

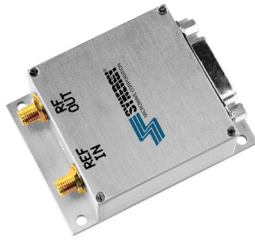
# REFERENCE PHASE LOCKED TRANSLATOR CONNECTORIZED MODEL: KFCTS1000-10-5

## FIXED FREQUENCY

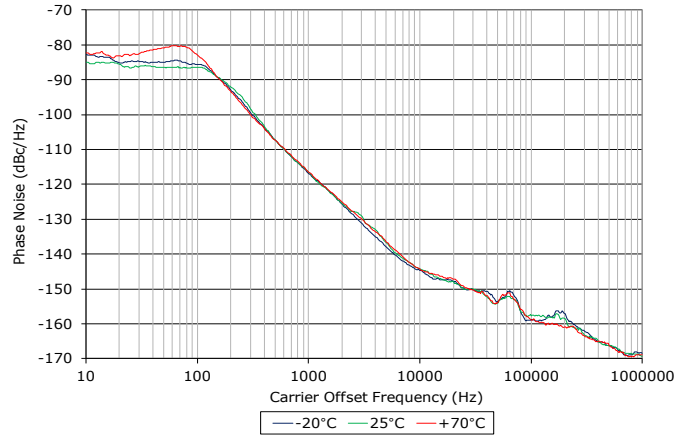
## 1000 MHz

### FEATURES:

- ▶ Ultra-Low Phase Noise
- ▶ No Programming Required



Phase Noise ( Measured with Agilent E5052A or R&S FSUP-26/27 )



### SPECIFICATIONS (Rev. B 11/30/23)

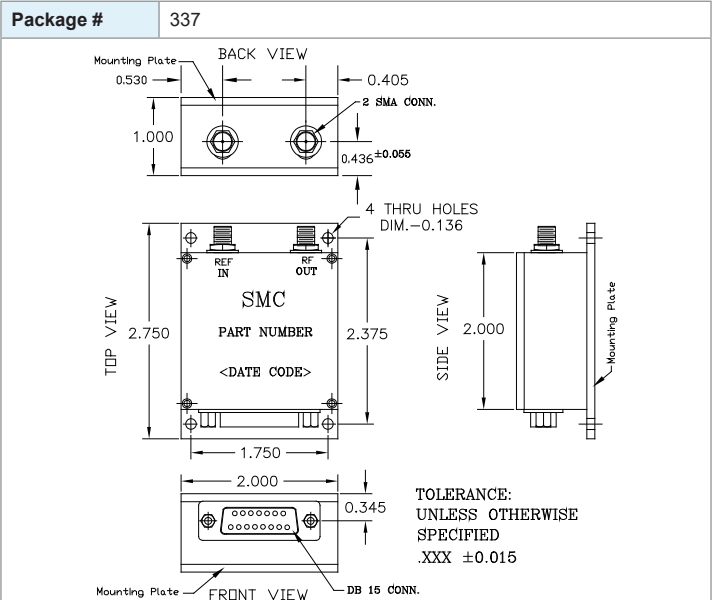
Frequency	1000 MHz		
Reference Input Frequency	10 MHz <sup>1</sup>		
Reference Input Voltage	1.0 to 3.3 V p-p		
Bias Voltage	<b>Vcc</b>	<b>V (Vdc)</b>	<b>I (mA Max.)</b>
	Digital	+5	25
	Tune	+12	10
	VCO	+5	35
Output Power	+5 dBm (Min.)		
Spurious Suppression	80 dB (Typ.)		
Harmonic Suppression	25 dB (Typ.)		
Output Impedance	50 Ohms (Nom.)		
Lock Detect Indicator	CMOS 3.3 V		
Typical Phase Noise	<b>Offset</b>	<b>Phase Noise</b>	
	@ 100 Hz	-80 dBc/Hz	
	@ 1 kHz	-115 dBc/Hz	
	@ 10 kHz	-141 dBc/Hz	
	@ 100 kHz	-158 dBc/Hz	
Operating Temperature Range	-20 to +70 °C		

<sup>1</sup> External 10 MHz reference sources should have phase noise better than -138 dBc/Hz @ 50 Hz offset to achieve published specifications.

