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sales@integrated-circuit.com



Synthesizer for Multilevel Modulation MODEL : S2R0G3R0GA

Wideband : 2GHz – 3GHz

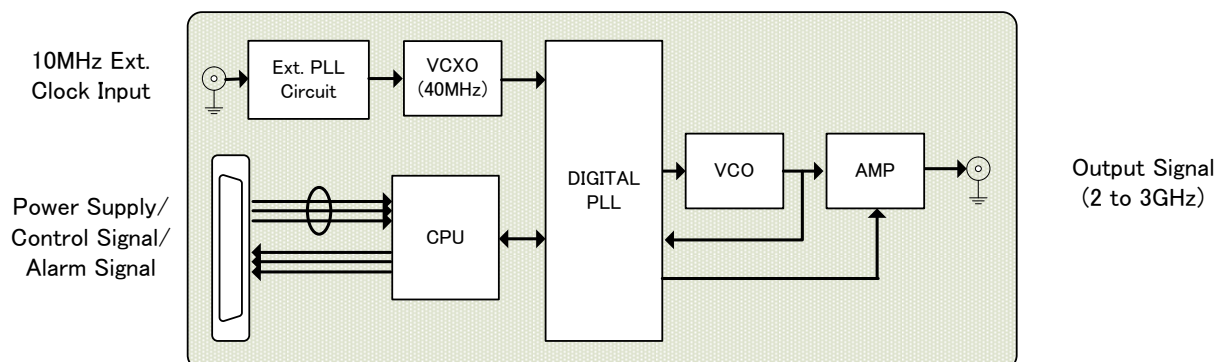
Features;

- * Wide Frequency Bandwidth (1GHz)
- * Ultra Low Phase Noise (less than -90dBc/Hz @1kHz)
- * 1Hz Step Resolution
- * High Purity & Low Spurious Signal Source
- * Frequency Setting Using 3-Wire Serial Interface
- * Built-In PLL Circuit Synchronized with 10MHz External Clock



RoHS Compliant
Directive 2011/65/EU

Function Block Diagram



Specifications;

