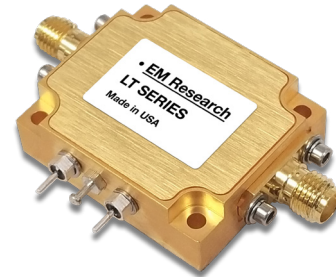


GENERAL DESCRIPTION

The LT-4000-10 is a ruggedized synthesizer in a module mount package, that produces a fixed signal at 4000 MHz. Part of the Little THOR family from EM Research, this compact device features extreme shock and vibration tolerance, as well as removable SMA connectors for surface mount-ability.



LT-4000-10 FEATURES

- Module Mount Package (1.30" x 1.10" x 0.40")
- Fixed Frequency
- Removable SMA connectors for surface mount-ability
- Extreme shock, and vibration tolerance
- Output power of +17 dBm
- Harmonics less than -15 dBc

APPLIED INDUSTRIES



LT SERIES OPTIONS

- Frequency range from 50 MHz to 19 GHz (within selected bands)
- Hermetic seal optional per MIL-STD-883
- Power output up to +17 dBm

LT SERIES TYPICAL APPLICATIONS

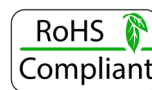
- LO for Up/Down Converters
- S-Band Local Oscillator
- LO for Sub-harmonic Mixers

ELECTRICAL SPECIFICATIONS

Frequency	4000 MHz	
Stability	Same as Reference	
Reference	100 MHz, +6 dBm ±3 dB	
Ref. Input Imp.	50 Ω	
Ref. Phase Noise	100 Hz	<-105 dBc/Hz
	1 KHz	<-135 dBc/Hz
	10 KHz	<-155 dBc/Hz
Output Power	+17 dBm ±2 dB, 50 Ω	

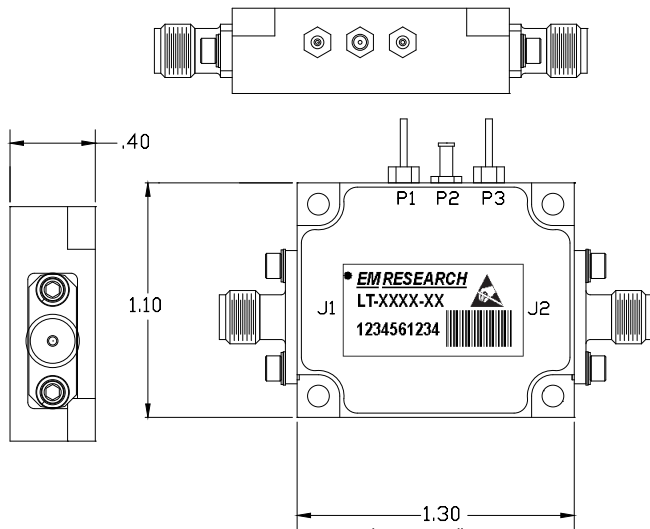
Harmonics	<-20 dBc TYP, <-15 dBc MAX	
Spurs	<-70 dBc TYP, <-65 dBc MAX	
Phase Noise	1 KHz	<-85 dBc/Hz TYP , <-80 dBc/Hz MAX
	10 KHz	<-95 dBc/Hz TYP , <-90 dBc/Hz MAX
	100 KHz	<-115 dBc/Hz TYP , <-110 dBc/Hz MAX
VCC	+5V ±0.15V @230mA TYP, 250mA MAX	
Lock Detect	3.3V TTL, HIGH = LOCK	

All specifications are typical unless otherwise specified and subject to change without notice.





PACKAGE OUTLINE



All dimensions are in inches unless otherwise specified
.XX = +/- 0.01.

PIN DESCRIPTIONS

J1	RF OUT	Female SMA
J2	REF IN	Female SMA
P1	VCC	Filtered Feedthrough
P2	GND	Terminal
P3	LOCK	Filtered Feedthrough
Housing is Ground		

MECHANICAL SPECIFICATIONS

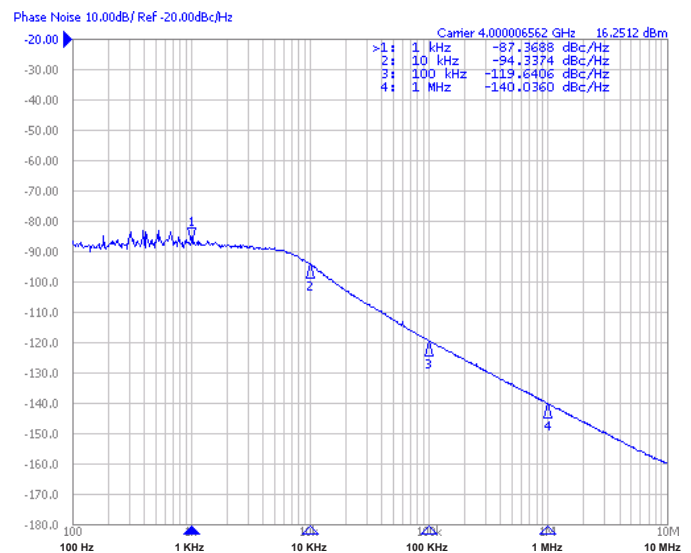
DC Connectors	Filtered Feedthrough
REF & RF Connectors	Female SMA
Package	Module Mount, 1.30" x 1.10" x 0.40"
Package Outline	EM Drawing 2200006006
Part Label	EM Drawing 8000002001

ENVIRONMENTAL SPECIFICATIONS

Standard Operating Temperature	-30°C to +70°C
Optional Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

Custom designs are available. Please contact EM Research.

PHASE NOISE PLOT





DETAILS

Title	Fixed Frequency Synthesizer Part No. LT-4000-10
File	SPC-LT-4000-10-REVA
Scale	N/A
Size	A
Rev.	A

APPROVALS

Department	Date
DWN: Kielely Smith	12/17/19
QA: Susan Zandonella	10/4/19
MKTG: Matt Eiting	12/11/19
ENG: Evan Smith	12/12/19
MFG: Nick Hicks	12/12/19
Other:	

REVISION HISTORY

Rev.	Description	Date	Approved
A	Configurable Product	12/17/19	DCR# 1904345

NOTES