



frequency control solutions

T1247

PRECISION ANALOG COMPENSATION

tcxo

Product Description

Greenray Industries' T1247 TCXO offers OCXO-like frequency vs. temperature stability performance in a compact, rugged package. In addition, the T1247 performs over a wide temperature range with low power consumption.

Features

- 36.1 x 26.9 mm Euro Package, 6-pin
- +3.3 or +5 VDC supply
- CMOS output
- Temperature Stability to ± 0.03 ppm
- Extended, long-term stability performance

Applications

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

REV: E



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

intertek

Greenray Proprietary. Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2022 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.



frequency control solutions

T1247 SERIES
10 MHz to 50 MHz**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		± 30		ppb	N38
	-40°C to +85°C		± 50		ppb	T58
Aging	1 st year, after 14 days of operation			± 1	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	For a 5% change			± 0.3	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 @ 10 MHz Nom. Freq.	10		-90		dBc/Hz	
	100		-120		dBc/Hz	
	1 k		-140		dBc/Hz	
	10 k		-150		dBc/Hz	
	100 k		-155		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				35	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	%	



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

Greenray Proprietary. Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2020 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.



frequency control solutions

T1247 SERIES
10 MHz to 50 MHz



Environmental and Mechanical Specifications

Test	Standard	Method	Condition	Description
Vibration (Random)	MIL-STD-202G	214	I-J	1 PSD, 37.80 rms G
Vibration (Sine)	MIL-STD-202G	204	D	20 g, 20 to 2,000 Hz,
Shock	MIL-STD-202G	213	F	1,500 g, 0.5 ms half-sine

Recommendations and General Information

Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +95°C
Terminal Finish	Sn 100 (RoHS) (SnPb 63/37 (non-RoHS) Available upon request)
Package Weight	3 grams
Soldering Instruction	Hand Solder
Shipping	Tray Pack
Marking	GRI Logo, Model #, Frequency, Serial #, Date Code Addition marking upon request if space is available

Ordering Example

T1247	-	T	58	-	B	-	SG	-	10.0 MHz
Model	Temp. Range		Stability		Supply Voltage		G-Sensitivity		Freq. (MHz)

Model
 N: -20 to +70°C
 T: -40 to +85°C

Temp. Range

Stability
 38: ±0.03ppm
 58: ±0.05ppm

Supply Voltage
 B: 3.3V
 E: 5.0V

G-Sensitivity
 SG: < 3.0 ppb/g
 LG: < 2.5 ppb/g
 ULG: < 0.7 ppb/g
 HG: Customer-specific

Freq. (MHz)
 10 - 50

The Order ID (T1247-T58-B-SG-10.0MHz) is only used to issue the preliminary quote. The Part Number (T1247-1) 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.



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

Greenray Proprietary Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2020 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.

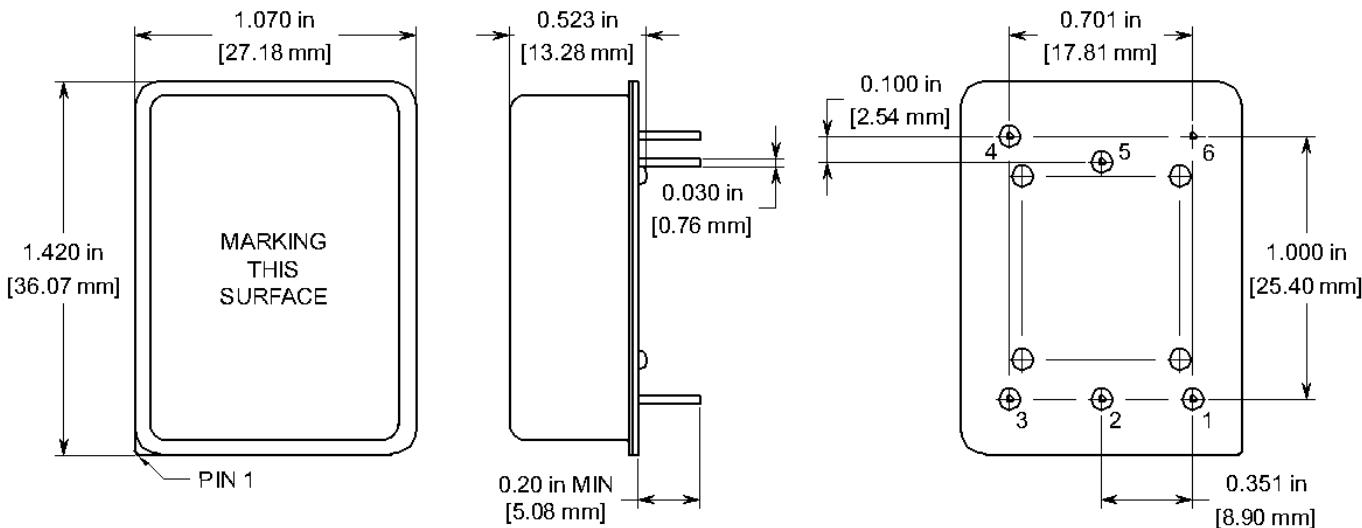


frequency control solutions

T1247 SERIES
10 MHz to 50 MHz

tcxo

Package Information



PIN CONNECTIONS

1	CONTROL VOLTAGE (EFC)
2	CONTROL VOLTAGE (EFC)
3	SUPPLY VOLTAGE (Vdd)
4	OUTPUT
5	NO CONNECT (NC)
6	GND

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

PIN 2 FUNCTION



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

Greenray Proprietary. Greenray Industries, Inc. disclaims all liability arising from this information and its use. No licenses are conveyed, implicitly or otherwise, to any Greenray intellectual property rights. ©2020 Greenray Industries, Inc. All rights reserved. Reproduction in whole or in part is prohibited.