rf/microwave instrumentation

Model MT06000
Multistar™
Multi-tone RF Radiated Immunity System
80MHz–6GHz

Complete Testing Solutions to the following standards:

- EN/IEC 61000-4-3
- EN/IEC 60601-1-2
- EN 50130-4
- EN 61000-6-1/2
- EN 55024

The Model MT06000 (Multistar™ Multi-tone tester) is a state-of-the-art system designed to test RF Radiated Immunity faster than ever before possible. By testing multiple frequencies (tones) at once, test times can be reduced by a factor equivalent to the number of tones selected. The number of tones is only limited by the signal generator bandwidth (150MHz) and the size of the amplifier used with the system. The MT06000 contains all the instruments needed to perform radiated immunity testing for IEC 61000-4-3 specification except the required amplifiers, antennas and directional couplers. Amplifiers can be sized and selected based on your required field levels and testing needs. Up to 4 RF amplifiers and directional couplers can be controlled and monitored and power can be delivered to up to 4 antennas to generate the desired fields. The system contains a vector signal generator, a vector signal analyzer, a RF pre-amplifier, a RF field probe and monitor, an RF switch matrix, and automated radiated immunity test software. Everything is contained in a single housing, which eliminates setup issues. The software includes automated routines to calibrate the field and maximize the speed of test (most tones possible) while still meeting the Linearity and Harmonics requirements of the specification. In the event of a EUT failure, margin investigation (thresholding) and traditional single tone testing can be performed causing a slowing of the test only in the areas of concern. This system has the versatility needed for every test laboratory and equipment manufacturer while adding the benefit of reduced test times and greater throughput.

Internal Test Specifications	
IEC/EN 60601-1-2 IEC/EN 50130-4 IEC/EN 61326 IEC/EN 61000-6-1 IEC/EN 61000-6-2 CISPR 24/EN 55024	IEC 61000-4-3 procedure and levels

Vector Signal Generator Specifications	
Frequency range Resolution	80<Hz to 6.6 GHz <4Hz
Power Out	+10dBm
Modulation	AM, FM, Pulse, Phase
Bandwidth	150MHz
Hardware Platform	PXIe

Vector Signal Analyzer Specifications	
Frequency Range Resolution	10MHz-6.6GHz 533nHz
Dynamic Range	80dB
Bandwidth	50Mhz
Hardware Platform	PXIe

RF Preamplifier Specifications	
Frequency Range	50MHz-8GHz
Gain	26dB
Hardware Platform	PXIe

Field Monitor/Probe Spec	
Channels	4
Probe	1
Type	Isotropic, Laser powered
Frequency	100kHz-6GHz
Range	0.5–800 V/m

Connections	
RF signal input	2 SMA Male (rear) For optional signal generators
RF Signal Out	4 SMA Male (rear) to RF amplifiers
High power RF in	4- Type N Male (rear) from RF amplifiers
High power RF out	4 Type N male (rear) to antennas/loads
Monitor port In	4- SMA Male (rear) 4 for forward power

Control PC	
Computer	Intel Core 2 Duo, 2.53GHz
Operating system	Windows 7
RAM	4GB DDR2
Hardware Platform	PXIe

General	
Power	115/230 VAC 50/60 Hz, single phase 16A
Breaker	2 pole, 20A
Cooling	active cooling, air ventilation
Environmental conditions	10°C - 40°C
Dimensions,	50.3 x 47.2 x 61 cm 19.8 x 18.6 x 24 in
Weight	22.7 kg (50.0 lb)

Accessories	
DAQ Module (AR P/N 10025318) (NI USB-6212)	Data acquisition module is used to collect data, identify user defined failures, report user defined error messages, and reset EUT after failure
Low Pass Filter, 80MHz-1GHz	Absorptive filter used to remove harmonics
Low Pass Filter, 80MHz-4.2GHz	Absorptive filter used to remove harmonics
Low Pass Filter, 80MHz-6GHz	Absorptive filter used to remove harmonics