

# FAST SETTLING SYNTHESIZER

## SURFACE MOUNT MODEL: FSFS315555-500

OPTIMIZED LOOP PARAMETERS

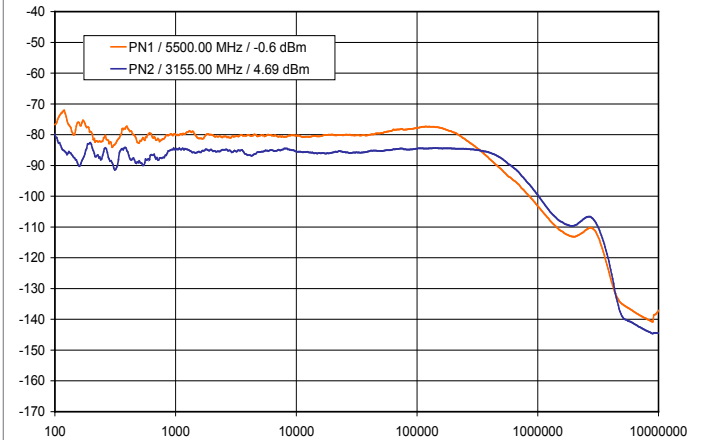
3150 - 5550 MHz

**FEATURES:**

- ▶ Fast Settling
- ▶ Exceptionally Low Phase Noise
- ▶ Serial Input Programming
- ▶ Optimized Reference Sidebands
- ▶ Lead Free - RoHS Compliant
- ▶ Patented REL-PRO® Technology
- ▶ Small Size, Surface Mount



**Phase Noise**



SPECIFICATIONS (Rev. B 03/06/07)

<b>Frequency</b>	3150 - 5550 MHz		
<b>Step Size</b>	5 MHz		
<b>Reference Input Frequency</b>	10 MHz <sup>1</sup>		
<b>Reference Input Voltage</b>	0.8 V p-p to 3.3 V p-p		
<b>Bias Voltage</b>	Vcc	V (Vdc)	I (mA Max.)
	Digital	+5	65
	VCO	+5	65
	Tune	+15	10
<b>Output Power</b>	+5 dBm (Min.)		
<b>Spurious</b>	-75 dBc (Typ.)		
<b>Harmonics</b>	-10 dBc (Typ.)		
<b>Settling Time</b>	<50 uSec <sup>2</sup>		
<b>Output Impedance</b>	50 Ohms (Nom.)		
<b>Typical Phase Noise</b>	Offset	Phase Noise	
	@ 10 kHz	-80 dbc/Hz	
	@ 100 kHz	-80 dbc/Hz	
	@ 1 MHz	-100 dbc/Hz	
<b>Operating Temperature Range</b>	-40 to +85 °C		
<b>Programming</b>	See Analog Devices ADF4106 programming.		

<sup>1</sup> Reference input frequency is programmable in multiples of the step size, 10 MHz is the default setting. 150 MHz (Max.)  
<sup>2</sup> From the rising edge of LE to stable lock detect.

**Package #** 319LF

PINOUT  
 5 RF OUT  
 7 LD  
 9 DATA  
 11 CLK  
 12 LE  
 14 REF IN  
 16 VCC1  
 18 VCC2  
 20 VCC3  
 ALL OTHERS ARE GND

**RECOMMENDED PCB LAYOUT**

REL-PRO® PATENT NO. 7,612,296  
 PACKAGE MOUNTING: SEE APPLICATION NOTES AN7200, AN7300

Pin Configuration		
Pin 5 - RF Out	Pin 12 - LE	Pin 20 - Vcc3 (VCO)
Pin 7 - Lock Detect Out	Pin 14 - Ref. In	
Pin 9 - Data	Pin 16 - Vcc1 (Digital)	All Others - Ground
Pin 11 - Clock	Pin 18 - Vcc2 (Tune)	

This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,660,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 7,580,693; 7,586,361; 7,605,670; 7,636,021; 2,533,623 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,563,174; 7,580,693; 7,612,296; 2,524,751