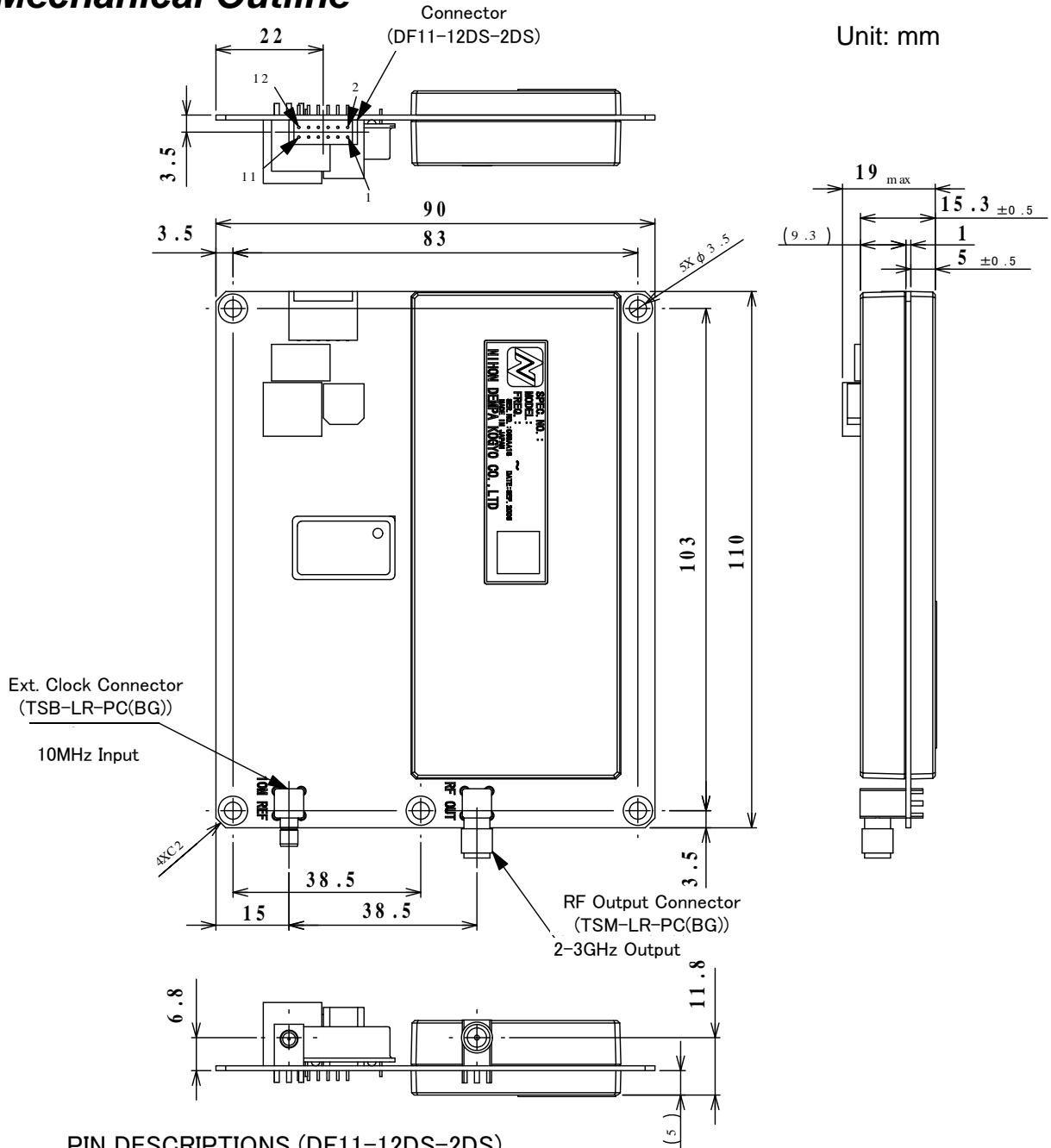
Frequency Range:	2GHz to 3GHz
Bandwidth:	1GHz
Frequency Resolution:	1Hz (3-Wire Serial Interface)
Frequency Stability:	Depends on Ext. Clock
Ext. Clock Input Frequency Range:	10MHz +/- 50Hz
Phase Noise:	< -90dBc/Hz @1kHz
RF Output Power:	14dBm +/- 2dB
Lock-Up Time:	< 150msec
Spurious (Harmonics):	< -30dBc
Spurious (Others):	< -60dBc
Interface:	
RF Output Connector:	SMA-F
Ext. Clock Input Connector:	SMB-F
Power & Control Connector:	DF11-12DP-2DS (HIROSE ELECTRIC CO., LTD.)
Power Supply Voltage(Current Consumption);	Vcc = +12V (< 0.5A)
Operating Temperature Range:	-10 to +60 deg.C
Dimensions: Width(90mm) x Height(19mm) x Depth(110mm)	



Low Phase Noise for Multilevel Modulation
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Mechanical Outline



PIN DESCRIPTIONS (DF11-12DS-2DS)

#1	GND		#7	NC	
#2	SDI (SERIAL DATA)	INPUT	#8	RF PLL ALARM	OUTPUT
#3	NC		#9	RF OUTPUT LEVEL ALARM	OUTPUT
#4	10MHz EXT. PLL ALARM	OUTPUT	#10	NC	
#5	/SCS (SERIAL CHIP SELECT)	INPUT	#11	+12V (POWER SUPPLY)	INPUT
#6	SCLK (SERIAL CLOCK)	INPUT	#12	GND	

