

NEW

DSI-600-4



4.0 GHZ EMI TEST RECEIVER

DSII reserves the right to change specifications without notice

Frequency Characteristics	Specification
Frequency Range	20 Hz to 4.0 GHz
Frequency resolution	.1 Hz
Internal Reference Frequency 100 MHz	OCXO
Aging per year (after 30 days continuous operation)	10^{-6} +1 PPM/year +0.05 PPM 0°C to 60°C
Temperature drift (+5°C to +45°C)	5×10^{-8} , 0°C to 60°C
Frequency display (Receiver mode)	8 digit
Frequency display response referred to 1 GHz <50 kHz 50 kHz to 2 GHz	+/- 0.5 dB +/-4 dB
Marker resolution	1 Hz
Spectral purity, SSB phase noise IF=500 MHz, (RBW=1 Hz)	
10 kHz	-90 dBc
100 kHz, span>100 kHz	-90 dBc
Residual FM, RBW=1 kHz, Sweep time=100 mS	<-120 dBm

Sweep (Analyzer Mode)	
Sweep time, in time domain, span 0 Hz,	Selectable
Sweep time in frequency domain, span >10 Hz	Automatically Set by the BW and selectable
Resolution Bandwidths	
Sweep Filters	
6 dB Bandwidths	
Bandwidth accuracy, <100 kHz	10%
Bandwidth accuracy, 300 kHz to 3 MHz	10%
Shape factor 60 dB:3 dB, <100 kHz	4:1
Shape factor 60 dB:3 dB, 300 kHz to 3 MHz	4:1
EMI Bandwidths, 6 dB Bandwidths	
EMI Bandwidths, pulse	200 Hz, 9 kHz, 120 kHz
EMI Bandwidths, pulse	1 MHz, 3 MHz, 10 MHz, 15 MHz
Bandwidth accuracy, <=120 kHz	10%
Bandwidth accuracy, 1 MHz	10%
Shape factor 60 dB:6 dB, <=120 kHz	>4:1
Shape factor 60 dB:6 dB, 1 MHz	>4:1

Characteristic	Specification
Video Bandwidths, Analyzer Mode	> Selected IF BW/2
FFT Filters	
6 dB band widths	10 Hz, 20 Hz, 50 Hz
Bandwidth accuracy	<.1 %
Shape factor 60 dB:3 dB	4:1
IF Filters	
Bandwidth accuracy	10 %
RBW 6dB Filters, Hz	100,200, 250,300, 400, 500,640, 800
RBW 6 dB Filters, kHz	1, 1.3, 1.6, 2, 2.5, 3, 4, 5, 6.4, 8, 9, 10, 13, 16, 20, 30, 100, 120, 500
RBW 6 dB Filters, MHz	1, 3, 10, 15
Internal Preselector	
Selectable, on and off switch	125 kHz-280 kHz
Selectable, on and off switch	280 kHz-450 kHz
Selectable, on and off switch	450 kHz-720 kHz
Selectable, on and off switch	720 kHz-1.2 MHz
Selectable, on and off switch	1.2 MHz-2 MHz
Selectable, on and off switch	2 MHz-3.7 MHz
Selectable, on and off switch	3.7 MHz-5.9 MHz
Selectable, on and off switch	5.9 MHz-10.9 MHz
Selectable, on and off switch	10.9 MHz-16.5 MHz
Selectable, on and off switch	15 MHz-1.0 GHz
Tunable Tracking Bandpass filter	1.1 GHz-4.0 GHz
LO Radiation from Input Port	20 Hz -2 GHz <-90 dBm 2 GHz – 4 GHz <-80 dBm
Impulse Overshoot	<2% for BW < 20 kHz <10% for BW < 120 kHz

Level	Specification
Display range	>30 dB Linear, >70 dB Logarithmic
Max Input DC Voltage AC coupled	50 V
Max Input CW RF Power RF Attenuation 0 dB	1 W
Inter-Modulation 1 dB Compression of Input Mixer f>15 Mhz, RF Attention 0 dB Preselection	-17dBm
Third Order Intercept, Level	-65 dBm
Displayed Average Noise Level (DANL) (sensitivity) RF attenuation 0 dB, S/N=0 dB, RBW=10 Hz, VBW=1 Hz, span=0 Hz, 50 Ohm termination.	
Without pre-selection, AC coupled 20 Hz-20 kHz 20 kHz-600 MHz 600 MHz-4 GHz	-152 dBm -155 dBm -152 dBm
Displayed Average Noise Level (DANL) RF attenuation 0 dB, Normalized to RBW=1 Hz.	
Without Preamplifier 20 Hz-9 kHz 9 kHz-200 MHz 200 MHz-4 GHz	-55 dBuV -58 dBuV -55 dBuV
Immunity to Interference Image Frequency Intermediate Frequency	>80 dB >80 dB

