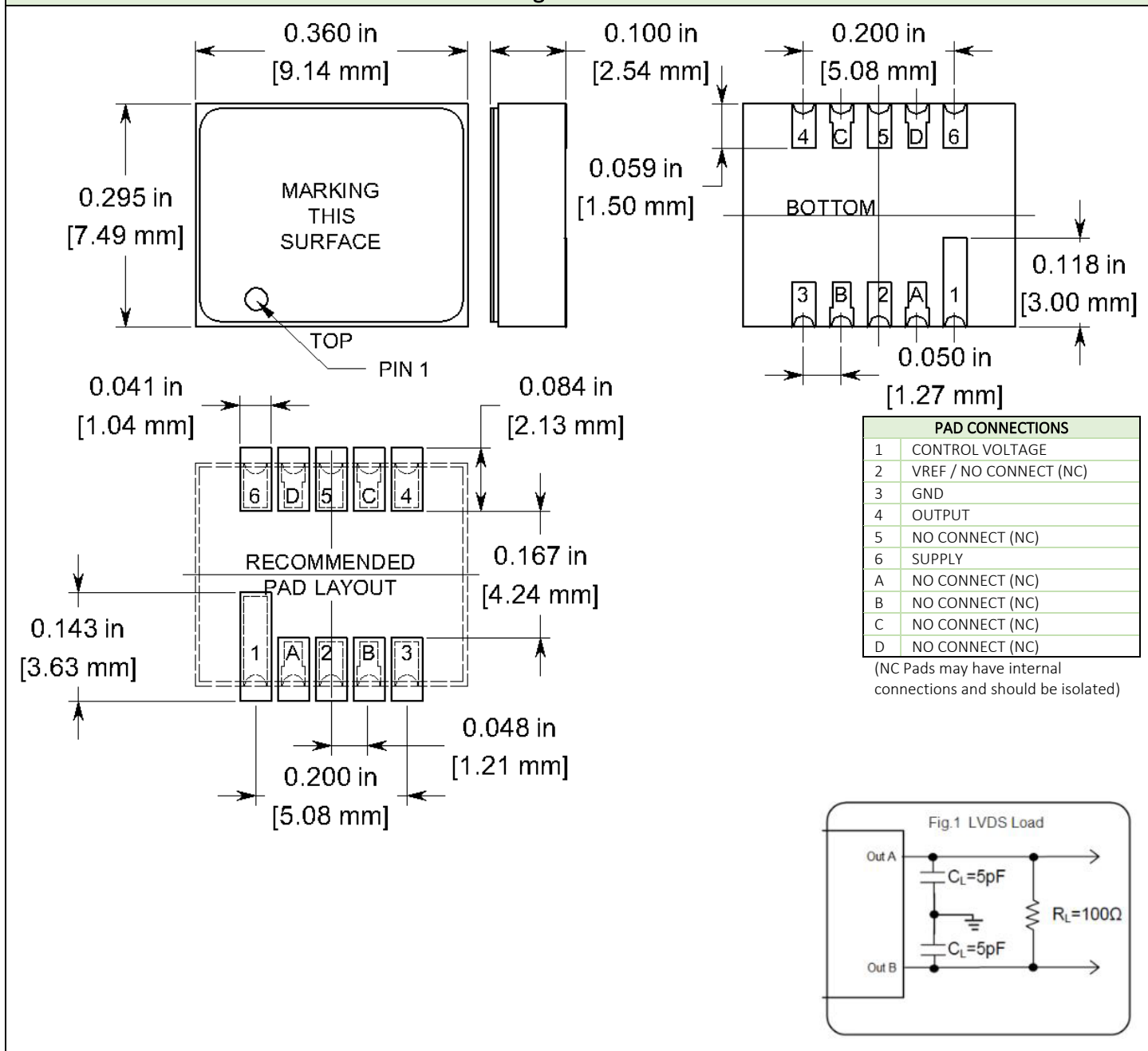
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Package Information



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