

EMC System Solutions  
**EMGen**<sup>™</sup>  
**RF Signal Generator**  
Model 7003-001

**Features:**

- Flexible LF and HF Operation
- Accurate Measurements for EMC Test
- Easy to Use



*ETS-Lindgren's EMGen RF Signal Generator*

**ETS-Lindgren's Model 7003-001 EMGen RF Signal Generator** offers users a convenient and economical solution for signal generation. The EMGen Module is designed to fit into the EMCenter<sup>™</sup> Modular Test System and provides the user with a signal generator that can be used in different modes across the 9 kHz to 6 GHz frequency range.

**FEATURES**

**Flexible Operation**

The EMGen EMC Signal Generator can be used in Continuous Wave (CW) mode, as well as AM or pulse modulation mode.

The EMGen covers a frequency range from 9 kHz to 6 GHz and therefore can be used for both conducted and radiated immunity tests. It has two SMA output connectors; one for low frequency output (LF) and one for high frequency output (HF)

The LF output covers the signal generator from 9 kHz to 230 MHz. It is intended for conducted immunity set-ups, like the IEC61000-4-6 or ISO11451-4 (BCI).

The HF output covers the signal generator from 80 MHz to 6 GHz and therefore can be used for radiated immunity tests like the IEC61000-4-3 and ISO11451-2 (ALSE).

**Accurate Measurements**

The EMGen is an accurate RF signal generator with a frequency error of less than 20 ppm and a modulation accuracy better than 2%. At the same time its output has an extremely fast response (less than 500µs) which is very important for EMC testing.

In addition, special engineering efforts have been taken to assure complete monotone behavior and prevent undesirable results at the

output level. All these features make the EMGen the perfect signal generator for EMC immunity testing.

**Easy to Use**

The EMGen system is "Plug-and-Play", meaning this card is automatically recognized and initialized by the EMCenter and is immediately ready to use.

The user can configure and control the system by using TILE!<sup>™</sup> Lab Management Software.

**STANDARD CONFIGURATION**

- EMGen Plug-in Card

**OPTIONS**

- EMCenter Modular RF Platform (Model 7000-001, required for operation)

## Physical Specifications

MODEL FEATURE	(PLUG-IN CARD)	7003-001
Dimensions		3U x One 19" Slot in EMCenter
Temperature Range (Use)		+10° C to +40° C
Relative Humidity		10 to 90% (Non-condensing)

## Performance Specifications

MODEL FEATURE (PLUG-IN CARD)	7003-001
Frequency Band	9 kHz to 230 MHz (LF Output) 80 MHz to 6 GHz (HF Output)
Frequency Resolution	1 Hz
Frequency Error	+/- 20 ppm
Minimum Output Level	-70 dBm
Maximum Output Level	+10 dBm (+4.0 dBm When Using AM)
Amplitude Resolution	0.1 dBm
Amplitude Accuracy	+/- 1.5 dB
Output Level Settling Time	<500 $\mu$ s
Harmonics	<- 20 dBc
Non Harmonic Spurious	<- 50 dBc
Modulation Types	CW, AM and Pulse
Modulation Frequency Range	10 Hz to 100 kHz
AM Modulation Depth	5 to 95% (Usable 0 to 100%)
AM Accuracy, Output LF Measured at 0 dBm Level	< +/- 3% (5 to 95% Modulation Depth)
AM Accuracy, Output HF Measured at 0 dBm Level	< +/- 2% (10% to 90% Modulation Depth) < +/- 3% (5 to 10% and 90 to 95% Modulation Depth)
Pulse On/Off Time Range	200 ns to 100 ns
Pulse Modulation On/Off Ratio Output LF	> 60 dB (9 kHz to 230 MHz)
Pulse Modulation On/Off Ratio Output HF	> 90 dB (80 MHz to 1 GHz) > 70 dB (1 GHz to 3 GHz) > 60 dB (3 GHz to 6 GHz)
Supply Voltage	12 VDC

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