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Product Brochure

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Portable Vector Network Analyzer T5113H/T5231A

Overview

Compared to conventional multiport test scheme of VNA+matrix switch, T5845A supports synchronous test of DUTs. Each DUT has its own test interface to achieve completely parallel operation. Therefore, the "multi-purpose" functions of T5845A are achieved without losing stability, accuracy and repeatability.

Key Features

- Frequency Range：300kHz~1.3GHz/3GHz（T5113A/ T5231A)
- 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 μs/point (IFBW=30 kHz)
- High Effective Directivity：>45 dB
- Remote Control： LAN/GPIB/USB
- Very Low Power Consumption：40W
- "One-Key-Test" Solution

Measurement Range

Product Model	T5231A	T5113H
Impedance	50Ω, 75Ω[1]	
Test Port Connector	N-type, female	
Number of Test Ports	2	
Frequency range	300kHz~3.0GHz	300kHz ~ 1.3GHz
Full CW Frequency Accuracy	±5×10-6	
Frequency Resolution	1Hz	
Number of Measurement Points	2 ~ 10001	2 ~ 1601
Measurement Bandwidths	1Hz to 30kHz (in 1 / 1.5 / 2 / 3 / 5 / 7 steps)	1Hz to 30kHz (in 1 / 3 steps)
Dynamic Range	125dB, typ.130dB	
Measurement Parameters	S11, S21, S12, S22	S11, S21

[1]Use 75 connector via adapter

Effective System Data[1]

Product Model	T5231A	T5113H
Effective Directivity	45 dB	
Effective Source Match	40 dB	
Effective Load Match	45 dB	NA

[1] 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	T5231A	T5113H
Accuracy of Transmission Measurements (magnitude / phase)		
+5dB to +15dB	0.2dB/2º	0.2dB/2º (+10dB to +13dB)
-50dB to +5dB	0.1dB/1º	0.1dB/1º (-50dB to +10dB)
-70dB to -50dB	0.2dB/2º	
-90dB to -70dB	1.0dB/6º	
Accuracy of Reflection Measurements (magnitude / phase)		
-15dB to 0dB	0.4dB/3º	
-25dB to -15dB	1.0dB/6º	1.5 dB/7º
-35dB to -25dB	3.0dB/20	4.0 dB/22º

Trace stability		
Product Model	T5231A	T5113H
Trace Noise Magnitude (IF bandwidth 3 kHz)	1mdB rms	2 mdB rms
Temperature Dependence (per one degree of temperature variation)	0.02dB	

Measurement Speed

Product Model	T5231A				T5113H			
Measurement Time Per Point	125ms				150 ms			
Source to Receiver Port Switchover Time	＜10ms				NA			
Typical Cycle Times Versus Number of Measurement Points（IFBW 30kHz）	51	201	401	1601	51	201	401	1601
One-Path Two-Port Calibration（300kHz~1.3GHz）	NA				9ms	31ms	60ms	235ms
Uncorrected（300kHz~10MHz）	13ms	52ms	104ms	413ms	NA			
Full Two-Port Calibration（300kHz~10MHz）	46ms	123ms	226ms	844ms	NA			
Uncorrected（10MHz~3GHz/8GHz）	7ms	27ms	53ms	207ms	NA			
Full Two-Port Calibration（10MHz~3GHz/8GHz）	34ms	73ms	125ms	434ms	NA			

Test Port Output

Product Model	T5231A	T5113H
Match (W/O System Error Correction)	15dB	20dB
Power Range		
300kHz~1.3GHz/3GHz/6GHz	-55dBm to +10dBm	-55 dBm to +3 dBm
6GHz~8GHz	NA	
Power Accuracy	±1.0dB	±1.5 dB
Power Resolution	0.05dB	

Test Port Input

Product Model	T5231A	T5113H
Match (W/O System Error Correction)	25dB	30dB
Damage Level	+26dBm	
Damage DC Voltage	+35V	
Noise Level (IF Bandwidth 10 Hz)	＜-120dBm	＜-127dBm

