Atlantic Microwave
A Division of ETL Systems

SG-G1S-B3-01-S5

25MHz-3000MHz Signal Generator

SG-G1S-B3-01-S5 a Signal Generator Module operating over the frequency range of 25MHz-3GHz 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.

- 25 MHz—3 GHz frequency range
- Ideal for precision applications
- 100 Hz Frequency Steps
- Optional External Reference
- Compact 1U chassis
- Remote/Local Control

Operating frequency range 25MHz - 3000MHz

Local control & monitoring via HMI high-resolution touchscreen

High precision, ±2ppm (23°C) accuracy

Output range –15dBm to +13dBm

Resilience from dual redundant hot-swap power supplies & field replaceable CPU & HMI

Compact housed in a 1U high chassis with capacity for up to 17 modules

Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface

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: -20˚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) *Above Mean Sea Level*
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 Diode OR. Hot swappable
Input & Output ports	Dependent upon module fitted

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Signal Generator Module - RF Parameters		
Frequency	Min	25 MHz
	Max	3000 MHz
Frequency step size		100 Hz
Output power	Max	+13 dBm
	Min	-15 dBm
Output power adjustment steps		0.5 dB ± 0.2dB
Internal reference stability		± 1 x 10-6
Spurs in-band (non-carrier related) Carrier related		<-60dBm <-50dBc
Harmonics (@ +10dBm output power)		<-20dBc
Lock time		<50ms
RF connector		SMA female
Reference connector		SMA female
Reference input		10MHz
Reference output		100MHz
Power selection		Automatic switching

Phase Noise (typical)	
Offset Frequency (Hz)	25MHz-1000MHz
1K	-98 dBc/Hz
10K	-96 dBc/Hz
100K	-106 dBc/Hz
Offset Frequency (Hz)	1000MHz-3000MHz
1K	-92 dBc/Hz
10K	-94 dBc/Hz
100K	-101 dBc/Hz

Interface	
Control method	Via chassis (Local and remote provided by the chassis)
Number of modules per chassis	4 (Each module 4 slots wide)
Maximum Voltage Applied to the Output Connector	50V DC

Environmental conditions	
Operating temperature	-20°C to 50°C
Storage temperature	-40°C to +85°C
Location	Indoor use only
Humidity	20 to 90% non-condensing
Altitude	10,000ft/3000m AMSL
Altitude	30,000ft/10000m AMSL (Transport)

Physical dimensions & parameters	
Dimensions	114 x 70 x 20mm
Weight	0.35kg TBC

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.