



frequency control solutions

tcxo

T120

TIGHT STABILITY
LOW NOISE TCXO

Product Description

Greenray Industries' T120 TCXO offers low noise and tight stability in a rugged package

Features

- 22.9 x 17.8 mm, ruggedized package
- 3.3 or 5 VDC Supply
- CMOS output
- Temperature Stability to ± 0.5 ppm (-40 to +85°C)
- -160 dBc/Hz Noise Floor
- Extended, long-term stability performance



Applications

- Telecommunications
- Mobile radio
- Mobile instrumentation
- Airborne communications
- Wireless communications
- Microwave receivers

Rev. F



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frequency control solutions

T120 SERIES
10 MHz to 100 MHz



Electrical Characteristics

Frequency Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency		10		100	MHz	
Frequency Stability (other stability available, please contact factory)	-40°C to +85°C		± 0.5		ppm	T57
	-40°C to +85°C		± 1		ppm	T16
Total Stability	From nominal over 10 years (including temp stability, load, aging, supply V)			± 5	ppm	
Aging	1 st year			± 1	ppm	
Acceleration Sensitivity	(note 1)			2.5	ppb/g	
Frequency vs Supply Voltage	For a 5% change			± 0.1	ppm	
Frequency vs Load	For a 5% change			± 0.1	ppm	
Electronic Frequency Control	EFC = 0 to SUP. Positive slope,		± 6		ppm	
Phase Noise Performance						
Parameter	Frequency Offset (Hz)	10 MHz Typ.	100 MHz Typ.		Units	Ordering Code
Static @ 100 MHz nominal Frequency	10	-90	-70		dBc/Hz	
	100	-125	-100		dBc/Hz	
	1k	-145	-125		dBc/Hz	
	10 k	-155	-145		dBc/Hz	
	100 k	-160	-160		dBc/Hz	
DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage		3.0	3.3	3.6	VDC	3.3
		4.75	5.0	5.25	VDC	5.0
Supply Current				30	mA	
RF Output						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
CMOS						
Load		13.5	15	16.5	pF	
Level	15 pF load	SUP.-0.3 "1" level		0.3 "0" level	V	
Rise/Fall Time	15pF load			10	ns	
Symmetry		40	50	60	%	

(1) Acceleration Sensitivity is worst axis tested at 90 Hz, 10 g



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Environmental and Mechanical Specifications

Screenings			
Screening	Standard	Method, Condition	Description
Vibration	MIL-STD-202	201A	0.6 PSD, 34.02 g RMS, 3min/axis
Shock	MIL-STD-202	213, Cond K	90 g peak, half-sine, 5 ms

Recommendation and General Information

Conditions	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +90°C
Terminal Finish	Gold plating (RoHS) is standard (E). 63/37 SnPb (non-RoHS) also available
Package Weight	< 3 grams
Soldering Instruction	Hand and reflow soldering
Shipping	Type of package (tray pack)
Marking	Line 1: Greenray logo Line 2: Model Line 3: Frequency Line 4: Serial Number Line 5: Data Code (YYWW)

Ordering (Example)

T120	-	T16	-	3.3	-	70.0MHz	-	E
Model		Stability		Supply Voltage		Frequency in MHz		Termination finish
		Refer to Electrical Specs Table* T57 (-40 to +85°C) T16 (-40 to +85°C)		3.3: 3.3 VDC 5.0: 5.0 VDC		From 10 to 100 MHz		Code: Pads finish E: Gold plated (RoHS), Standard PB: SnPb 63/37 (non-RoHS)