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 Reference Input	BNC female; 10 MHz; 2 dBm ± 2 dB（T5231A/T5113H）
External Reference Output	BNC female; 10 MHz; 2 dBm ± 2 dB（T5231A/T5113H）
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 ~ +40°C
Storage Temperature Range	-45°C ~ +55°C
Humidity	90% (25°C)
Atmospheric Pressure	84 to 106.7 kPa
Calibration Interval	3 yr
Power Supply	220 ± 22 V (AC), 50 Hz
Power Consumption	60W
Dimensions (W × H × D)	440 ×231 ×360 mm
Weight	7.1 kg (T5231A) / 6.5 kg (T5113H)

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About Transcom

Shanghai Transcom Instrument Co., Ltd. (NEEQ: 831961), established in 2005, independently research and develop high-end radio frequency communication testing instruments and is a professional provider of overall testing solutions. Starting from 2009, Transcom, titled as National High-Tech Enterprise and the fostered enterprise by Shanghai Little Giant Project, has undertaken the tasks of development for National "New-Generation Broadband Wireless Mobile Communication Network" and the construction of Shanghai Engineering Research Center for Wireless Communication Testing Instruments.

In 2015, Transcom officially announced its new five-year development strategy "1+3" . In detail, Transcom will continue to enhance its potential to be the national team for domestic wireless communication instruments, and develop security software for mobile communication network (network communication/data mining), wireless signal (spectrum monitoring/situation analysis) and Beidou navigation (signal monitoring for satellite navigation/mobile anti-jam verification platform). The strategy has now been implemented systematically with progressive achievements in Shanghai, Guangdong and other cities.

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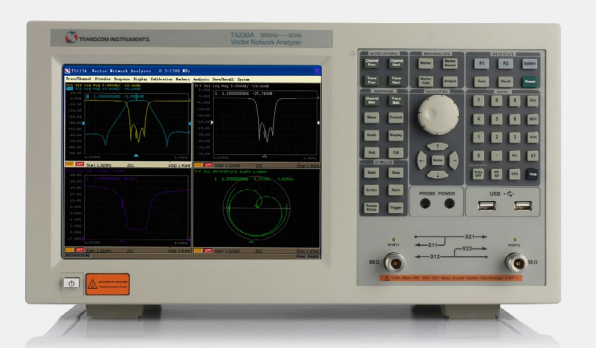
Vector Network Analyzer T5113A/T5230A/T5280A/T5480A



Overview

Transcom T5000 Series vector network analyzer offers the high RF performance, wide frequency range and versatile functions. The T5000 series is the economic solution for manufacturing and R&D engineers evaluating RF components and circuits for frequency range up to 8GHz.

Key Features

- Frequency Range：300kHz~1.3GHz/3GHz/8GHz（T5113A/ T5230A/ T5280A）100kHz~8GHz（T5480）
- 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 μs/point (IFBW=30 kHz)
- High Effective Directivity：>45 dB
- Remote Control： LAN/GPIB/USB
- Very Low Power Consumption：60W
- “One-Key-Test” Solution

Measurement Range				
Product Model	T5480A	T5280A	T5230A	T5113A
Impedance	50Ω	50Ω	50Ω，75Ω[1]	50Ω，75Ω[1]
Test Port Connector	N-type, female			
Number of Test Ports	4	2		
Frequency range	100kHz~8.0GHz	300kHz~8.0GHz	300kHz ~ 3.0GHz	300kHz~1.3GHz
Full CW Frequency Accuracy	±5×10-6			
Frequency Resolution	1Hz			
Number of Measurement Points	2 ~ 10001			2 ~ 1601
Measurement Bandwidths	1Hz to 30kHz (in 1 / 1.5 / 2 / 3 / 5 / 7 steps)			1Hz to 30kHz (in 1 / 3 steps)
Dynamic Range	115 dB, typ. 125 dB (100kHz~300kHz) 135 dB, typ. 140 dB （300kHz~8GHz）	125dB, typ.130dB		
Measurement Parameters	S11，S21，S31，S41，S12，S22，S32，S42，S13，S23，S33，S43，S14，S24，S34，S44	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21

