

IVA-TMA

CABLE AND ANTENNA ANALYZER WITH TRANSMISSION MODE

The iVA-TMA is a software option that adds Transmission Mode measurement capability to the iVA Cable and Antenna Analyzer. The iVA-TMA includes all of the existing features of the base iVA model, plus a suite of multi-port Transmission testing options.

Transmission mode enables two or more iVAs to operate in a coordinated fashion to perform accurate swept insertion loss, antenna isolation and antenna radiation pattern measurements.



Sample Testing Scenario:

6 iVAs with Transmission mode can be used to perform measurements on a multi-port antenna. This configuration covers all 36 transmission pathways (6x6), including return loss at each port (6 measurements) and the transmission loss between each possible pair of ports (30 measurements).

Transmission mode requires 2 or more iVA-TMAs.

FEATURES

- Directly measure insertion loss and isolation
- Up to 7 units can be connected together via Bluetooth
- Accurately measure transmission loss (Magnitude only)
- 90 dB dynamic range
- Comes with all features of base iVA



Equipment setup for measuring antenna isolation with two iVA-TMAs

IVA-TMA TECHNICAL SPECIFICATIONS

IVA ANALYSIS MODE - MULTI-PORT TRANSMISSION	
Sweep speed	10 ms per frequency point
RF output power	0 dBm \pm 3 dB
Dynamic range	90 dB
Transmission loss measurement accuracy	Accuracy specifications only applicable where return loss of DUT is greater than 10 dB.
0 - 10 dB	\pm 1 dB
10 - 60 dB	\pm 2 dB
60 - 90 dB	\pm 3 dB
Interference immunity	
0 - 60 dB	-5 dBm at 500 KHz offset from stimulus frequency
60 - 100 dB	-25 dBm at 500 KHz offset from stimulus frequency

BASE IVA SPECIFICATIONS

KEY SPECIFICATION - REFER TO BASE IVA DATASHEET FOR FULL SPECIFICATIONS	
iVA analysis modes	Return Loss, VSWR, Cable Loss, Distance to Fault (DTF), Isolation, Spectrum Monitor
Frequency range	560 - 2750MHz
Minimum frequency increment	1kHz all modes
Number of measurement points	1 to 2191

ELECTRICAL	
DC power consumption	
Return loss mode	4.7W
Transmission mode	4.7W
Spectrum monitor mode	3.7W
Standby (Idle)	0.6W
Battery	Lithium-Ion 3.6V, 2350 mAh, 8.5Wh
Battery charging method	USB-compatible power source connected to USB port of iVA
Battery operating time	8 Hours at typical usage factor

INSTRUMENT CONTROL	
User interface	USB or Bluetooth supported user device with iVA application software installed
Supported devices	iPA Portable PIM Analyzer Tablet computer (iOS & Android) Smartphone (iOS & Android) PC, Windows 7,8 & 10 running .NET version 4 or later
Communications interface to iVA	Bluetooth and USB 2.0
Bluetooth antenna	Integrated into housing
Maximum input power on RF port	+23dBm maximum, DC voltage \pm 30V

TECHNICAL SPECIFICATIONS

MECHANICAL	
Dimensions H x D x W	52 x 69.5 x 216mm 2.06 x 2.73 x 8.51in
Weight	0.68kg 1.5 lbs
Connector 1	RF test port iVA-0627A: Type N male, 50 ohms iVA-0627B: 4.3-10 male, 50 ohms
Connector 2	USB 2.0 Mini-B (for charging and connection to iPA or PC)
Mechanical shock & vibration	MIL-PRF-28800F Class 2, ETS 300 019-2-1, -2, -7

ENVIRONMENTAL	
Temperature range	-10°C to +55°C +14°F to +131°F (operational)
Ingress protection	IP54
Altitude	4600m 15,000ft maximum
Compliance	EMC- EN 61326-1:2013, EN 61326-2-1:2013, EN 55022:2010 "Class A" EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-11 Safety- EN 61010-1:2012, EN 61010-030:2012
Operational humidity	5% to 95% RH non-condensing
Storage temperature range	-20°C to +60°C -4°F to +140°F

ORDERING INFORMATION

1. CHOOSE BASE IVA WITH DESIRED ACCESSORIES

PART NUMBER	DESCRIPTION
IVA-0627A-NC	iVA Cable & Antenna Analyzer System, Type N male connector with Neoprene Soft Case
IVA-0627A-HC	iVA Cable and Antenna Analyzer System, Type N male connector with Hard Case
IVA-0627A-BK	iVA Cable & Antenna Analyzer System, Type N male connector with Basic Accessory Kit
IVA-0627A-SK-02	iVA Cable & Antenna Analyzer System, Type N male connector with Standard Accessory Kit
IVA-0627A-PK-02	iVA Cable & Antenna Analyzer System, Type N male connector with Premium Accessory Kit

2. ADD IVA TRANSMISSION MODE

PART NUMBER	DESCRIPTION
IVA-SW-TMA	Base iVA + Transmission Mode

Contact Kaelus at 1.303.768.8080 or +1.800.498.1352 to obtain additional information, request a quote or receive unit pricing on the Kaelus iVA-TMA analyzers.

MECHANICAL INTERFACE