### Absolute Maximum Ratings

Storage Temp. Range	-40 to +85 °C
Bias Voltage (Digital)	+5.25 V
Bias Voltage (Tune)	+13.0 V
Bias Voltage (VCO)	+5.5 V

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



### PORT CONFIGURATION

Pin 1 - Vcc (Digital)	Pin 8 - Lock Detect *	NC - No Connection
Pin 2 - Vcc (Tune)	Pin 9 - Vcc (VCO)	
Pin 3,4,5,6 - NC	Pin 11,12,13,14 - NC	
Pin 7 - NC	Pin 10,15 - Ground	

\* High when locked (source/sink 500 uA)

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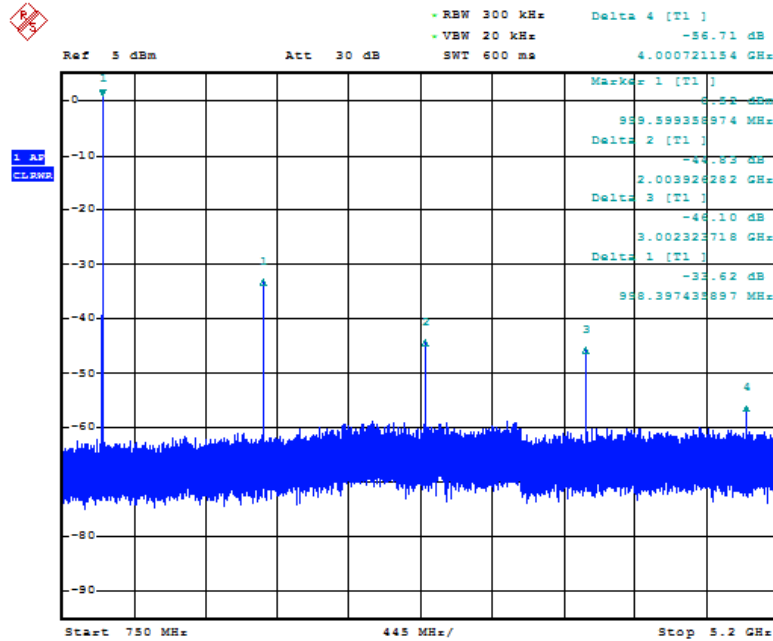
FIXED FREQUENCY