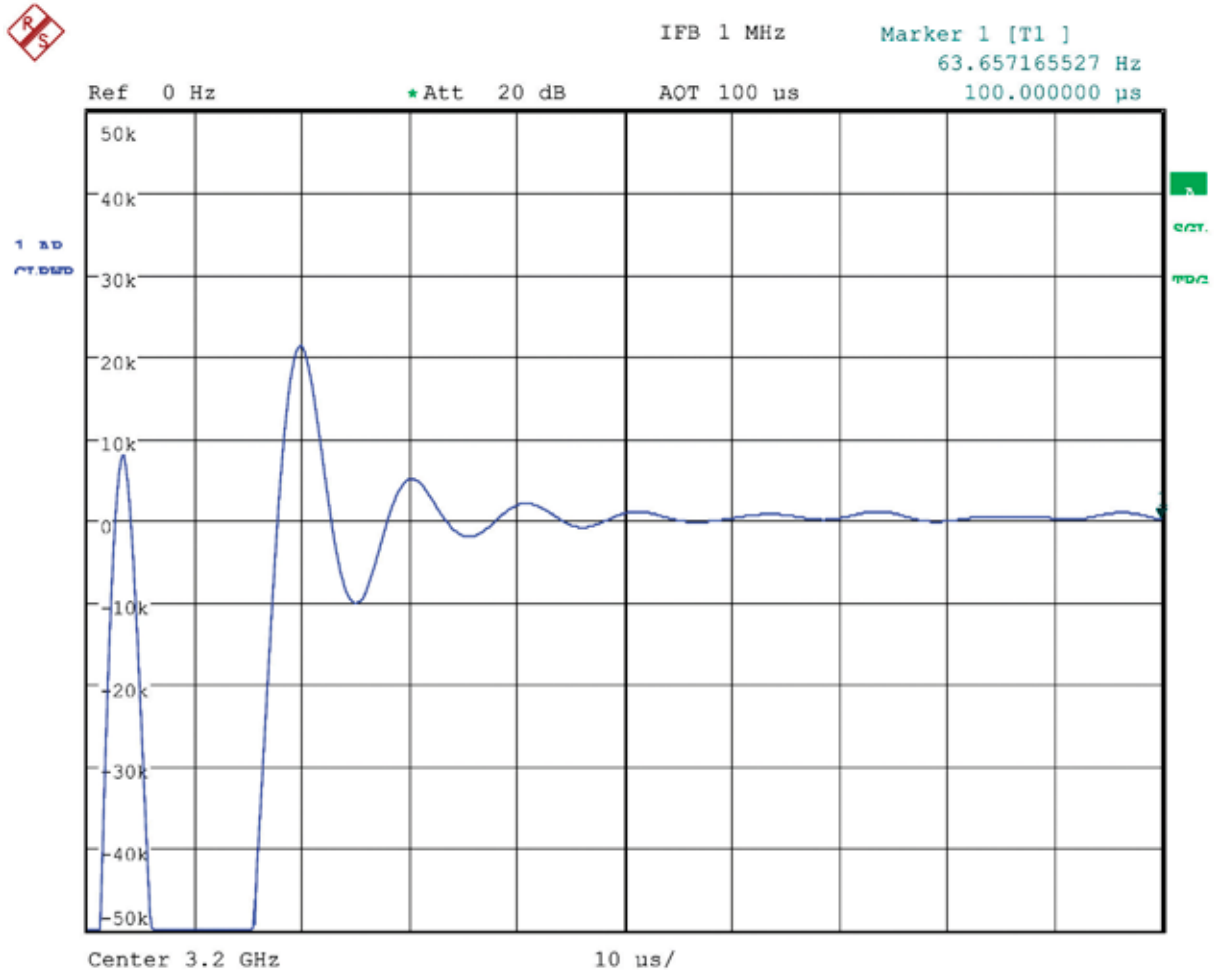
# FAST SETTLING SYNTHESIZER

## SURFACE MOUNT MODEL: FSFS315555-500

OPTIMIZED LOOP PARAMETERS

3150 - 5550 MHz

### SWITCHING SPEED



This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,660,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 7,580,693; 7,586,361; 7,605,670; 7,636,021; 2,533,623 | Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,963,174; 7,580,693; 7,612,296; 2,524,751

Copyright © Synergy Microwave Corporation  
201 McLean Boulevard • Paterson, New Jersey 07504 USA • Tel: (973) 881-8800 • Fax: (973) 881-8361  
E-Mail: sales@synergymwave.com • World Wide Web: <http://www.synergymwave.com>

