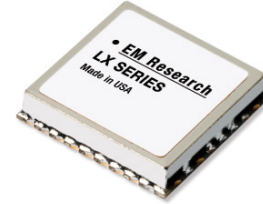


**GENERAL DESCRIPTION**

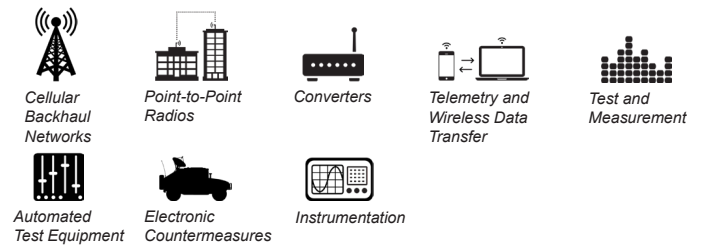
The LX-5850-03 is a programmable frequency synthesizer in a miniature, surface mount package (0.75" Square). Part of EM Research's small footprint series, this LX features a programmable frequency output between 4000 and 5850 MHz.



**LX-5850-03 FEATURES**

- Miniature, surface mount package (0.75" Square)
- Programmable frequencies between 4000 and 5850 MHz
- Output power of +6 dBm
- Harmonics less than -10 dBc

**APPLIED INDUSTRIES**



**LX SERIES OPTIONS**

- Programmable frequencies up to 10.5 GHz (within selected bands)
- Internal Reference
- Output power up to +10 dBm

**LX SERIES TYPICAL APPLICATIONS**

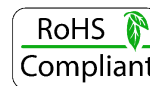
- Cellular and Radio Communications
- Instrumentation Component
- Test and Measurement Reference

**ELECTRICAL SPECIFICATIONS**

Frequency	4000-5850 MHz
Stability	Same as Reference
Step Size	5 MHz
Switch Speed	50 usec to w/in 10 KHz
	Band Edge to Band Edge
Reference	125 MHz, 0 dBm ±3 dB, 50 Ω
Output Power	+6 dBm ± 2 dB, 50 Ω
Harmonics	<-25 dBc MAX
Spurs	<-60 dBc MAX

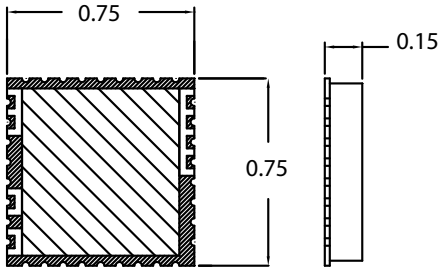
Phase Noise	10 KHz	<-85 dBc/Hz TYP , <-82 dBc/Hz MAX
	100 KHz	<-85 dBc/Hz TYP , <-82 dBc/Hz MAX
	1 MHz	<-105 dBc/Hz TYP , <-102 dBc/Hz MAX
D-VCC	+5 V ±0.15V @ 85 mA TYP, 100 mA MAX	
Lock Detect	3.3V TTL, HIGH=LOCK	
Programming	Serial; Clock, Data, Enable 3.3V	
	3.3V TTL Logic, V <sub>IN,H</sub> > 2.0V, V <sub>IN,L</sub> < 0.6V	
Prog. Format	PF-03	

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



HIGHEST QUALITY • COMPREHENSIVE SERVICE • BEST PERFORMANCE

**PACKAGE OUTLINE**



**BOTTOM VIEW**



**TOP VIEW**

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

**PIN DESCRIPTIONS**

1	REF IN	10	GND
2	Enable	11	RF OUT
3	Data	12-14	GND
4	Clock	15	D - VCC
5-8	GND	16	Lock
9	A - VCC	All other pins ground.	

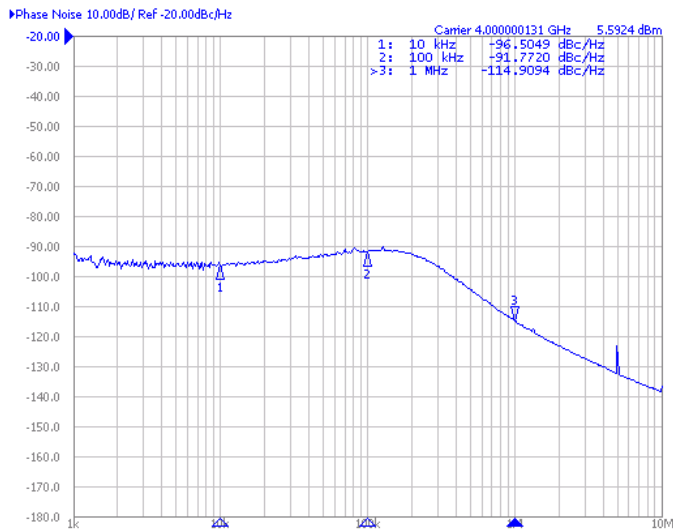
**MECHANICAL SPECIFICATIONS**

Package	SMT, 0.75" x 0.75" x 0.15"
Package Outline	EM Drawing 2200007001
Part Label	EM Drawing 8000020001

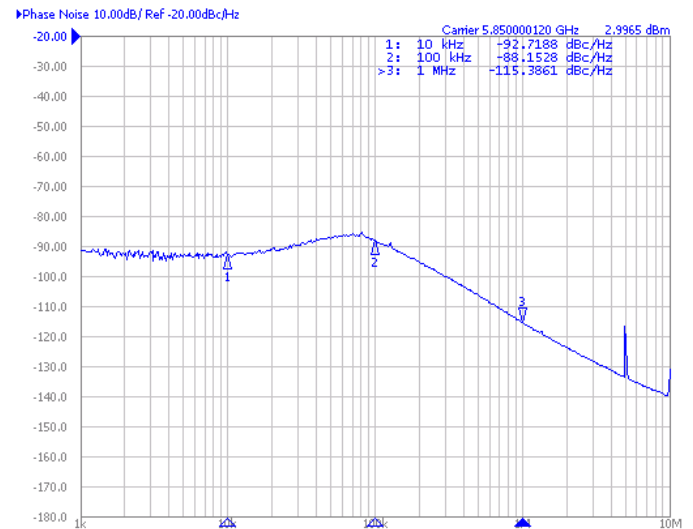
**ENVIRONMENTAL SPECIFICATIONS**

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

**PHASE NOISE PLOT | 4000 MHZ**



**PHASE NOISE PLOT | 5850 MHZ**



Custom designs are available. Please contact EM Research.

Page 2 of 3



**DETAILS**

Title	Programmable Frequency Synthesizer Part No. LX-5850-03
File	SPC-LX-5850-03-REVA
Scale	N/A
Size	A
Rev.	A

**APPROVALS**

Department	Date
DWN: Kielely Smith	4/5/21
QA: Susan Zandonella	3/23/21
MKTG: Annie Paquette	3/25/21
ENG: Matt Anthony	3/25/21
MFG: Nick Hicks	3/25/21
Other: Connor VanKalmthout	3/30/21

**REVISION HISTORY**

Rev.	Description	Date	Approved
A	Configurable Product	3/30/21	DCR# 2104965

**NOTES**

1. Vibration by design only
2. Shock by design only
3. Humidity by design only