Quality&**Precise**

MAXWELLON
EA3030A

1kHz~3.6GHz

EMC Comprehensive Tester

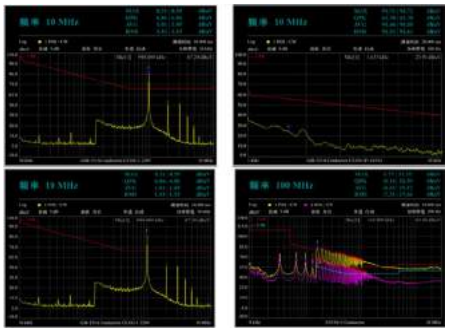
2023

Maxwellon

The EA3030A comprehensive tester is a compact electromagnetic compatibility testing and diagnostic device that integrates various instrument functions such as EMI receiver, spectrum analyzer, network analyzer, filter design simulation, Line impedance stabilization network (LISN), and CM/DM separation device. With the help of a comprehensive measuring instrument, users can detect conducted and radiated interference in the early stage, locate the interference source, and determine the interference component; By designing a filter to filter out interference signals, and then conducting standard template testing on a comprehensive tester, it is verified whether the improved results meet the requirements, thereby saving product development cycle and shortening certification time.

Key Feature

- Frequency range: 1kHz~3.6GHz
- Resolution bandwidth: 1Hz~3MHz (-3dB), 200Hz/9kHz/120kHz/1MHz (-6dB)
- Complies with CISPR 16-1-1-1 standards, including CISPR AVG, CISPR RMS, QPK detectors
- Integration of EMI reception, spectrum analysis, network measurement, LISN power supply, CM/DM separation, EMC diagnosis, simulation, rectification, and pre detection.
- Embedded multiple EMC testing standards (GB/GJB/EN/CISPR/FCC), supporting custom standards
- Supports ETR measurement and analysis software and remote control interfaces, and can establish an EMC automatic testing system
- Rich testing accessories suitable for EMC testing in industries such as automotive electronics, lighting, and home appliances

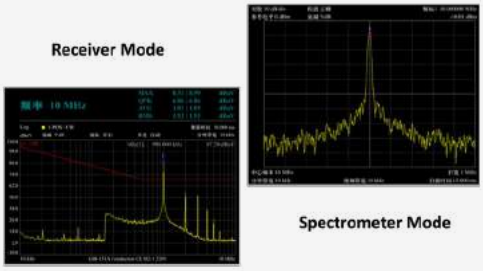


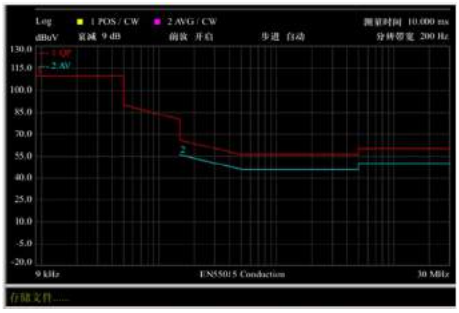
Embedded Multiple EMI Measurement Standards

Embedded with various EMI measurement standards such as GB/GJB/EN/CISPR/FCC, supporting custom standards.

EMI Receiver and Spectrum Analyzer In One

Dual system mode: EMI receiver and spectrum analyzer modes can be freely switched for measurement.



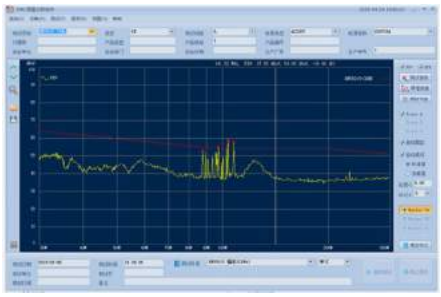


Multiple Detection Methods

Dual system mode: EMI receiver and spectrum analyzer modes can be freely switched for measurement.

EMC Automated Testing System

Editable EMC measurement analysis measurement software and remote control interface, capable of establishing an EMC automatic testing system and outputting test reports.



Built in LISN and CM/DM separator

The output ports of LISN and CM/DM separator can be switched to switch outputs.

