

TRANSCOM INSTRUMENTS

Product Brochure

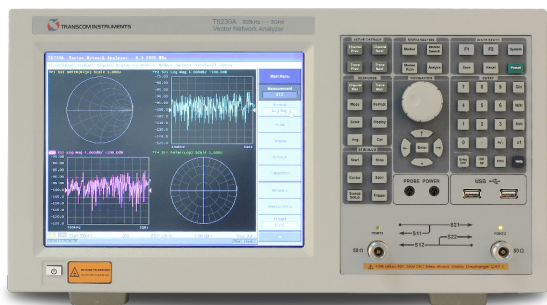
Transcom Instruments
Product Brochure



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T5000 Series Bench-top Vector Network Analyzer

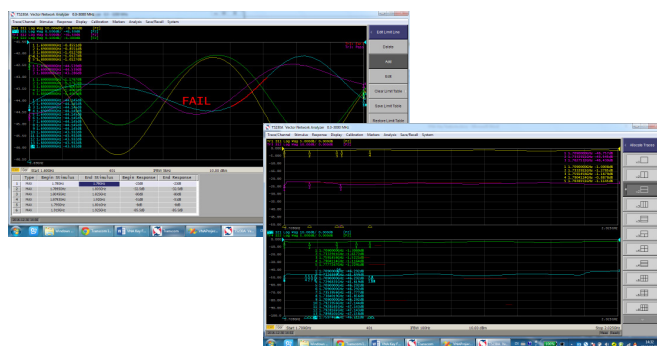


Overview

T5000 Series Bench-top Vector Network Analyzer offers the high RF performance, wide frequency range and versatile functions. The T5000 Series VNA is the economic solution for manufacturing and R&D engineers evaluating RF components and circuits for frequency range up to 8GHz.

Key Facts

- Frequency Range: 300kHz to 3GHz/4GHz/6GHz/8GHz
- Dynamic Range: >125 dB (IFBW=10 Hz), 130 dB typical
- Low Noise Level: <-120 dB (IFBW=10 Hz)
- Low Trace Noise: 1 mdB rms (IFBW=3 kHz)
- High Measurement Speed: 100 μ s/point (IFBW=30 kHz)
- High Effective Directivity: >45 dB
- Remote Control: LAN/GPIB/USB
- Very Low Power Consumption: 60W
- "One-Key-Test" Solution

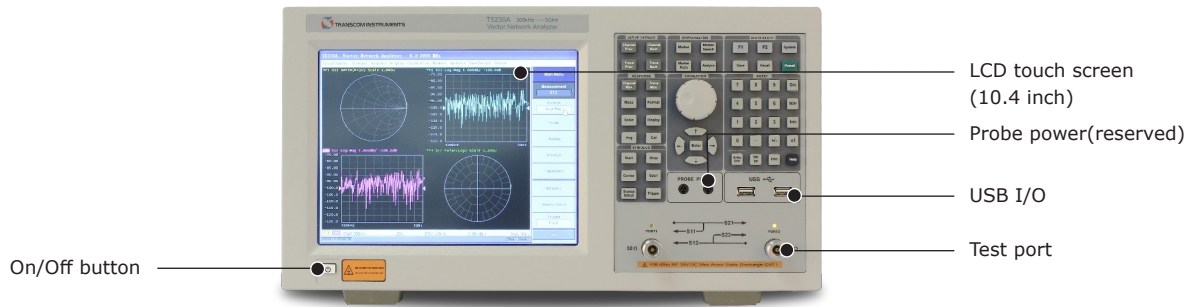


Innovative Features & Benefits



- Multiple analysis options
- Efficient communication interface for multi-types testing instruments
- Simplified testing manipulation

Control Elements



Specifications

Measurement Range				
Product Model	T5230A	T5240A	T5260A	T5280
Impedance	50Ω ~ 75Ω ①	50Ω	50Ω	50Ω
Test Port Connector	N-type, female			
Number of Test Ports	2			
Frequency Range	300KHz to 3GHz	300KHz to 4GHz	300KHz to 6GHz	300KHz to 8GHz
Full CW Frequency Accuracy	±5×10-6			
Frequency Resolution	1Hz	1Hz	1Hz	1Hz
Number of Measurement Points	2 to 10001			
Measurement Bandwidths	1Hz to 30kHz (in 1 / 1.5 / 2 / 3 / 5 / 7 steps)			
Dynamic Range	125dB, typ.130dB	125dB, typ.123dB	125dB, typ.123dB	125dB, typ.123dB
Measurement Parameters	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22

① Use 75 connector via adapter

Effective System Data ②				
Product Model	T5230A	T5240A	T5260A	T5280A
Effective Directivity	45 dB	42 dB	42 dB	45 dB
Effective Source Match	40 dB			
Effective Load Match	45 dB	42 dB	42 dB	45 dB

