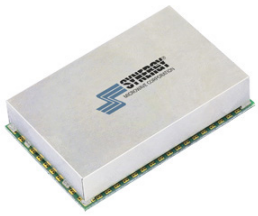
REFERENCE PHASE LOCKED TRANSLATOR SURFACE MOUNT MODEL: FSA1000-100

FIXED FREQUENCY 1000 MHz

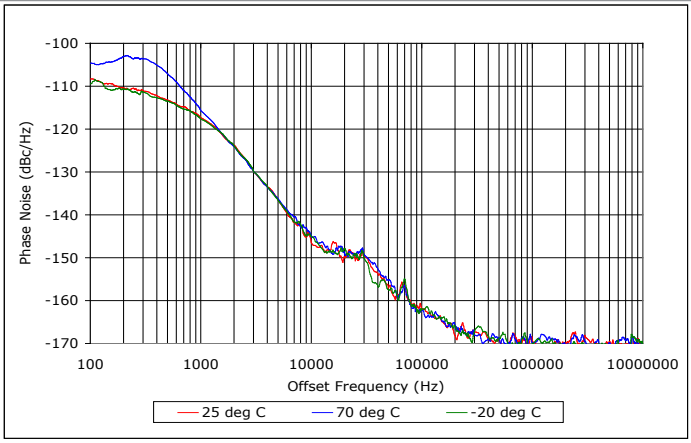
FEATURES:

- Ultra-Low Phase Noise
- No Programming Required



RoHS COMPLIANT

Phase Noise (Measured with Agilent E5052A or R&S FSUP-26/50)



SPECIFICATIONS

Frequency	1000 MHz
Reference Input Frequency	100 MHz [1]
Reference Input Voltage	1.0 to 3.3 V p-p
Bias Voltage	

VCC	VDC @ I
1 (RF)	+5 VDC @ 50 mA (Max.)
2 (Analog)	+3.3 VDC @ 10 mA (Max.)
3 (RF, 1 GHz)	+3.3 VDC @ 50 mA (Max.)
4 (Reference)	+5 VDC @ 150 mA (Max.)
5 (Vtune)	+12 VDC @ 20 mA (Max.)
6 (PLL)	+5 VDC @ 10 mA (Max.)
7 (PLL)	+3.3 VDC @ 10 mA (Max.)
8 (VCO)	+5 VDC @ 50 mA (Max.)

Output Power	+5 dBm (Min.)
Spurious Suppression	80 dB (Typ.)
Harmonic Suppression	15 dB (Typ.)
Output Impedance	50 Ohms (Nom.)
Lock Detect Indicator	CMOS 3.3 V

[1] External 100 MHz reference sources should have phase noise better than -138 dBc/Hz @ 50 Hz offset to achieve published specifications.

Typical Phase Noise

Offset	Phase Noise
@ 100 Hz	-105 dBc/Hz
@ 1 kHz	-115 dBc/Hz
@ 10 kHz	-145 dBc/Hz
@ 100 kHz	-160 dBc/Hz

Operating Temperature Range	-20 to +70 °C

Absolute Maximum Ratings

Storage Temp. Range	-40 to +85 ºC
Bias Voltage (+3.3 V)	+3.6 V
Bias Voltage (+5 V)	+5.5 V
DC Bias Voltage applied to RF output	±25 V
Bias Voltage (+12 V)	+14 V