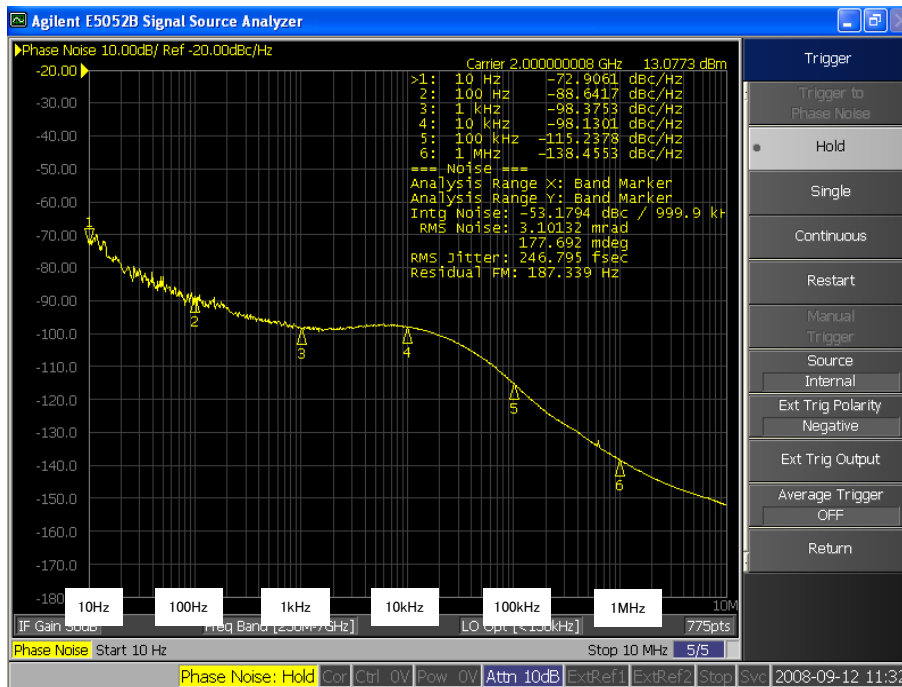
Notes) Never Connect with NC pins.



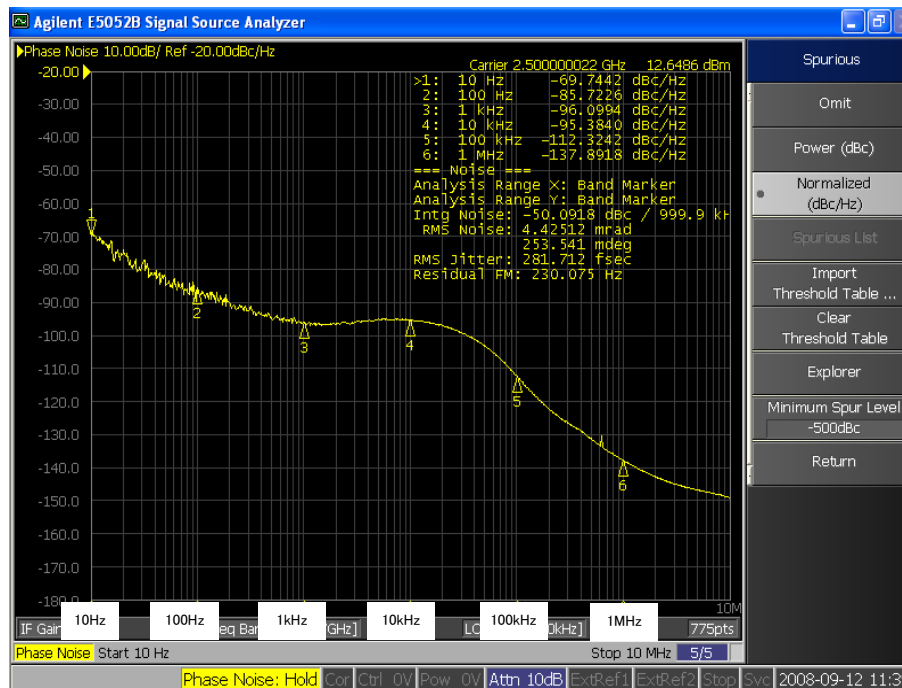
Low Phase Noise for Multilevel Modulation MODEL : S2R0G3R0GA