[1]Use 75 connector via adapter

Effective System Data[1]				
Product Model	T5480A	T5280A	T5230A	T5113A
Effective Directivity	46	45 dB		
Effective Source Match	40	40 dB		
Effective Load Match	46	45 dB		NA

[1] 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	T5480A	T5280A	T5230A	T5113A
Accuracy of Transmission Measurements (magnitude / phase)				
+5dB to +15dB	0.2dB/2º			0.2dB/2º (+10dB to +13dB)
-50dB to +5dB	0.1dB/1º			0.1dB/1º (-50dB to +10dB)
-70dB to -50dB	1.5 dB/10º(100kHz~300kHz) 0.2dB/2º(300kHz~8GHz)	0.2dB/2º		
-90dB to -70dB	1.0dB/6º(300kHz~8GHz)	1.0dB/6º		
Accuracy of Reflection Measurements (magnitude / phase)				
-15dB to 0dB	0.4dB/3º			
-25dB to -15dB	1.0dB/6º	1.0dB/6º		1.5 dB/7º
-35dB to -25dB	3.0dB/20º	3.0dB/20º		4.0 dB/22º
Trace stability				
Trace Noise Magnitude (IF bandwidth 3 kHz)	1mdBrms (100kHz~300kHz) 1mdBrms (300kHz~8GHz)	1mdB rms		2 mdB rms
Temperature Dependence (per one degree of temperature variation)	0.02dB			

Measurement Speed

Product Model	T5048A		T5280A		T5230A				T5113A			
Measurement Time Per Point	100ms				125ms				150 ms			
Source to Receiver Port Switchover Time	＜10ms				＜10ms				NA			
Typical Cycle Times Versus Number of Measurement Points （IFBW 30kHz）	51	201	401	1601	51	201	401	1601	51	201	401	1601
One-Path Two-Port Calibration （300kHz~1.3GHz）	NA								9ms	31ms	60ms	235ms
Uncorrected（300kHz~10MHz）	13.1ms	51.3ms	102.3ms	408.3ms	13ms	52ms	104ms	413ms	NA			
Full Two-Port Calibration （300kHz~10MHz）	45.5ms	122.0ms	230.5ms	840.5ms	46ms	123ms	226ms	844ms	NA			
Uncorrected（10MHz~3GHz/8GHz）	6.5ms	21.1ms	40.5ms	157.7ms	7ms	27ms	53ms	207ms	NA			
Full Two-Port Calibration （10MHz~3GHz/8GHz）	32.4ms	61.7ms	100.3ms	333.0ms	34ms	73ms	125ms	434ms	NA			

Test Port Output

Product Model	T5480A	T5280A	T5230A	T5113A
Match (W/O System Error Correction)	18dB		15dB	20dB
Power Range				
300kHz~1.3GHz/3GHz/6GHz	-60dBm to +10dBm (100kHz~6GHz)	-60dBm to +10dBm	-55dBm to +10dBm	-55 dBm to +3 dBm
6GHz~8GHz	-60dBm to +5dBm	-60dBm to +5dBm	NA	NA
Power Accuracy	±1.5 dB	±1.5dB	±1.0dB	±1.5 dB
Power Resolution	0.05dB			

Test Port Input

Product Model	T5480A	T5280A	T5230A	T5113A
Match (W/O System Error Correction)	18 dB		25dB	30dB
Damage Level	+26dBm			
Damage DC Voltage	+35V			
Noise Level (IF Bandwidth 10 Hz)	-105dBm(100kHz~300kHz) -125dBm（300kHz~8GHz）	＜-125dBm	＜-120dBm	＜-127dBm