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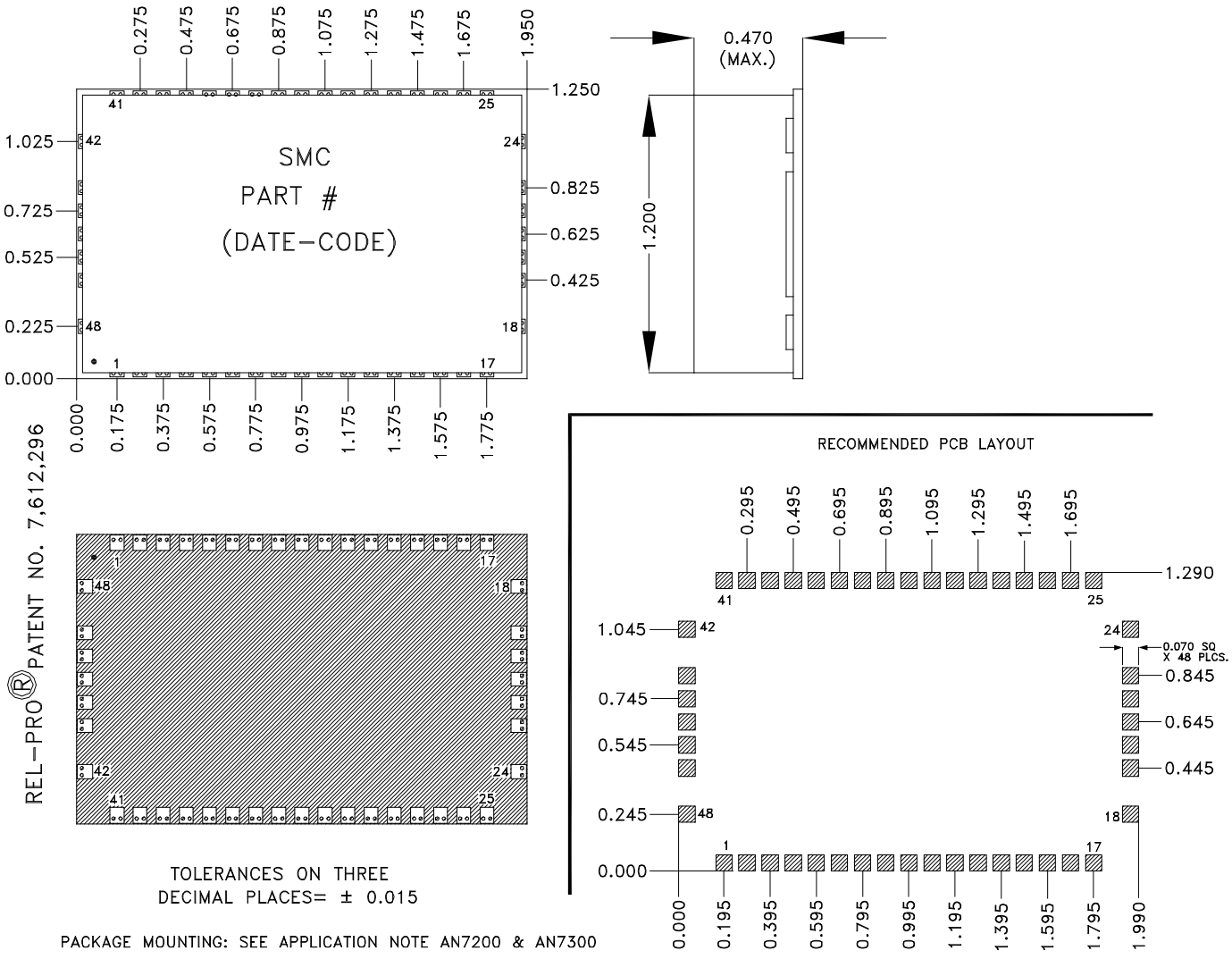
SYNERGY® MICROWAVE CORPORATION

REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FSA1000-100

FIXED FREQUENCY — 1000 MHz

Package #	344



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7200 & AN7300

PORT CONFIGURATION

Pin 3 - VCC 1 (VCC RF)
Pin 6 - RF OUT
Pin 8 - VCC 2 (Analog = +3.3 VDC)
Pin 9 - NC
Pin 10 - NC
Pin 11 - VCC 3 (Digital = +3.3 VDC)
Pin 12 - NC
Pin 13 - NC
Pin 14 - Lock Detect (LD) **
Pin 15, 16 - NC
Pin 18,19,20,21 - NC
Pin 22 - Reference In
Pin 27 - VCC 4 (Reference = +5 VDC)
Pin 28 - VCC 5 (Vtune = +12 VDC)*
Pin 30,31 - NC
Pin 35 - NC
Pin 39 - VCC 6 (PLL = +5 VDC)
Pin 40 - VCC 7 (PLL = +3.3 VDC)
Pin 44 - VCC 8 (VCO = +12 VDC)*
Pin 43,45 - NC
All others - Ground
1,2,4,5,7,17,23-26,32-34,36-38,41,42,46-48

NC - No connection

** Connect together externally and bypass with shunt 10 uF, 35 V capacitor to ground.*
*** Positive CMOS levels (unbuffered 3.3 VDC)*

