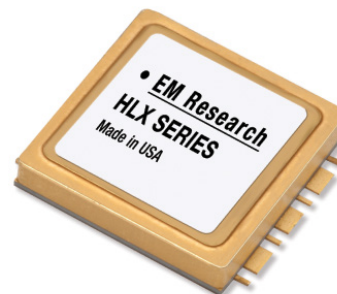


GENERAL DESCRIPTION

The HLX-14000-04 is a fixed frequency synthesizer in a ruggedized, hermetically sealed surface mount package (0.81" square). Part of EM Research's Hybrid LX series, this HLX features an internal reference, extreme shock and vibration tolerance, and a fixed frequency output of 14000 MHz.



HLX-14000-04 FEATURES

- Surface mount package (0.81" Square)
- Extreme shock and vibration tolerance
- Fixed programming
- Output power of +6 dBm
- Harmonics less than -20 dBc

HLX SERIES OPTIONS

- Fixed frequencies up to 14 GHz
- Output power up to +10 dBm
- Hermetic seal per MIL-STD-883

ELECTRICAL SPECIFICATIONS

Frequency	14000 MHz
Reference	Internal
Stability	±5 ppm Over Temperature
Frequency Accuracy @ Room	±2 ppm MAX
Output Power	+6 dBm ±2 dB, 50 Ω
Harmonics	<-20 dBc

APPLIED INDUSTRIES



AEROSPACE



AIRCRAFT-BASED
EQUIPMENT



MISSILE
DEFENSE



SOUNDING
ROCKETS



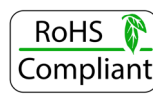
MISSILE
SYSTEMS

HLX SERIES TYPICAL APPLICATIONS

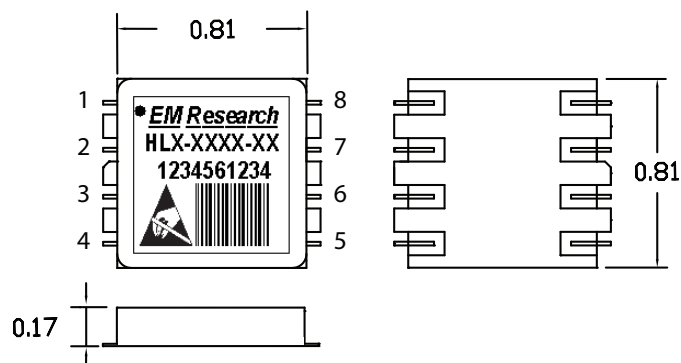
- Aircraft-Based Equipment
- Defense Applications
- Guidance Systems

Sub-Harmonics		<-30 dBc TYP, <-25 dBc MAX
Spurs		<-65 dBc
Phase Noise	1 KHz	<-80 dBc/Hz TYP, <-75 dBc/Hz MAX
	10 KHz	<-93 dBc/Hz TYP, <-90 dBc/Hz MAX
	100 KHz	<-95 dBc/Hz TYP, <-90 dBc/Hz MAX
VCC		+5V ±015V @ 250 mA TYP, 300 mA MAX
Lock Detect		3.3V TTL, HIGH=LOCK

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



PACKAGE OUTLINE



PIN DESCRIPTIONS

1	GND	5	VCC-VCO
2	GND	6	RF OUT
3	GND	7	VCC-PLL
4	GND	8	LOCK
ALL OTHER PINS ARE GROUND			

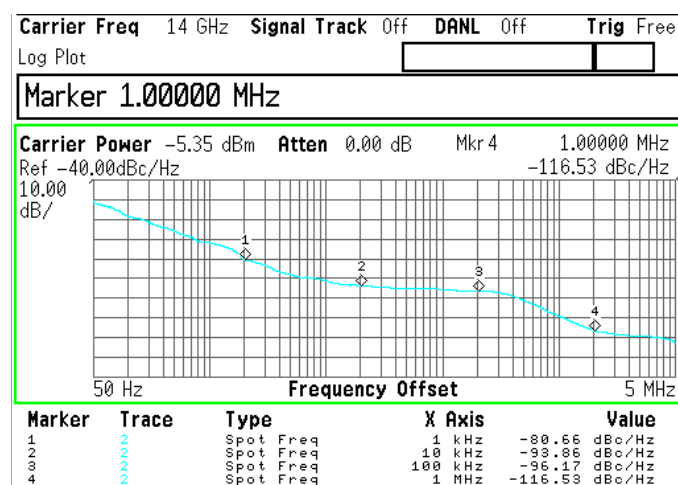
ENVIRONMENTAL SPECIFICATIONS

Standard Operating Temperature	-40°C to +85°C
Optional Operating Temperature	-65°C to +85°C
Storage Temperature	-55°C to +125°C

MECHANICAL SPECIFICATIONS

Package	SMT, 0.81" x 0.81" x 0.17"
Package Outline	EM Drawing 2200002001
Part Label	EM Drawing 8000005001

PHASE NOISE PLOT



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

Custom designs are available. Please contact EM Research.



DETAILS

Title	Fixed Frequency Synthesizer Part No. HLX-14000-04
File	SPC-HLX-14000-04-REVA
Scale	N/A
Size	A
Rev.	A

APPROVALS

Department	Date
DWN: Kieley Smith	7/24/19
QA: Susan Zandonella	7/29/19
MKTG: Matt Eiting	8/6/19
ENG: Lupe Armendariz	8/2/19
MFG: Nick Hicks	7/30/19
Other:	

REVISION HISTORY

Rev.	Description	Date	Approved
A	Configurable Product	8/6/19	DCR# 1904281

NOTES