*other frequency stabilities available, please contact factory



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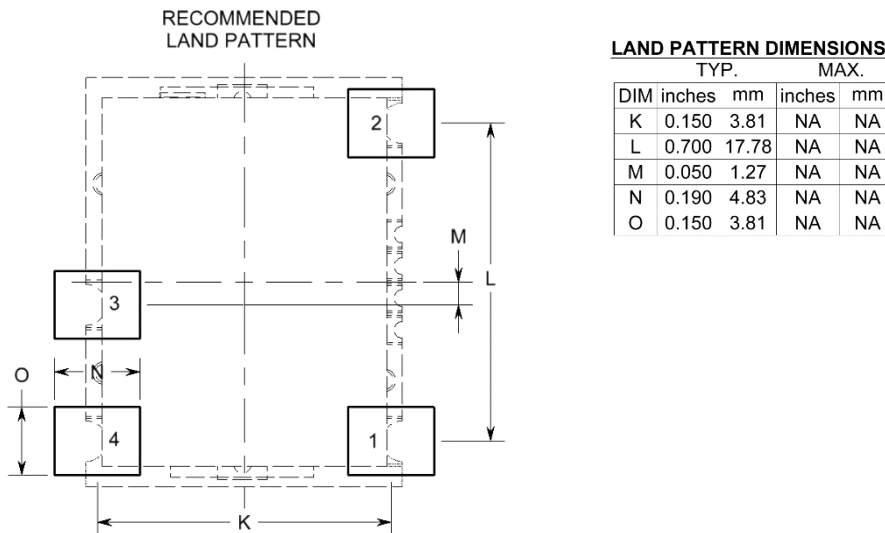
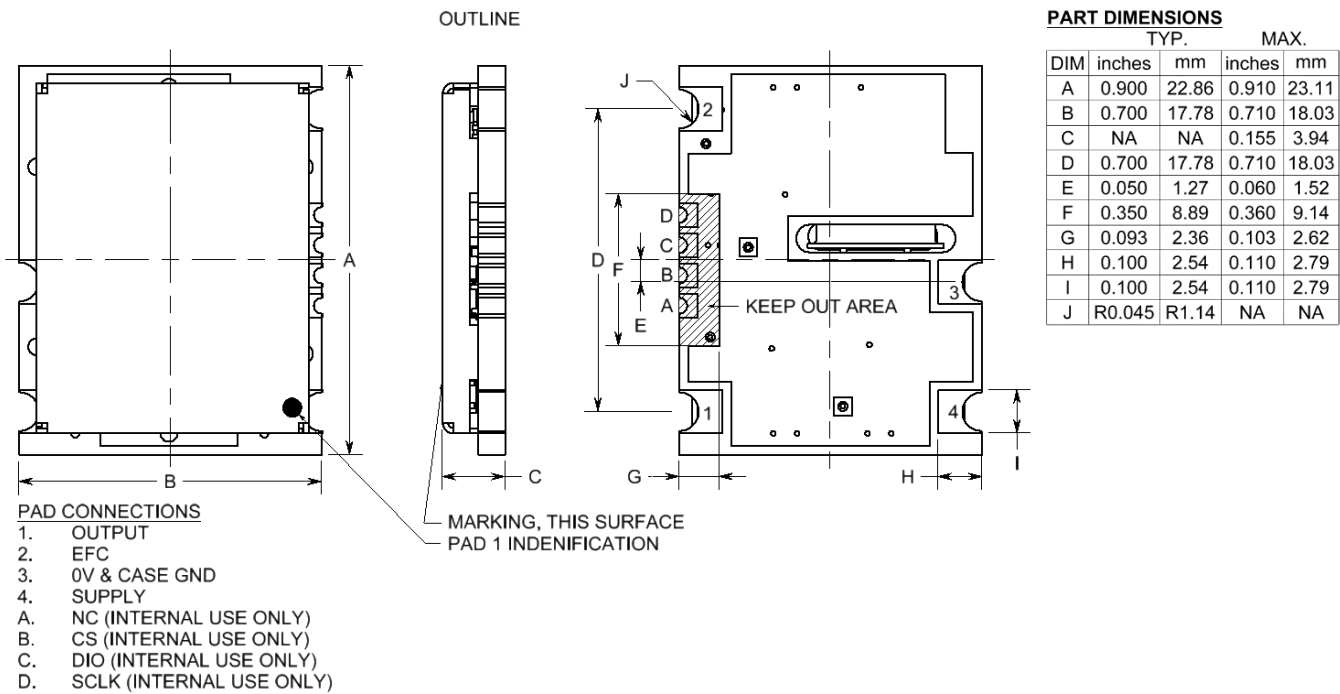


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Package dimensions and Pad Connections



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