Wideband : 2GHz – 3GHz

Typical Phase Noise Characteristics



at 2GHz



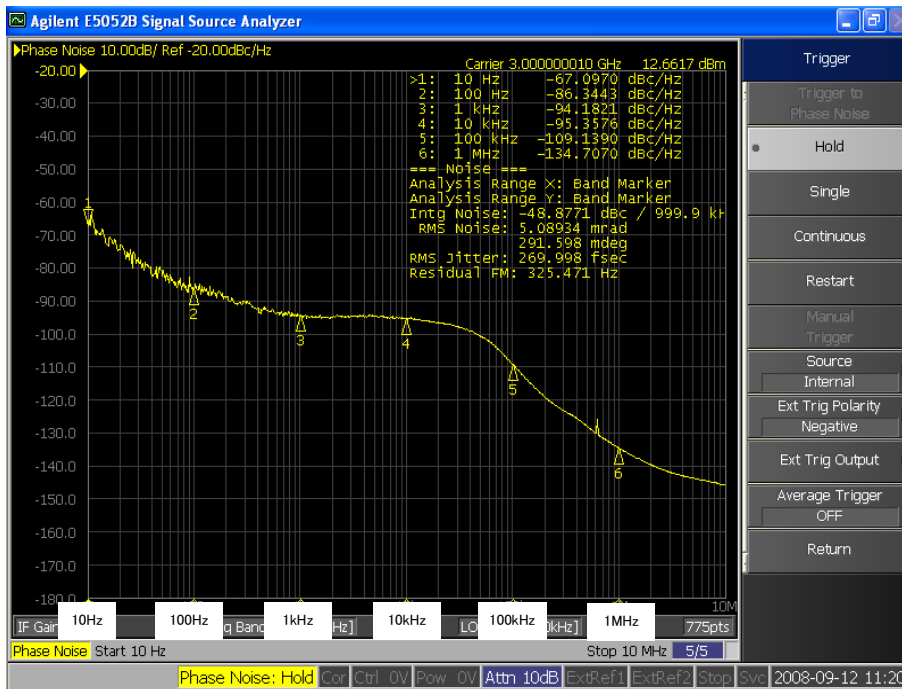
at 2.5GHz



Low Phase Noise for Multilevel Modulation
MODEL : S2R0G3R0GA

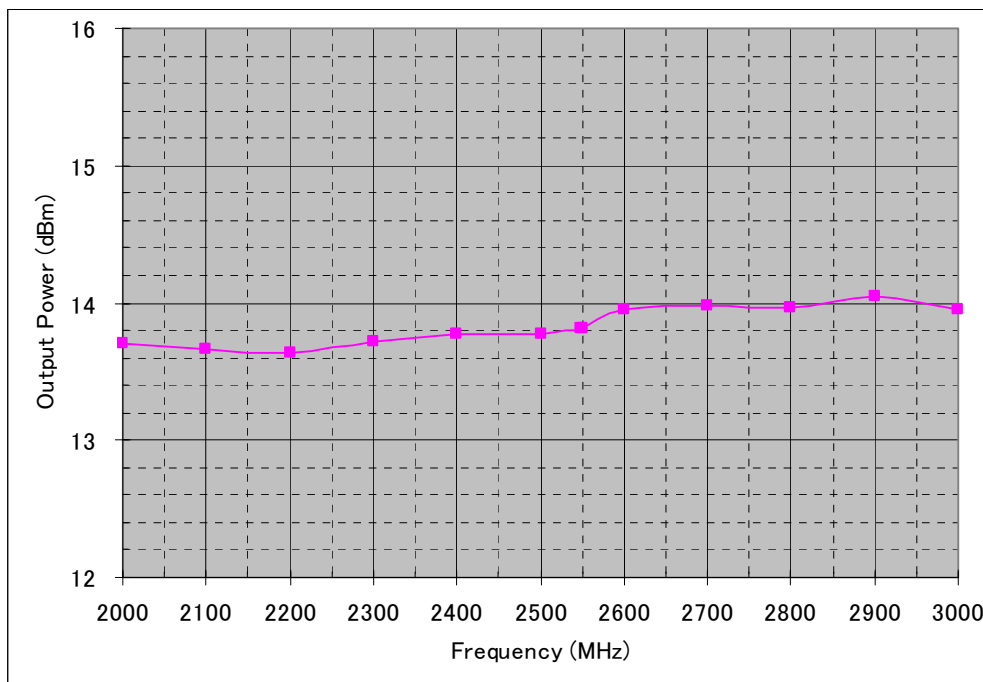
Wideband : 2GHz – 3GHz

Typical Phase Noise Characteristics



