STL-SG-022403-S1

ACCESS Low Phase Noise Synthesized Signal Generator, 200 MHz – 40 GHz

STL-SG-022403-S1 is a portable, touch screen-controlled Synthesized Signal Generator designed and manufactured for standard test instrumentation, communication, and Radar systems as a local signal source. The module covers a frequency range of 0.2 to 40 GHz with exceptional low harmonics and spurious emissions as well as superior low phase noise performance. The model is externally referenced with high performance internal reference backup. The frequency resolution of the module is up to 0.2 Hz. The synthesized signal generator has a maximum spurious of -60 dBc. It has a built-in voltage regulator to further improve the signal quality and provide over voltage protection. This module can be directly controlled with a touch screen via a user-friendly GUI.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	0.2 GHz		40 GHz
Step Size		0.2 Hz	
Output Power	-40 dBm		+10 dBm
Output Power Flatness	±2.0 dB		
Frequency Stability	±0.2 ppm or Same as External Reference		
Frequency Accuracy	±0.2 ppm or Same as External Reference		
Output Spurious		-65 dBc	-60 dBc
Output Harmonics		-20 dBc	
External Reference Input (10 MHz)	7 dBm ± 3 dBm		
Internal Refence Output (100 MHz)		10 dBm	
Phase Noise (Internal)	*See the Data Table section*		
Control Interface	Touch Screen		
Pulse Modulation Depth	≥60 dBc @ Output Power + 10 dBm		
Pulse Modulation Pulse Width	0.1 ms	5 ms	10 ms
Pulse Modulation Time	≤50 ns Raise/100 ns Fall		
Supply Voltage/Current	12 V/2,600 mA		
Specification Temperature		+25 ºC	
Operating Temperature	0°C		+50°C

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FEATURES

- Easy Control
- Portable
- Low Phase Noise

APPLICATIONS

- Test Lab
- Instrumentations
- System Reference Source

SUPPLEMENTAL DETAILS

Mechanical Specifications:

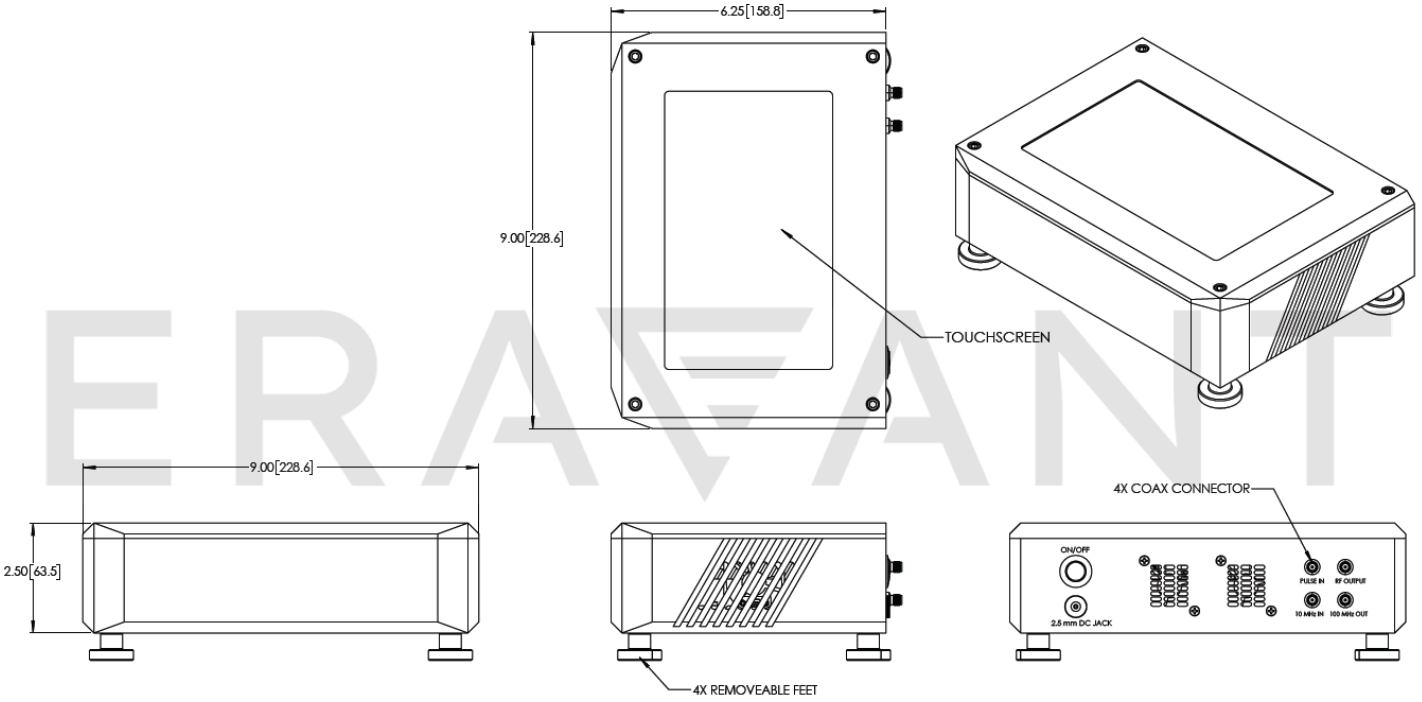
Item	Specification
RF Output	SMA(F) Connector
100MHz Output	SMA(F) Connector
10MHz Input	SMA(F) Connector
Pulse Input	SMA(F) Connector
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
Body Material	Aluminum
Finish	Black Anodized
Dimension	9.00''(L) x 6.25''(W) x 2.50''(H)
Outline	TL-SG-S1

Phase Noise Data Table*:

	Output Frequency				
Frequency Offset	**1 GHz**	**5 GHz**	**10 GHz**	**20 GHz**	**40 GHz**
100 Hz	-105 dBc/Hz	-91 dBc/Hz	-85 dBc/Hz	-79 dBc/Hz	-73 dBc/Hz
1 kHz	-125 dBc/Hz	-113 dBc/Hz	-107 dBc/Hz	-101 dBc/Hz	-95 dBc/Hz
10 kHz	-135 dBc/Hz	-122 dBc/Hz	-116 dBc/Hz	-110 dBc/Hz	-104 dBc/Hz
100 kHz	-135 dBc/Hz	-122 dBc/Hz	-116 dBc/Hz	-110 dBc/Hz	-104 dBc/Hz
1 MHz	-135 dBc/Hz	-122 dBc/Hz	-116 dBc/Hz	-110 dBc/Hz	-104 dBc/Hz

* *The phase noise data is taken with internal reference.*

Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.