



frequency control solutions

## T1243

ULTRA-LOW ACCELERATION SENSITIVITY  
LOW PHASE NOISE

# tcxo

### Product Description

Greenray Industries' T1243 TCXO delivers ultra-low acceleration sensitivity and low phase noise performance.



### Features

- g-Sensitivity down to  $<0.07 \times \text{ppb/g}$  applied acceleration force
- Frequency range from 10 MHz to 50 MHz
- 22.9 x 17.8 mm package
- Voltage Control for precise tuning or phase locking apps
- +3.3 or +5 VDC Supply
- CMOS output
- Excellent phase noise performance under high shock/high vibration conditions
- Rugged package, ideally suited for demanding mobile communications applications

### Applications

- Telecommunications
- High-shock electronics
- Mobile radio
- Mobile instrumentation
- Airborne communications
- Wireless communications
- Microwave receivers

REV: F



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Electrical Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency	@ +25°C	10		50	MHz	(FREQ.)
Frequency Stability	-20°C to +70°C		± 1.0		ppm	N16
	-40°C to +85°C		± 2.0		ppm	T26
Aging	1 <sup>st</sup> year			± 1.0	ppm	
Acceleration Sensitivity	Worst axis tested @ 90 Hz, 10 g			2.5	ppb/g	SG
				0.7	ppb/g	LG
				0.07	ppb/g	ULG
Frequency vs Voltage	For a 5% change			± 1.0	ppm	
Frequency vs Load	For a 10% change			± 0.1	ppm	
Voltage Control (EFC)	0 to Supply, Positive Slope		± 7.0		ppm	
Warm-up Time	Within ± 1 ppm			10	mSec	
Phase Noise Performance						
Parameter	Frequency Offset (Hz)	Min	Typical	Max	Units	Ordering Code
Static @ 50 MHz Nom. Freq.	10		-90		dBc/Hz	
	100		-129		dBc/Hz	
	1 k		-135		dBc/Hz	
	10 k		-150		dBc/Hz	
	100 k		-160		dBc/Hz	
	Floor		-165		dBc/Hz	
DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage		3.0	3.3	3.6	Vdc	B
		4.75	5.0	5.25	Vdc	E
Supply Current				30	mA	
RF Output						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
CMOS						C
Load			15		pF	
Level		0.8 Vdd "1" Level		0.2 Vdd "0" Level	V	
Symmetry		40	50	60	%	



Environmental and Mechanical Specifications				
Test	Standard	Method	Condition	Description
Vibration	MIL-STD-883	2007	A	50 g, 20 to 2,000 Hz, swept sine
Shock	MIL-STD-883	2002	B	1,500 g, 0.5 ms half-sine

Recommendations and General Information	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-45°C to +90°C
Terminal Finish	ENIG (RoHS) (SnPb 63/37 (non-RoHS) Available upon request)
Package Weight	3 grams
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					
<b>T1243</b>	<b>-</b>	<b>N</b>	<b>16</b>	<b>-</b>	<b>B - SG - 10.0 MHz</b>
Model	Temp. Range	Stability	Supply Voltage	G-Sensitivity	Freq. (MHz)
	N: -20 to +70°C T: -40 to +85°C	16: ±1ppm 26: ±2ppm	B: 3.3V E: 5V	SG: < 2.5 ppb/g LG: < 0.7 ppb/g ULG: < 0.07 ppb/g HG: Customer-specific	10 to 50

The Order ID (T1243-N16-B-SG-10.0MHz) is only used to issue the preliminary quote. The Part Number (T1243-1) 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.