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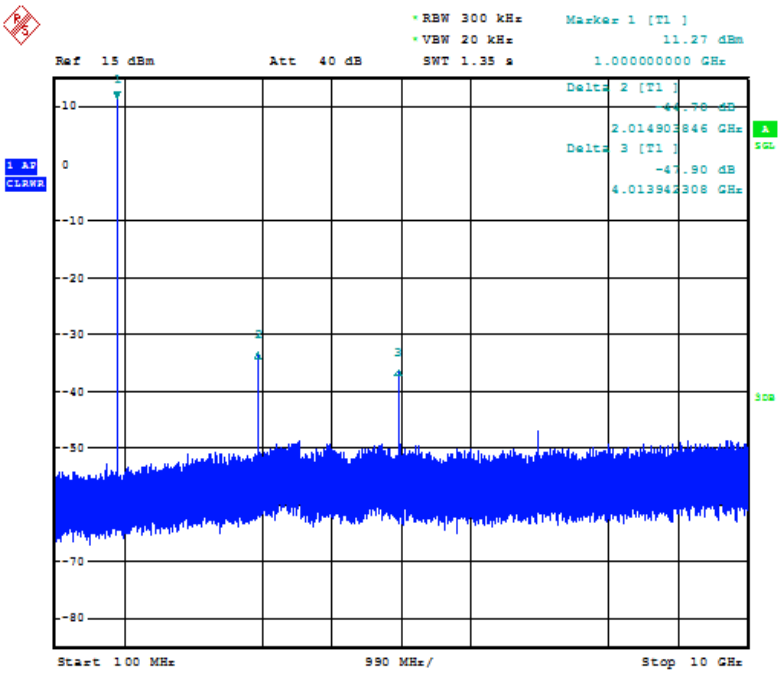
REFERENCE PHASE LOCKED TRANSLATOR
SURFACE MOUNT MODEL: FSA1000-100

FIXED FREQUENCY 1000 MHz

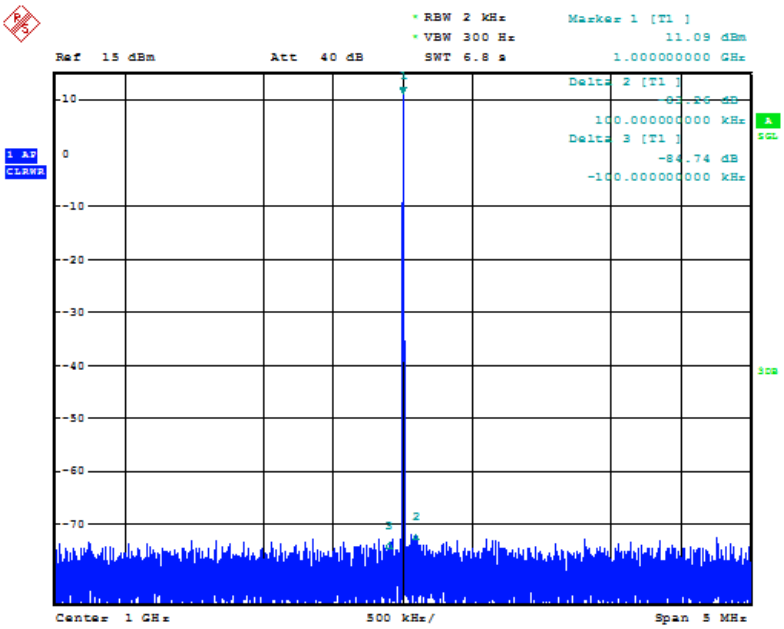
@ 25 ºC

PERFORMANCE PLOTS

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



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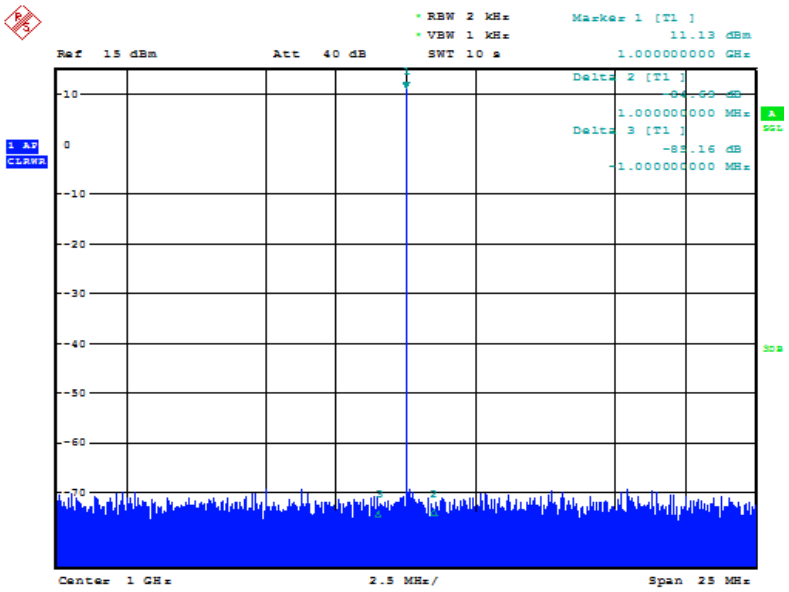
SURFACE MOUNT MODEL: FSA1000-100

FIXED FREQUENCY 1000 MHz

PERFORMANCE PLOTS

REFERENCE SIDEBAND SUPPRESSION

@ 25 ºC



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