1000 MHz

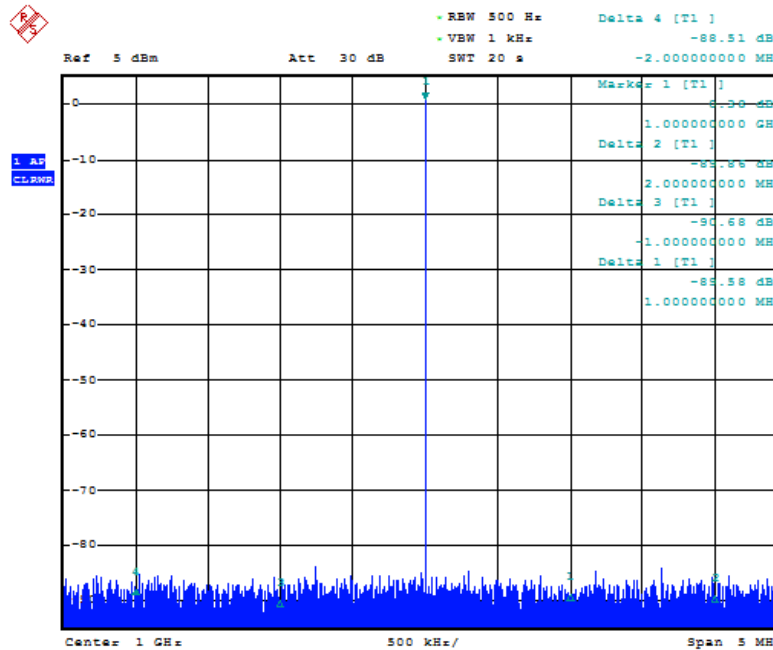
@ -20 °C

PERFORMANCE PLOTS

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



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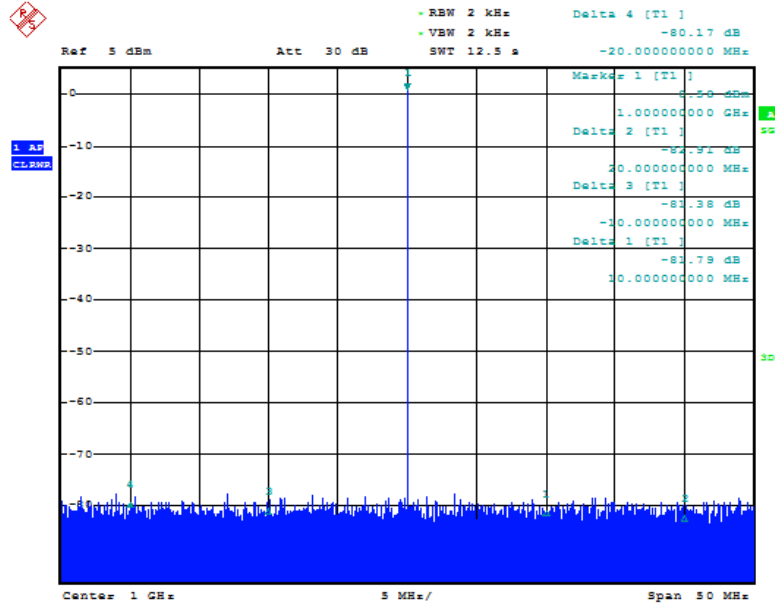
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PERFORMANCE PLOTS

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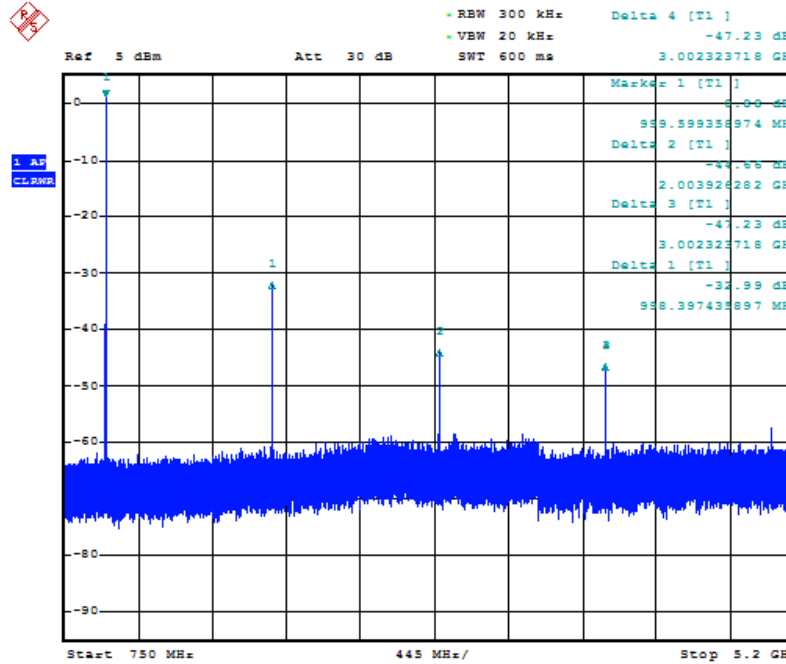
FIXED FREQUENCY