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 Reference Input	BNC female; 10 MHz; 2 dBm ± 3 dB （T5480A） BNC female; 10 MHz; 2 dBm ± 2 dB（T5280A/T5230A/T5113A）
External Reference Output	BNC female; 10 MHz; 3 dBm ± 2 dB （T5480A） BNC female; 10 MHz; 2 dBm ± 2 dB（T5280A/T5230A/T5113A）
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 ~ +40°C
Storage Temperature Range	-45°C ~ +55°C
Humidity	90% (25°C)
Atmospheric Pressure	84 to 106.7 kPa
Calibration Interval	3 yr
Power Supply	220 ± 22 V (AC), 50 Hz
Power Consumption	60W
Dimensions (W × H × D) mm	440 ×231 ×360
Weight	13kg(T5480A) 12.5 kg (T5280A/T5230A) 10kg (T5113A)

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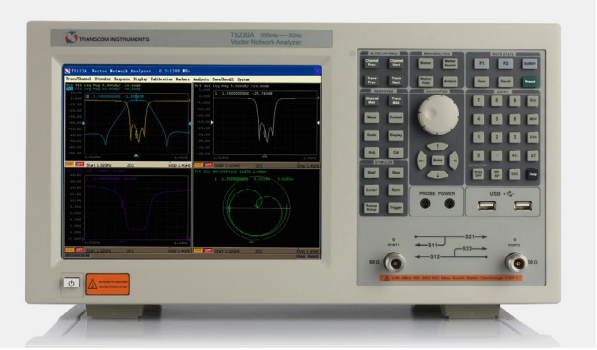

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Key Features

- Frequency Range：300kHz~1.3GHz/3GHz/8GHz（T5113A/ T5230A/ T5280A）100kHz~8GHz（T5480）
- 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 μs/point (IFBW=30 kHz)
- High Effective Directivity：>45 dB
- Remote Control： LAN/GPIB/USB
- Very Low Power Consumption：60W
- “One-Key-Test” Solution

Measurement Range				
Product Model	T5480A	T5280A	T5230A	T5113A
Impedance	50Ω	50Ω	50Ω，75Ω[1]	50Ω，75Ω[1]
Test Port Connector	N-type, female			
Number of Test Ports	4	2		
Frequency range	100kHz~8.0GHz	300kHz~8.0GHz	300kHz ~ 3.0GHz	300kHz~1.3GHz
Full CW Frequency Accuracy	±5×10-6			
Frequency Resolution	1Hz			
Number of Measurement Points	2 ~ 10001			2 ~ 1601
Measurement Bandwidths	1Hz to 30kHz (in 1 / 1.5 / 2 / 3 / 5 / 7 steps)			1Hz to 30kHz (in 1 / 3 steps)
Dynamic Range	115 dB, typ. 125 dB (100kHz~300kHz) 135 dB, typ. 140 dB （300kHz~8GHz）	125dB, typ.130dB		
Measurement Parameters	S11，S21，S31，S41，S12，S22，S32，S42，S13，S23，S33，S43，S14，S24，S34，S44	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21

[1]Use 75 connector via adapter

Effective System Data[1]				
Product Model	T5480A	T5280A	T5230A	T5113A
Effective Directivity	46	45 dB		
Effective Source Match	40	40 dB		
Effective Load Match	46	45 dB		NA

[1] 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	T5480A	T5280A	T5230A	T5113A
Accuracy of Transmission Measurements (magnitude / phase)				
+5dB to +15dB	0.2dB/2º			0.2dB/2º (+10dB to +13dB)
-50dB to +5dB	0.1dB/1º			0.1dB/1º (-50dB to +10dB)
-70dB to -50dB	1.5 dB/10º(100kHz~300kHz) 0.2dB/2º(300kHz~8GHz)	0.2dB/2º		
-90dB to -70dB	1.0dB/6º(300kHz~8GHz)	1.0dB/6º		
Accuracy of Reflection Measurements (magnitude / phase)				
-15dB to 0dB	0.4dB/3º			
-25dB to -15dB	1.0dB/6º	1.0dB/6º		1.5 dB/7º
-35dB to -25dB	3.0dB/20º	3.0dB/20º		4.0 dB/22º
Trace stability				
Trace Noise Magnitude (IF bandwidth 3 kHz)	1mdBrms (100kHz~300kHz) 1mdBrms (300kHz~8GHz)	1mdB rms		2 mdB rms
Temperature Dependence (per one degree of temperature variation)	0.02dB			

