

# 25MHz-6GHz Modular Signal Generator

SG-G1S-CX-02-S5 is a Signal Generator Module operating over the frequency range of 25MHz-6GHz in 100Hz steps. The module utilises 4 slots in a Genus 1U Chassis or Instrumentation Benchtop Chassis offering flexibility in a compact and lightweight housing. Remote control & monitor via web browser interface or local control & monitor via HMI touchscreen if fitted.

- Covers VHF to C-band
- Ideal for precision applications
- 100 Hz Frequency Steps
- Optional External Reference
- Compact 1U chassis
- Remote/Local Control



## Chassis - Specification

Dimensions / Weight / Colour	1U high x 550mm deep x 19" wide / <10 kg / RAL9003—White (Semi-matte)
Capacity	Total of 17 module slots. Note that 1 slot will be used for fan (if required) and 1 slot will be used for 10 MHz EXT inject module (if required).
Modules per chassis	17 max (dependant upon configuration).
Temperature	Operating: 0°C to +60°C / Storage: -40°C to +90°C
Location / Humidity / Altitude	Indoor use only / 20 to 90% non-condensing / 10,000 feet AMSL (Operational) 30,000 feet AMSL (Storage) <i>Above Mean Sea Level</i>
Control & Monitoring	Local: HMI touch screen    Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. TCP/IP, SNMP V3 & HTTPS & Web browser interface HMI and CPU field replaceable. Each module independently monitored and reported.
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace) Applies to LRUs only and assumed in house stock
AC Input / Consumption	85-264Vac 50/60Hz / 150 W
PSU Redundancy	Dual redundant and alarmed. Hot swappable
Input & Output ports	Reference; SMA    Output; SMA



Signal Generator Module - RF Parameters			
Frequency	Min	25 MHz	
	Max	6 GHz	
Frequency Step Size		100 Hz	
Output Power	Min	-15 dBm	
	Max	≤ 3 GHz	+13 dBm
		> 3GHz	+10 dBm
Output Power Adjustment Steps		0.5 dB ± 0.2 dB	Output power set in dBm
Internal Reference Stability		± 1 x 10 <sup>-6</sup>	Over 0 to 50°C
Phase Noise: 25 – 1000 MHz	@1 kHz Offset	-92 dBc/Hz	
	@10 kHz Offset	-96 dBc/Hz	
	@100 kHz Offset	-106 dBc/Hz	
Phase Noise: 1000 – 3000 MHz	@1 kHz Offset	-83 dBc/Hz	
	@10 kHz Offset	-94 dBc/Hz	
	@100 kHz Offset	-101 dBc/Hz	
Phase Noise: 3000 – 6000 MHz	@1 kHz Offset	-80 dBc/Hz	
	@10 kHz Offset	-85 dBc/Hz	
	@100 kHz Offset	-92 dBc/Hz	
Spurs In-band	Non-carrier related	< -60 dBm	
	Carrier related (non-harmonic)	< -50 dBc	
Harmonics		< -20 dBc	At +10 dBm output power
RF Connector		SMA Female	
Reference Connector		SMA Female	
Reference Input		10 MHz	Reference is configurable as input or output via software control
Reference Output		100 MHz	
Interface			
Control method		Local and remote as provided by chassis	
Number of modules per chassis		4 slot wide module	
Maximum Voltage Applied to the Output Connector		50V DC	
Environmental conditions			
Operating Temperature		0 to 50°C	
Storage Temperature		-40°C to +85°C	Equipment not powered.
Location		Indoor use only	
Humidity		20 to 90% non-condensing	Relative Humidity
Altitude		10,000ft/3000m AMSL	Above mean sea level
Altitude		30,000ft/10000m AMSL	Transport
Physical Dimensions & Parameters			
Dimensions		114 x 70 x 20mm	
Weight		0.35kg	TBC
Tech Spec Version		0.2	

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