Specifications

EMI Receiving Mode		
Frequency Range	EA3030A	1kHz~3.6GHz
Reading accuracy	± (Frequency standard reading × Frequency reference accuracy+half of the last displayed unit)	
Amplitude uncertainty(20℃ ~30℃)	Comprehensive amplitude accuracy (90%)	±2.0dB
Resolution bandwidth (-6dB)	Resolution bandwidth range	200Hz/9kHz/120kHz/1MHz
	Resolution bandwidth accuracy	<10%
Line impedance stabilization network (LISN)	frequency range	9kHz~30MHz
	Rated current	10A
	AC voltage	0 ~240VAC
	DC voltage	0 ~60VDC
	Power frequency	50Hz, 60Hz, 400Hz
	Connection method	IEC socket (input), 3-hole socket (output)
CM/DM separator	Separation frequency range	10kHz~30MHz
	Rejection ratio	≥ 40dB, impedance 50 Ω
Detector	Positive peak, negative peak, quasi peak, average, RMS	
Scan Time	100us~100s	
Scan Points	301~1001	
Number Of Traces	3 (parallel detection)	
Frequency Band List	10	
Frequency Response	± 2.0dB	
Spectrum Analysis Mode		
Frequency Range	1kHz~3.6GHz	
Reading Accuracy	± (Frequency standard reading × Frequency reference accuracy+1% × Sweep width+10% × RBW+0.5 × [Sweep width/(scan point -1)]+1Hz)	
Internal Benchmark (10MHz)	Aging rate	1ppm/ year
	Temperature drift	<0.5ppm(15℃ ~35℃)

Spectrum Analysis Mode				
SSB (f=500MHz)	Frequency offset 30kHz		-90dBc/Hz	
	Frequency offset 1MHz		-110dBc/Hz	
Display Average Noise Level	Channel	frequency	Pre Off	Pre On
	Frequency Conversion Channel	100kHz~1MHz	≤-100dBm-30* (f/100kHz)dB	≤-120dBm-30* (f/100kHz)dB
		1MHz~10MHz	≤-130dBm	≤-150dBm
		10MHz~1GHz	≤-135dBm	≤-155dBm
		1GHz~3.6GHz	≤-140dBm	≤-148dBm
	Low Frequency Channel	5kHz~10kHz	/	≤-110dBm
		10kHz~10MHz	/	≤-125dBm
Maximum input level	Average continuous power		+36dBm	
	Maximum DC input voltage		50Vdc	
Attenuator	Attenuator range		0~39dB, 3dB stepping	
	Attenuator uncertainty		±1.0dB	
Remaining Response	≤ -96dBm			
Detection	Detector		Automatic, normal, positive peak, negative peak, sampling	
Scan time	Span=0		1ms~3000s	
	Span>0		3ms~3000s	
Input port standing wave ratio (ATT=9dB)	50MHz~1GHz		≤2.0	
Amplitude uncertainty(20℃ ~30℃)	Comprehensive amplitude accuracy (90%)		±1.8dB	
Resolution Bandwidth (-3db)	Resolution bandwidth range		1Hz~3MHz, continuous stepping	
	Resolution bandwidth conversion uncertainty		1Hz≤RBW≤500kHz: ±0.6dB	
			RBW>500kHz: ±1.0dB	
	Resolution bandwidth accuracy		<10%	
Frequency Response	5kHz~200kHz		±1.8dB	
	200kHz~3.6GHz		±1.5dB	
Tracking Source	frequency range		100kHz~1.5GHz	
	output power		-30dBm~0dBm	
	Flatness output		±3dB	
General				
Display	TFT-LCD, 10.1 inch 800×600			
Communication Interface	LAN			
Working Temperature	0℃ ~40℃			
Storage Temperature	-30℃ ~+70℃			
Weight	9.8kg			
Size (length × wide × High)	400mm×380mm×190mm			

Ordering Information

Configure	Describe	Order No.
Main Engine	EMC Comprehensive Tester (1kHz~3.6GHz)	EA3030A
Standard	CD (user manual, programming manual)	/
	Power cord (220VAC)	/
	N/SMA-JK connector	/
	N/BNC-JK connector	/
	BNC/SMA-KJ connector	/
	Dual SMA cable (70mm)	/
	Dual SMA cable (80cm)	/
	Dual BNC cable (60cm)	/
	Built in artificial power network (10A)	/
	Built-in tracking source (10kHz~1.5GHz)	/
	CM/DM separator (9kHz~30MHz)	/
Option	Pulse limiter	PLA030
	RF switch	RFS003
	Current injection probe	PRBI-400
	Current detection probe	PRB330
	Probe calibration fixture	CLA001
	Low noise amplifier (+5V DC)	LNA010
	Near field probe	ANT01
	Power probe	UP60
	EMC testing software	BL.EMC.ETR

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