Characteristic	Specification
Level Display (Receiver Mode)	
Level Display Resolution: Digital Analog Dynamic Readout	0 dB 0.1 dB 150 dB
Uncertainty of attenuator settings, 0 to 70 dB, referenced to 10 dB RF Attenuation	+/-0.5 dB
Units of Level Display:	dBm, dBuV, dBuA, dBuV/m, dBuA/m, dBmV, dBpT
Simultaneous Detectors:	Average, Quasi Peak, RMS, Peak
Dynamic Range (1 dB Compression Point/ Equivalent Input Noise Density) 20 Hz-20 kHz 20 kHz-600 MHz 600 MHz-2 GHz 2 GHz-4 GHz	 >150 dB >153 dB >150 dB >148 dB
Noise Figure 20 Hz-20 kHz 20 kHz-600 MHz 600 MHz-2 GHz 2 GHz-4 GHz	 <12 dB <9 dB <12 dB <20 dB
Video Linear Dynamic Range	>50 dB
Video Output Level (50Ω)	0 to 4 V
Signal Monitor at 21.4 MHz, 20 MHz Bandwidth	-107 dBm to 10 dBm
Detectors	AM

Characteristic	Specification
Level Display (Analyzer Mode)	
Screen	TFT, 640 X 480
Linear Level Display Range	>30 dB
Number of Tandem (one after another) Traces	20
Trace Detectors, in the Measure Mode	Peak, Quasi Peak, Average, RMS
Trace Functions	
Number of Measurement Points	1,000,000 per Segment Out of 20 Segments possible
Measurement Accuracy (S/N>10dB)	+/- 2 dB
Correction Factors	Preloaded/ User Defined
Quasi Peak Indication	+/- 2 dB
Dwell Time	Preset/Adjustable
Demodulation/Detection Modes	AM
Audio Output	>3Vp-p, 20 Hz to 20 kHz

Connectors and Controllers	
Front Panel	Rear Panel
Display TFT, 640x480	Connectors BNC female (Signal Monitor, Video, IF Out)
IF Out BNC Female	IEEE-GPIB -488.2
Input Connector Planar Female	IEEE bus remote control
Earphone 18" Stereo Headphone Jack	2 USB Interfaces
	2 Ethernet
	Mouse, Keyboard
	Connector for external monitor (VGA)
	AC Supply Connector 69 to 258 VAC
	Fuse 15A Chasis GND
	Input Connector N Type
Mass Memory	
Data Storage	40 GB hard disc, 7200 RPM
Storage Temperature Range	-20°C to +50°C
Climatic Loading (IEC 60068-2-30:2002-02)	0% to 80% non condensing
Power/Safety	
AC Supply	96 to 258 VAC, 47 to 400 Hz,
Power Consumption	300 W
Safety	UL
Test Marks	CE, UL
Recommended Calibration Interval	Operation with Internal Reference 1 Year

Mechanical/Environmental	
Weight	45 lbs (21 kg) <i>Total System Weight</i>
Cooling	Built-in low velocity fan
Mounting	Rack Mount
Temperature Range	+ 10 to + 40 °C
Storage Conditions	-20 to 50 °C
Humidity Range	0% to 80%
Software	
Operating System	Windows XP <i>Installed & CD Included</i>
Application	EMIT Software <i>Installed & CD Included</i>
Documentation	
DSI-600 EMI Test Measurement Receiver System Technical Manual	
DSI-600 EMI Test Measurement Receiver System User Manual	
Certificate of Calibration	
Warranty Certificate	
Certificate of Conformance/Compliance & Software Licenses	
Options	
19 Rack Mount Shipping Case with Shock Mounts	
Portable Antenna Kit DC to 1 GHz	
Antenna 1 GHz to 26.5 GHz	
Antenna, 18 GHz to 26.5 GHz	
Antenna, 26.5 to 40 GHz <i>(required w/DSI-600-40)</i>	
Line Impedance Stabilization Network (LISN)	
Rack Mount Computer	
Various Monitors	
Microsoft Office	



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