Measurement Speed

Product Model	T5048A		T5280A		T5230A				T5113A			
Measurement Time Per Point	100ms				125ms				150 ms			
Source to Receiver Port Switchover Time	＜10ms				＜10ms				NA			
Typical Cycle Times Versus Number of Measurement Points （IFBW 30kHz）	51	201	401	1601	51	201	401	1601	51	201	401	1601
One-Path Two-Port Calibration （300kHz~1.3GHz）	NA								9ms	31ms	60ms	235ms
Uncorrected（300kHz~10MHz）	13.1ms	51.3ms	102.3ms	408.3ms	13ms	52ms	104ms	413ms	NA			
Full Two-Port Calibration （300kHz~10MHz）	45.5ms	122.0ms	230.5ms	840.5ms	46ms	123ms	226ms	844ms	NA			
Uncorrected（10MHz~3GHz/8GHz）	6.5ms	21.1ms	40.5ms	157.7ms	7ms	27ms	53ms	207ms	NA			
Full Two-Port Calibration （10MHz~3GHz/8GHz）	32.4ms	61.7ms	100.3ms	333.0ms	34ms	73ms	125ms	434ms	NA			

Test Port Output

Product Model	T5480A	T5280A	T5230A	T5113A
Match (W/O System Error Correction)	18dB		15dB	20dB
Power Range				
300kHz~1.3GHz/3GHz/6GHz	-60dBm to +10dBm (100kHz~6GHz)	-60dBm to +10dBm	-55dBm to +10dBm	-55 dBm to +3 dBm
6GHz~8GHz	-60dBm to +5dBm	-60dBm to +5dBm	NA	NA
Power Accuracy	±1.5 dB	±1.5dB	±1.0dB	±1.5 dB
Power Resolution	0.05dB			

Test Port Input

Product Model	T5480A	T5280A	T5230A	T5113A
Match (W/O System Error Correction)	18 dB		25dB	30dB
Damage Level	+26dBm			
Damage DC Voltage	+35V			
Noise Level (IF Bandwidth 10 Hz)	-105dBm(100kHz~300kHz) -125dBm（300kHz~8GHz）	＜-125dBm	＜-120dBm	＜-127dBm

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 Reference Input	BNC female; 10 MHz; 2 dBm ± 3 dB （T5480A） BNC female; 10 MHz; 2 dBm ± 2 dB（T5280A/T5230A/T5113A）
External Reference Output	BNC female; 10 MHz; 3 dBm ± 2 dB （T5480A） BNC female; 10 MHz; 2 dBm ± 2 dB（T5280A/T5230A/T5113A）
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 ~ +40°C
Storage Temperature Range	-45°C ~ +55°C
Humidity	90% (25°C)
Atmospheric Pressure	84 to 106.7 kPa
Calibration Interval	3 yr
Power Supply	220 ± 22 V (AC), 50 Hz
Power Consumption	60W
Dimensions (W × H × D) mm	440 ×231 ×360
Weight	13kg(T5480A) 12.5 kg (T5280A/T5230A) 10kg (T5113A)

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TRANSCOM INSTRUMENTS
Product Brochure

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Compact VNA S5048/S7530/T1300

Overview

The compact VNA is an S-parameter vector network analyzer designed for operation with an external PC. It connects to any Windows-based computer via USB and delivers accurate testing and measurement through a platform that can keep up with constant advancements aswell as be remotely accessed. This analyzer is an excellent solution for performing the full range of magnitude and phase measurements over the frequency from 20 kHz up to 4.8GHz with 50 and 75Ω version.