② Applies over the temperature range of 23°C ± 5°C after 40 minutes of warming-up, with less than 1°C deviation from the full two-port calibration temperature, at output power of -5 dBm and IF bandwidth 10 Hz

Measurement Accuracy				
Product Model	T5230A	T5240A	T5260A	T5280A
Accuracy of Transmission Measurements (magnitude / phase)				
+5dB to +15dB	0.2dB/2°	0.2dB/2°	0.2dB/2°	0.2dB/2°
-50dB to +5dB	0.1dB/1°	0.1dB/1°	0.1dB/1°	0.1dB/1°
-70dB to -50dB	0.2dB/2°	0.25dB/3°	0.25dB/3°	0.2dB/2°
-90dB to -70dB	1.0dB/6°	1.5dB/8°	1.5dB/8°	1.0dB/6°
Accuracy of Reflection Measurements (magnitude / phase)				
-15dB to 0dB	0.4dB/3°	0.4dB/3°	0.4dB/3°	0.4dB/3°
-25dB to -15dB	1.0dB/6°	1.0dB/6°	1.0dB/6°	1.0dB/6°
-35dB to -25dB	3.0dB/20°	3.0dB/20°	3.0dB/20°	3.0dB/20°
Trace Stability				
Trace Noise Magnitude (IF bandwidth 3 kHz)	1m dB rms	8m dB rms	8m dB rms	1m dB rms
Temperature Dependence (per one degree of temperature variation)	0.02dB			
Measurement Speed				
Product Model	T5230A	T5240A	T5260A	T5280A
Measurement Time Per Point	125us	120us	120us	100us
Source to Receiver Port Switch-over Time	< 10ms	< 10ms	< 10ms	< 10ms
Typical Cycle Times Versus Number of Measurement Points (IFBW 30kHz) (Unit: ms)	51	51	51	51
	201	201	201	201
	401	401	401	401
	601	601	601	601
Uncorrected(300kHz to 10MHz) (Unit: ms)	51 points: 13	51 points: 13	51 points: 13	51 points: 13.1
	201 points: 52	201 points: 52	201 points: 52	201 points: 51.3
	401 points:104	401 points:104	401 points:104	401 points:102.3
	601 points: 413	601 points: 413	601 points: 413	601 points: 408.3
Full Two-Port Calibration (300kHz to 10MHz) (Unit: ms)	51 points: 46	51 points: 46	51 points: 46	51 points: 45.5
	201 points: 123	201 points: 123	201 points: 123	201 points: 122.0
	401 points: 226	401 points: 226	401 points: 226	401 points: 230.5
	601 points: 844	601 points: 844	601 points: 844	601 points: 840.5

Uncorrected(10MHz to 3GHz/4GHz/6GHz/8GHz) (Unit: ms)	51 points: 7 201 points: 27 401 points:53 601 points: 207	51 points: 7 201 points: 27 401 points:53 601 points: 207	51 points: 7 201 points: 27 401 points:53 601 points: 207	51 points: 6.5 201 points: 21.1 401 points:40.5 601 points: 157.7
Full Two-Port Calibration (10MHz to 3GHz/4GHz/6GHz/8GHz) (Unit: ms)	51 points: 34 201 points: 73 401 points:125 601 points: 434	51 points: 34 201 points: 73 401 points:125 601 points: 434	51 points: 34 201 points: 73 401 points: 125 601 points: 434	51 points: 32.4 201 points: 61.7 401 points:100.3 601 points: 333.0
Test Port Output				
Product Model	T5230A	T5240A	T5260A	T5280A
Match (W/O System Error Correction)	15dB	18dB	18dB	18dB
Power Range				
300kHz to 3GHz/4GHz/6GHz	-55dBm to +10dBm	-30dBm to +5dBm	-30dBm to +5dBm	-60dBm to +10dBm
6GHz to 8GHz	NA			-60dBm to +5dBm
Power Accuracy	±1.0 dB	±1.5 dB		
Power Resolution	0.05dB			
Test Port Input				
Product Model	T5230A	T5240A	T5260A	T5280A
Match (W/O System Error Correction)	25dB	18dB	18dB	18dB
Damage Level	+26 dBm	+23 dBm	+23 dBm	+26 dBm
Damage DC Voltage	+35 V			
General Data				
Display	10.4 inch TFT color LCD, touch screen			
External Trigger Input Connector	BNC female, Input level range: 0 to +5 V			
External Trigger Output Connector	BNC female; 10 MHz; 2 dBm ± 2 dB			
External Reference Input				
VGA Video Output	15-pin mini D-Sub; female; driving the VGA compatible monitors			
GPIB Connector (Optional)	24-pin D-Sub (type D-24), female; compatible with IEEE-488			
USB Connector	Female; provides connection to printer, ECal module, USB storage			
LAN Connector	10/100/1000 Base T Ethernet, 8-pin			
Operating Temperature Range	+5°C to +40°C			
Storage Temperature Range	-45°C to +55°C			
Humidity	90% (25°C)			
Atmospheric Pressure	84 to 106.7 kPa			
Calibration Interval	3 year			
Power Supply	220 ± 22 V (AC), 50 Hz			
Power Consumption	60W			
Dimensions (W × H × D) mm	440 × 231 × 360			
Weight	12.5 kg (T5230A/T5240A/T5260A/T5280A)			