at 3GHz

Typical Output Power



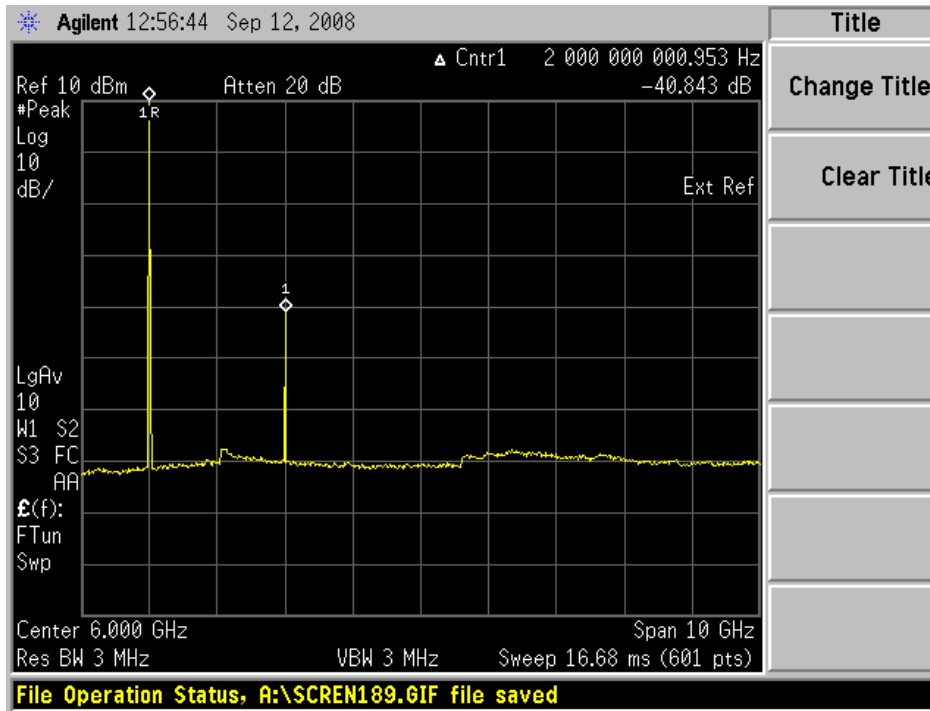


Crystal Bridge to the Future

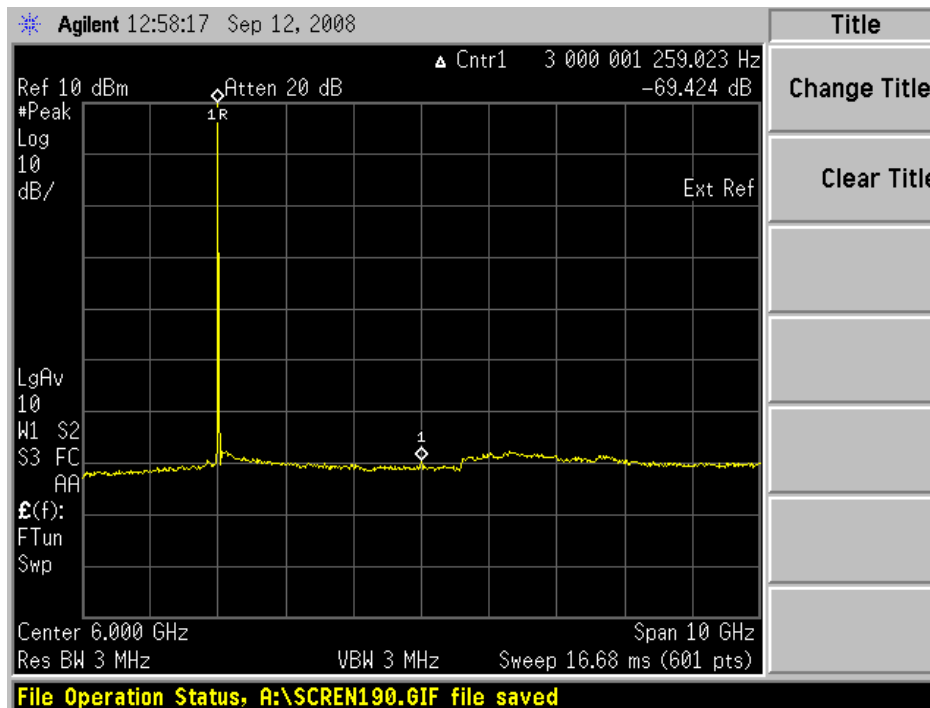
Low Phase Noise for Multilevel Modulation
MODEL : S2R0G3R0GA

Wideband : 2GHz – 3GHz

Typical Spurious Characteristics



at 2GHz



at 3GHz