1000 MHz

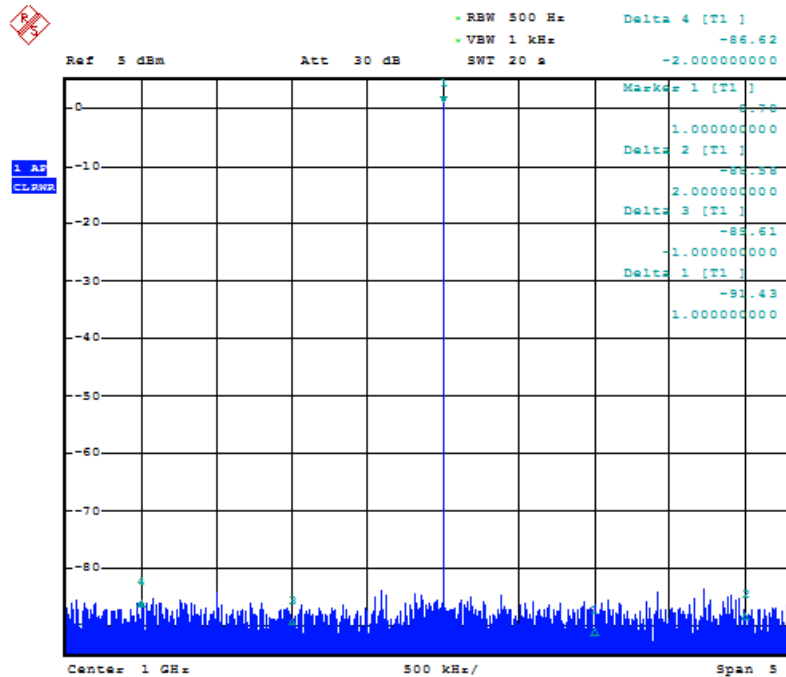
@ +25 °C

PERFORMANCE PLOTS

HARMONIC SUPPRESSION



REFERENCE SIDEBAND SUPPRESSION



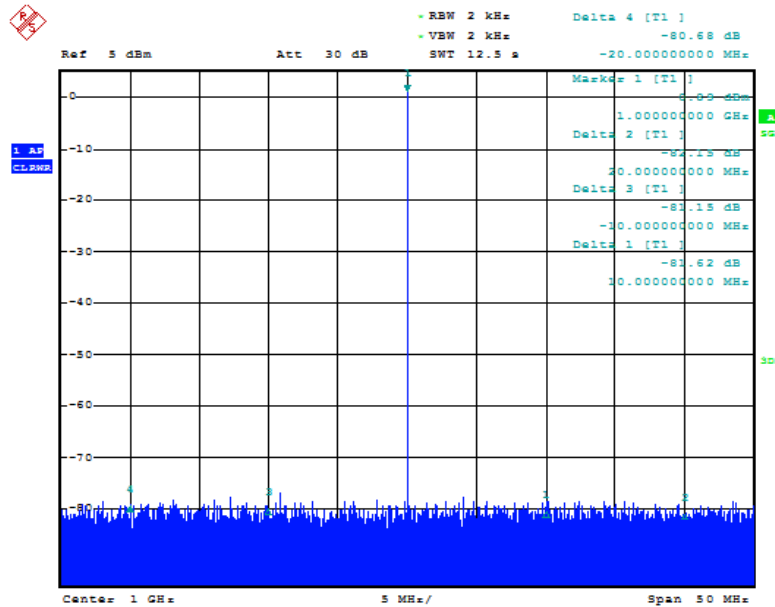
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REFERENCE SIDEBAND SUPPRESSION

