

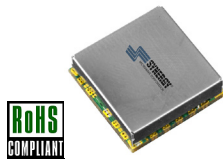
FIXED FREQUENCY SYNTHESIZER

SURFACE MOUNT MODEL: MFSF6950-50-2

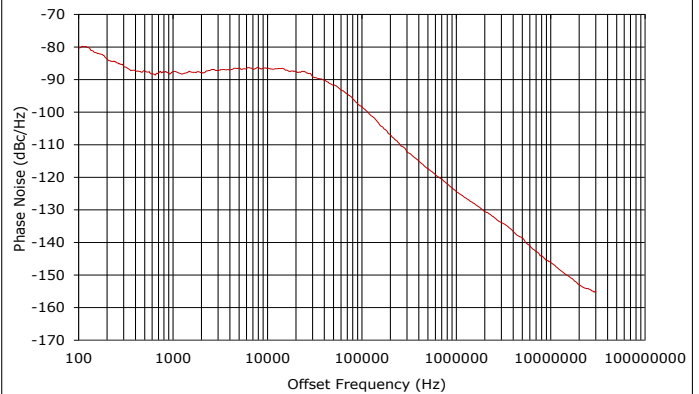
6950 MHz

FEATURES:

- ▶ Exceptionally Low Phase Noise
- ▶ No Programming Required
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Small Size, Surface Mount
- ▶ Buffered Output



Phase Noise



SPECIFICATIONS

Frequency	6950 MHz		
Reference Input Frequency	50 MHz (External)		
Reference Input Voltage	1.0 V p-p to 3.0 V p-p		
Bias Voltage	Vcc	V (Vdc)	I (mA Max.)
	Digital	+3	18
	VCO	+5	65
	VTune	+15	5
Output Power	+2 dBm (Min.)		
Spurious Suppression	70 dB (Typ.)		
Harmonic Suppression	35 dB (Typ.)		
Power-Up Time	90 mSec (Max.) ¹		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS - 3.0 V		
Typical Phase Noise	Offset	Phase Noise	
	@ 1 kHz	-86 dBc/Hz	
	@ 10 kHz	-86 dBc/Hz	
	@ 100 kHz	-98 dBc/Hz	
	@ 1 MHz	-124 dBc/Hz	
@ 10 MHz	-145 dBc/Hz		
Operating Temperature Range	-40 to +85 °C		

¹ From stable power on to stable lock detect

Package # 367

PINOUT

- 1-VCC3(TUNE)
- 7-RF OUT
- 8-VCC1(VCO)
- 9-VCC2(DIGITAL)
- 10-REF
- 17-NC
- 18-LE
- 19-DATA
- 20-CLK
- 21-LD*
- 22-NC
- NC=NO CONNECTION
- ALL OTHER GND

RECOMMENDED PCB LAYOUT

TOLERANCES ON THREE DECIMAL PLACES= ± 0.015

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200 & AN7300

Port Configuration		
Pin 5 - RF Out	Pin 25 - Vcc (VCO)	All Others - Ground
Pin 7 - Lock Detect	Pin 27 - Vcc (VTune)	NC - No Connection
Pin 21 - Ref. In	Pin 8 to 19, 24, 26, 28 - NC	
Pin 23 - Vcc (Digital)		

Absolute Maximum Ratings

Storage Temp. Range	-55 to +125 °C
Bias Voltage (Digital)	+3.6 V
Bias Voltage (Tune)	+16 V
Bias Voltage (VCO)	+5.5 V
DC Voltage Applied to RF Out	±25 V

Patent : <http://www.synergymwave.com/patents>

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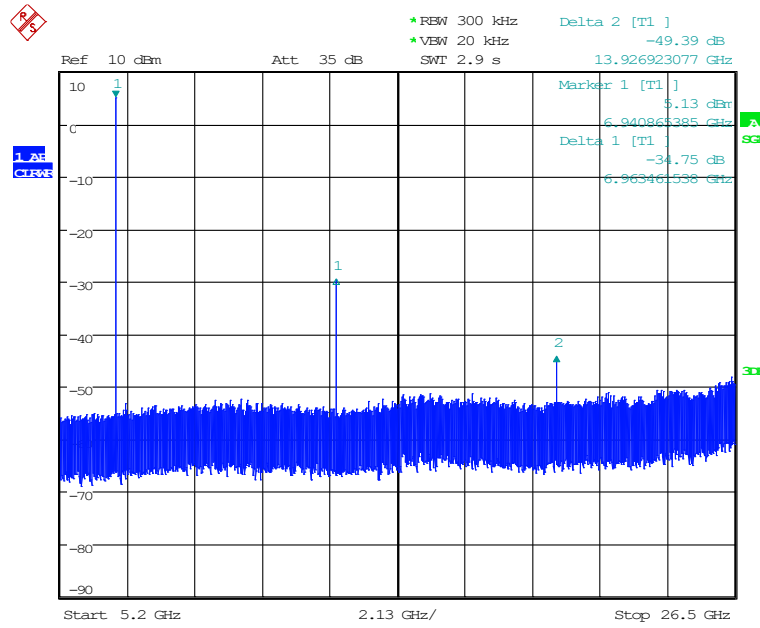
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6950 MHz

PERFORMANCE PLOTS

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION