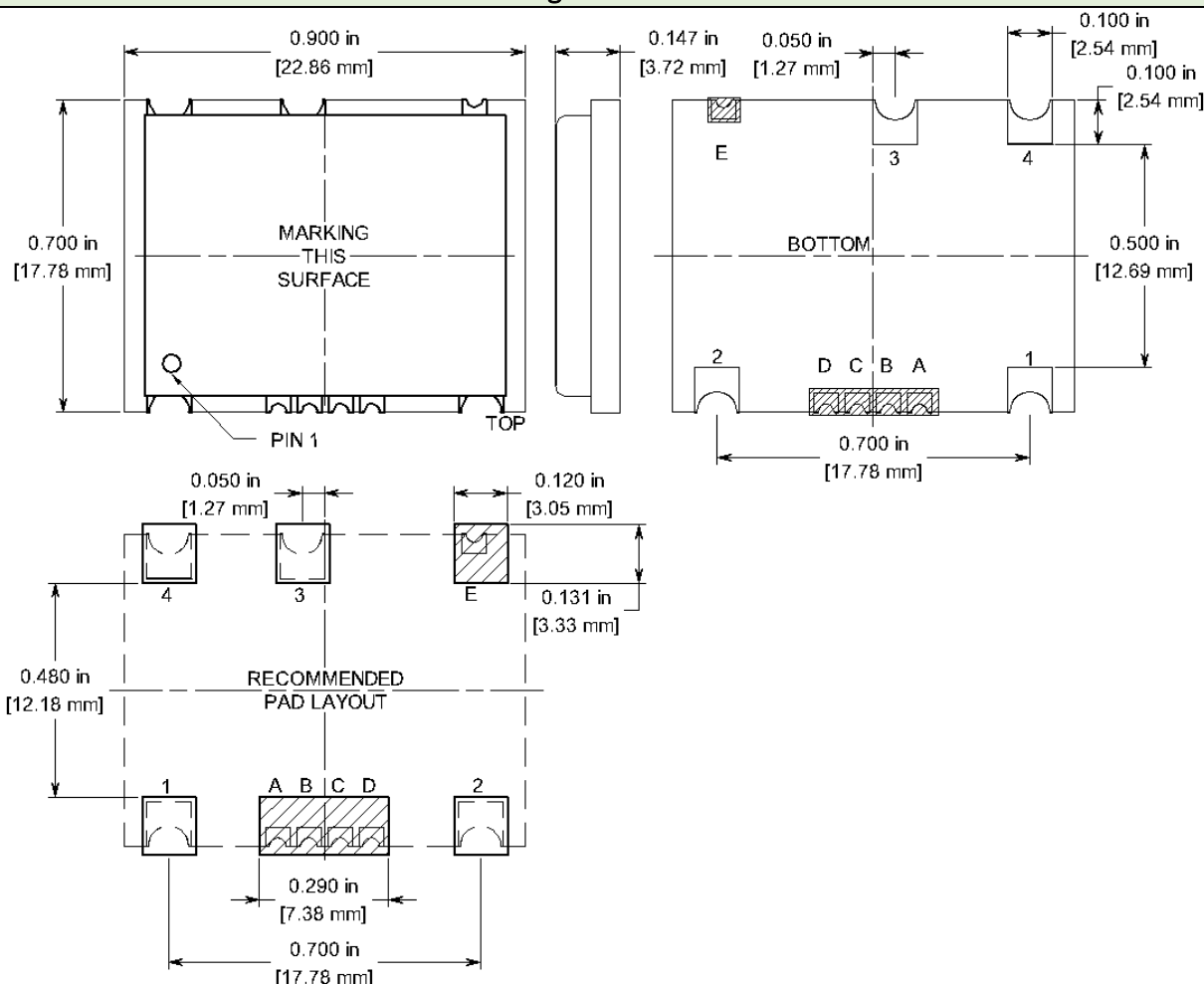
frequency control solutions

# T1243 SERIES

10 MHz to 50 MHz

# texo

## Package Information



### PAD/PIN CONNECTIONS

1	OUTPUT
2	CONTROL VOLTAGE (EFC)
3	GND
4	SUPPLY VOLTAGE (Vdd)

(NC Pads/Pins may have internal connections and should be isolated)



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