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PERFORMANCE PLOTS

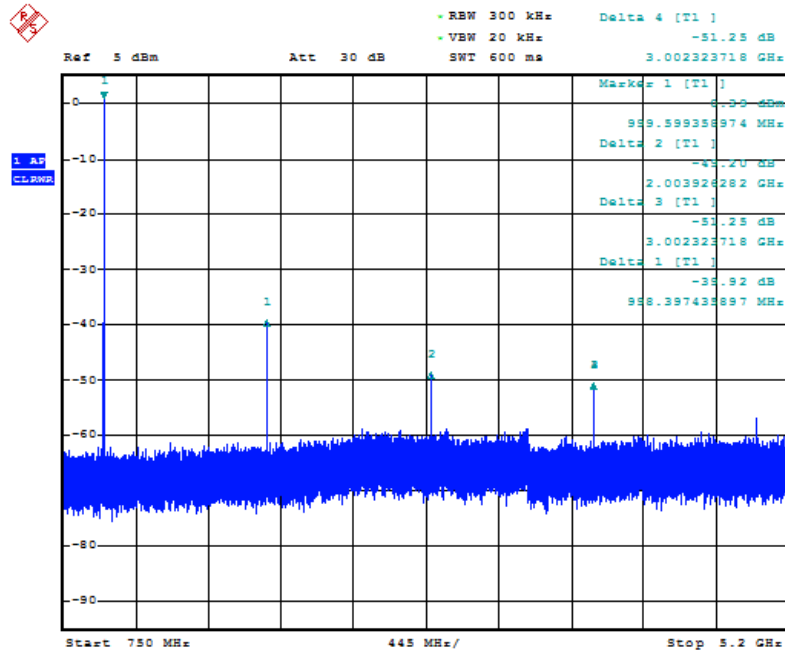
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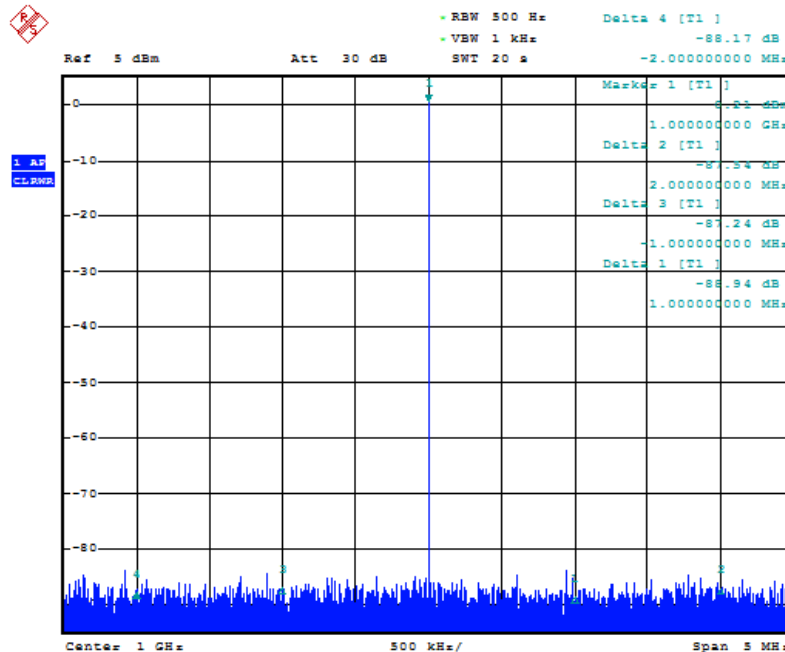
1000 MHz

HARMONIC SUPPRESSION

@ +70 °C



REFERENCE SIDEBAND SUPPRESSION



PERFORMANCE PLOTS

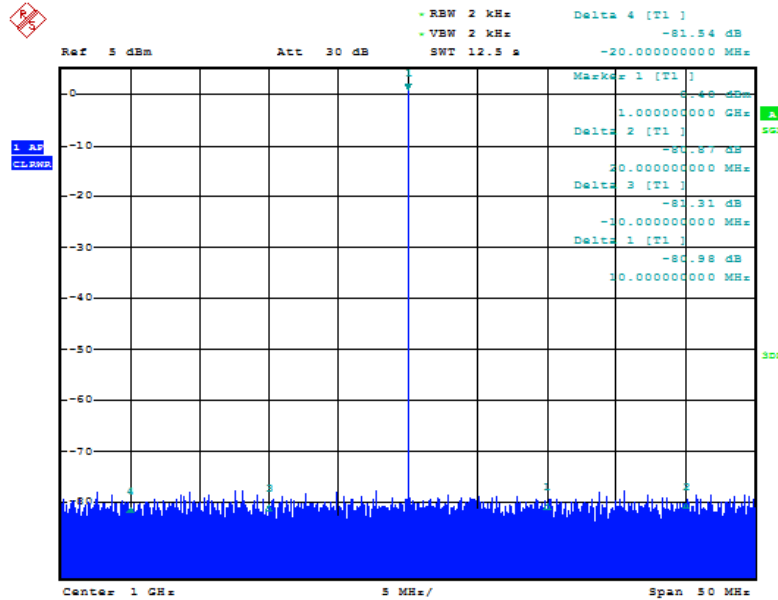
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