Signal Generators

Ethernet Control

- Satellite Bands – L, S, C, X, Ku, DBS, Ka, Q
- Frequency Steps from 1KHz
- Local and Remote Control with GUI
- Internal or External Reference
- Ethernet or RS485 Control
- Good Phase Noise
- Choice of Housing

The ESG series of Ethernet controlled signal generators provide economical and versatile solutions where there is a need to input microwave frequencies for test purposes at remote locations, antenna sites, equipment cabins and laboratories related to satellite communications, radar systems, EW systems, scientific apparatus and similar applications.

Covering frequencies from 0.5 to 46 GHz in bands specific to individual industries and also for general purpose applications, these instruments are controllable in frequency and level either locally or remotely via a GUI thereby facilitating the application of more efficient testing regimes.

Options:
-00 Standard
-01 Specific Programmed Frequency Steps
-02 Specific Programmed Attenuation Steps
-03 +20dBm output level – bandwidth dependent
-04 Dual Redundant Power Supplies – Diode Controlled
-05 RS485 Control
-06 Rechargeable Battery Powered (not with 19” x 1U)
-10 Standard Housing – 19” x 1U
-11 Portable Bench Instrument – 260 x 150 x 420 mm
-12 Ruggedised Portable Instrument – 380 x 310 x 245mm
-13 Weatherproof ODU – 360 x 210 x 95 mm (remote control only)

General Specifications

- Output Frequency Ranges: 0.5 – 46 GHz
- Satellite Frequency Bands: L, S, C, X, Ku, DBS, Ka, Q
- Frequency Steps: 1KHz to 25MHz
- Switching Time: 5msec. max
- Internal Reference (with output feature):
  - Frequency: 10 MHz
  - Temperature Stability: 0.002PPM over 0+40C
  - Aging: 0.03PPM/year
- Ref. Phase Noise @ offset frequencies:
  - 10Hz -130dBc/Hz
  - 100Hz -155dBc/Hz
  - 1KHz -165dBc/Hz
  - 10KHz -165dBc/Hz
- External Reference (switchable):
  - Frequency: 10 MHz
  - Level: 0dBm +/3dB
  - RF Output Power: +13dBm min.
- RF Output Level Control:
  - 0-60dB in 0.25dB steps
- Harmonics:
  - -20dBc typ.
  - Spurious:
  - -60dBc max.
- Output VSWR:
  - 1.5:1 typ.
- RF Mute Option:
  - 80dB min.
- Lock Alarm Indicators:
  - GUI, LED, TTL high for locked
- Input Power:
  - 80-240V, 50-60Hz
- Operating Temperature:
  - 0+40C
- Storage Temperature:
  - -10+70C
- Front Panel:
  - LCD screen
  - Local/Remote
  - Frequency Increase/Decrease
  - Attenuation Increase/Decrease
  - RF Mute
  - PSU Indicator
  - Phase Lock Indicator
- Rear Panel:
  - Int. Ref. Output Connector – BNC male
  - Ext. Ref. Input Connector – BNC female
  - Ref. Int/Ext switch
  - RF Output Connector:
    - Up to 20GHz SMA female
    - 20-40GHz 2.92mm female
    - Above 40GHz 2.4mm female
  - Ethernet Connector – RJ45
  - IEC input power with fuse
- Size:
  - 19” x 1U x 13.5” (343mm) Including connectors and protrusions

Phase Noise (dBc/Hz) typical

<table>
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<th>Offset Frequency (Hz)</th>
<th>2.0</th>
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<td>-120</td>
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