

**GENERAL DESCRIPTION**

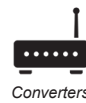
HFS-1300-05 is a fixed-frequency synthesizer that produces a fixed frequency of 1300 MHz. This surface mount synthesizer has excellent phase noise and low spurious.



**HFS-1300-05 FEATURES**

- Surface Mount Package (1.25" x 1.00" x 0.24")
- Fixed Frequency at 1300 MHz
- No Programming Necessary
- Demo Board Available

**APPLIED INDUSTRIES**



**HFS SERIES OPTIONS**

- Fixed frequencies from 50 to 15000 MHz
- Broadband Designs Available
- Internal Reference Output Available
- Optional Internal Reference
- Optional Reference Detect Switch

**HFS SERIES TYPICAL APPLICATIONS**

- Radar Systems
- Frequency Conversions
- High Performance Compact Instrumentation
- Converters
- Electronic Countermeasures

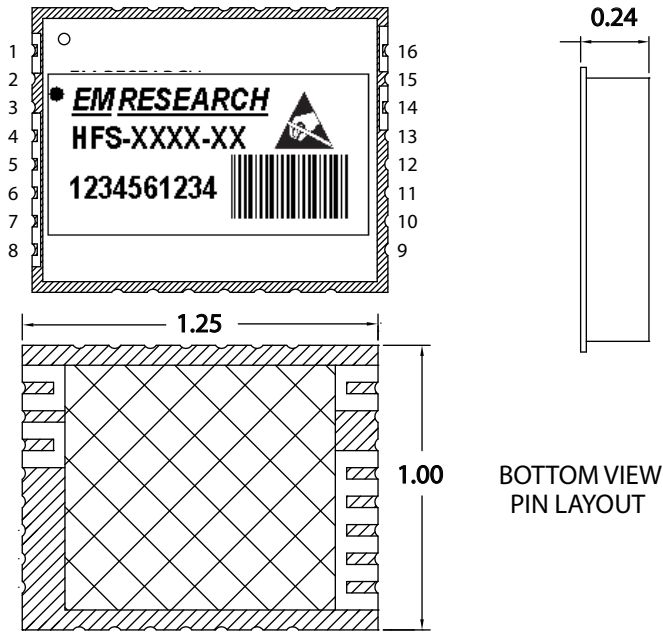
**ELECTRICAL SPECIFICATIONS**

Frequency	1300 MHz	
Stability	Same as Reference	
Reference	100 MHz, +3 dBm ±3 dB	
Ref. Input Imp	50 Ω	
Ref. Phase Noise	100 Hz	-130 dBc/Hz
	1 kHz	-150 dBc/Hz
	10 kHz	-155 dBc/Hz

Output Power	+12 dBm ±2 dB, 50 Ω	
Harmonics	<-40 dBc TYP, <-35 dBc MAX	
Spurs	<-75 dBc TYP, <-70 dBc MAX	
Phase Noise	10 kHz	<-98 dBc/Hz TYP, <-93 dBc/Hz MAX
	100 kHz	<-118 dBc/Hz TYP, <-113 dBc/Hz MAX
VCC	+5 V ± 0.15 V @ 80 mA TYP, 100 mA MAX	
Lock Detect	5V TTL, HIGH=LOCK	

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

**PACKAGE OUTLINE**



**PIN DESCRIPTIONS**

1	D-VCC	9-13	GND
2-3	GND	14	RF OUT
4	LOCK	15	GND
5-7	NC	16	A-VCC
8	REF IN		

**MECHANICAL SPECIFICATIONS**

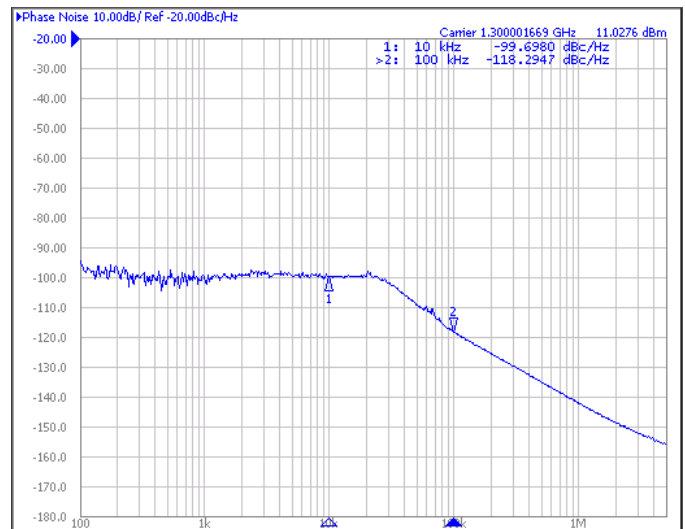
Package	Surface Mount, 1.25" x 1.00" x 0.24"
Package Outline	EM Drawing 2200009001
Part Label	EM Drawing 8000019001

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

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	-30°C to +70°C
Optional Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

**PHASE NOISE PLOT**



Custom designs are available. Please contact EM Research.



**DETAILS**

Title	Fixed-Frequency Synthesizer Part No. HFS-1300-05
File	SPC-HFS-1300-05-REVA
Scale	N/A
Size	A
Rev.	A

**APPROVALS**

Department	Date
DWN: Kielely Smith	2/22/21
QA: Susan Zandonella	12/15/20
MKTG: Sandi Renden	12/28/20
ENG: Matt Anthony	2/2/21
MFG: Nick Hicks	12/15/20
Other: Connor VanKalmthout	02/18/21

**REVISION HISTORY**

Rev.	Description	Date	Approved
A	Configurable Product	02/18/21	DCR# 2004669

**NOTES**