Ordering List

Main Unit Model	
T5230A	2 Ports 300kHz to 3GHz Vector Network Analyzer
T5240A	2 Ports 300kHz to 4GHz Vector Network Analyzer
T5260A	2 Ports 300kHz to 6GHz Vector Network Analyzer
T5280A	2 Ports 300kHz to 8GHz Vector Network Analyzer
Optional Accessories	
Cables	
T5_RFCAB-NmNm_18101	High Precision Test Cable - DC to 18GHz, 50Ω, N(m)-N(m) , 1m
T5_RFCAB-NmSMAM_18102	High Precision Test Cable - DC to 18GHz, 50Ω, N(m)-SMA(m), 1m
T5_RFCAB-NmNm_60101	Precision Test Cable - DC to 6GHz, 50Ω, N(m)-N(m), VSWR<1.1, IL<1.2dB
T5_RFCAB-NmSMAM_60102	Precision Test Cable - DC to 6GHz, 50Ω, N(m)-SMA(m), VSWR<1.1, IL<1.2dB
Connectors	
T9-SMA-KKG	SMA(f) to SMA(f) Connector-DC to 9GHz, 50Ω SMA(f) to SMA(f), VSWR<1.1
T9-SMA-JKG	SMA(f) to SMA(m) Connector-DC to 9GHz, 50Ω SMA(f) to SMA(m), VSWR<1.1
T9-SMA-JJG	SMA(m) to SMA(m) Connector-DC to 9GHz, 50Ω SMA(m) to SMA(m), VSWR<1.1
T9-N-KKG	N(f) to N(f) Connector-DC to 9GHz, 50Ω N(f) to N(f), VSWR<1.1
T9-N-JKG	N(f) to N(m) Connector-DC to 9GHz, 50Ω N(f) to N(m), VSWR<1.1
T9-N-JJG	N(m) to N(m) Connector-DC to 9GHz, 50Ω N(m) to N(m), VSWR<1.1
T9-N/SMA-KKG	SMA(f) to N(f) Connector-DC to 9GHz, 50Ω SMA(f) to N(f), VSWR<1.1
T9-N/SMA-JKG	SMA(f) to N(m) Connector-DC to 9GHz, 50Ω SMA(f) to N(m), VSWR<1.1
T9-N/SMA-KJG	SMA(m) to N(f) Connector-DC to 9GHz, 50Ω SMA(m) to N(f), VSWR<1.1
T9-N/SMA-JJG	SMA(m) to N(m) Connector-DC to 9GHz, 50Ω SMA(m) to N(m), VSWR<1.1
Calibration Kits	
5901N50	High Precision, DC to 9GHz, 50Ω, N-type Calibration Kit Set
SK-CAL-Set6	High Precision, DC to 6.0GHz, 50Ω, N-type Calibration kit Set, case included
5301N50	High Precision, DC to 3.0GHz, 50Ω, N-type Calibration kit Set, case included
5302N50-H	Economical, DC to 3.0GHz, 50Ω, N-type Male Calibration kit Set, case included
5302N50-F	Economical, DC to 3.0GHz, 50Ω, N-type Calibration kit Set, case included

Keep innovating for excellence!

About us

Transcom Instrument Co., Ltd. founded in 2005 and headquartered in Shanghai, is a leading manufacturer and provider of RF and wireless communication testing instruments and overall solutions in China. Based on its independent brands and a wide range of core patented technologies, Transcom became national high-tech enterprise with independent intelligent property rights and has been listed into Shanghai Enterprise Recognition Award for High Growth SMEs in Technology.

Transcom is backed by a experienced and dedicated research team in mobile communication, radio frequency and microwave, and network optimization testing instrument. Through "Industry-University-Research" cooperation with universities, Transcom founded Southeast University-Transcom Electronic Measurement Technology Center at Southeast University to futher ensure technology and talent reserve, and secure future visionary and sustainable technology development.

Transcom's product portfolios focus 4 areas: cellular network critical communication planning/maintenance/optimization, Manufacturing testing solution, educational instrument/equipment, spectrum monitoring sensor for system integration.



ISO14001



ISO9001

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Company Profile