Features

- Frequency Range：20kHz~4.8GHz/20kHz~3GHz/300kHz~1.3GHz
- Large Dynamic Range：>120 dB (IFBW=10 Hz), 123dB typical
- Low Noise Level：<-120 dB (IFBW=10 Hz)
- Low Trace Noise：2 mdB rms (IFBW=3 kHz)
- Measurement Speed：150 μs/point (IFBW=30 kHz)
- High Effective directivity：>45 dB
- Remote Controll：LabView
- Low Power Consumption：12W

Measurement Range			
Product Model	S5048	S7530	T1300
Impedance	50Ω	75Ω	50Ω
Test port Connector N-type, female	N-type, female		
Number of Test Ports	2		
Frequency Range	20kHz ~ 4.8GHz	20kHz ~ 3.0GHz	300kHz ~ 1.3GHz
Full CW Frequency Accuracy	$\pm 5\times10^{-6}$		
Frequency Setting Resolution	10Hz	10Hz	1Hz
Number of Measurement Points	2 ~ 200001		2 ~ 10001
Measurement Bandwidth	1Hz to 30kHz (in 1 / 1.5 / 2 / 3 / 5 / 7 steps)		1Hz to 30kHz (in 1 / 3 steps)
Dynamic Range（IFBW 10Hz）			
20kHz ~300kHz	100dB, typ.110 dB	110dB, typ.120 dB	
300kHz~1.3GHz/3GHz/4.8GHz	120dB, typ.123 dB		130dB, typ.135 dB
S-Parameter	S_{11}, S_{21}, S_{12}, S_{22}		S_{11}, S_{21},

Measurement Accuracy			
Product Model	S5048	S7530	T1300
Measurement Accuracy(magnitude / phase)			
+5 dB to +10 dB	0.2dB/2º		0.2dB/2º (+10dB to +13dB)
-50 dB to +5 dB	0.1dB/1º		0.1dB/1º (-50dB to +10dB)
-70dB to -50dB	2.5dB/11º（20kHz to 300kHz） 0.5 dB/3º（300kHz to 4.8GHz）	1.5 dB/10º（20kHz to 300kHz） 0.2 dB/2º（300kHz to 3GHz）	0.2 dB/2º
-90dB to -70dB	2.5 dB/11º（300kHz to 4.8GHz）	1.0 dB/6º（300kHz to 3GHz）	1.0 dB/6º
Accuracy of Reflection Measurements （magnitude / phase）			
-15dB to 0dB	0.4dB/3º		0.4dB/4º
-25dB to -15dB	1.0dB/6º		1.5 dB/7º
-35dB to -25dB	3.0dB/20º		4.0 dB/22º
Trace Stability			
Trace Noise（IFBW 3kHz）	5 mdB rms（20kHz to 300kHz） 2 mdB rms（300kHz to 4.8GHz）	5 mdB rms（20kHz to 300kHz） 2 mdB rms（300kHz to 3GHz）	2 mdB rms
Temperature dependence	0.02dB		

Effective System Data[1]	
Effective Directivity	45 dB
Effective source match	40 dB

1 applies over the temperature range of 73°F ± 9 °F (23°C ± 5 °C) after 40 minutes of warming-up, with less than 1 °C deviation from the one-path two-port calibration temperature, at output power of -5 dBm, and 10 Hz IF bandwidth.*All technical specifications apply to all devices that have been factory calibrated in 2013 and after.

Test Port Output			
Product Model	S5048	S7530	T1300
Match (without system error correction)	22 dB	18 dB	18 dB
Power Range	-50 dBm to +5 dBm	-50 dBm to +5 dBm	-55 dBm to +3 dBm
Power Accuracy	±1.0 dB	±1.5 dB	±1.5 dB
Power Resolution	0.05dB		

Test Port Input			
Product Model	S5048	S7530	T1300
Match (without system error correction)	22 dB	18 dB	28 dB
Damage Level	+23 dBm	+23 dBm	+26 dBm
Damage DC voltage	+35 V	+35 V	+35 V
Noise Level （IF bandwidth 10Hz）	-95 dBm（20kHz to 300kHz） -115 dBm（300kHz to 4.8GHz）	-105 dBm（20kHz to 300kHz） -120 dBm（300kHz to 3GHz）	-127dBm

General Data	
External Reference Input	BNC female ; 10 MHz; 2 dBm ± 3 dB
External Reference Output	BNC female ; 10 MHz; 3 dBm ± 2 dB
Operating Temperature Range	+5°C ~ +40°C
Storage Temperature Range	-45°C ~ +55°C
Humidity	90% (25°C)
Atmospheric Pressure	84 to 106.7 kPa
Calibration Interval	3 year
Power Supply AC Circuit (via adapter)	220 ± 22 V (AC), 50 Hz
Power Consumption AC Circuit	12W
Dimensions (L x W x H)	267 ×160 ×44(S5048/S7530) 284 ×142×40(T1300)
Weight	1.5 kg

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About Transcom

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Port Extender Switch for VNA TM SERIES

PES contains various features that facilitate test automation. This test set is tailored for testing device with multiport as well as batch testing in the manufacturing environment and it is a very efficient tool for a wide range of R&D multiport measurement applications. We provide customize software as per user requirement.

Overview

TM Series Port Extension Switch (PES) is a high performance multiport instrument which extends T5 Series VNA or any VNA in the market to various numbers of ports. PES is available in 2×3, 2×8, 2×9, 2×10 and 2×12 ports. This instrument provide exceptionally fast measurement and switching speed.

Typical Application

- LTE Smart Antenna (9-port) Testing
- Multi-band Antenna Testing
- Mobile Handset Antenna (8-port) Testing
- Base station multiport RF Filter, Duplexer and Multiplexer Testing
- Multiport RF Coupler and Splitter Testing

Test Port	
Impedance	50
Connector	N-type, female SMA-type, female
Max. Input Power	2 W
Max. Output Power	1 W
Max. Control Voltage	26V DC

Electronics Parameters	
Operating Frequency	DC to 9GHz
Insertion Loss	<4.5dB
Isolation	75dB to 100dB, 85dBTyp.
Port VSWR	1.2 typ.
Control Voltage	24VDC
Control Current	85~125mA
Switch Lifespan	0.1W 100Million cycles 1.0W 10Million Cycles
Matched Load	Internal matching loads

General	
Operating Environment	
Temperature	-15°C to +45°C
Storage Temperature	-15°C to +45°C
Power	220 ± 22 V (AC), 50/60 Hz;70W
Weight and Dimension	
Dimension (W*H*D) mm	438*100*360
Weight	7 kg
Remote Control	
USB	Type B, used for switch control

PES Past Numbers		
Item	Part No.	Discription
1	TM12BS	RSM2x12 SMA full-cross type switch
2	TM12BN	RSM2x12 N full-cross type switch
3	TM10BS	RSM2x10 SMA full-cross type switch
4	TM10BN	RSM2x10 N full-cross type switch
5	TM09BS	RSM2x9 SMA full-cross type switch
6	TM09BN	RSM2x9 N full-cross type switch
7	TM08AS	RSM2x8 SMA semi- cross type switch
8	TM08AN	RSM2x8 N semi- cross type switch
9	TM03AN	RSM2x3 N semi- cross type switch

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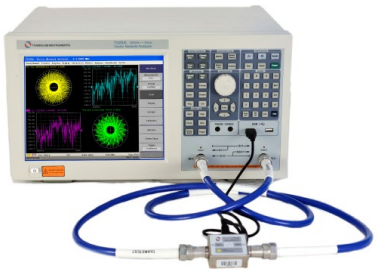

Overview

Electronic Calibration Module is the precision components and tools required to calibrate a Transcom Vector Network Analyzer. E-cal provide fast, repeatable and high-quality calibration in one step compare to the manual calibration kits which have Open/Short/Load. These reduce the on-site calibration time.

E-Cal module provide consistence result compare to traditional manual calibration. As traditional calibration require multiply connection of OSL. This will increase the calibration error as each time the force applied is not consistence.

Key Features

- Frequency Range:300kHz~8GHz
- Compatible whit CMT software
- Support USBTMC-USB488
- Connect to VNA via USB
- One Time Connection for Two Ports Calibration
- Reduce Wear and Tear

Specifications	
Frequency Range	300kHZ~8GHz
Directivity	46dB
Source Match	-40dB
Load Match	-46dB
Reflection Tracking	0.04dB
Transmission Tracking	0.06dB
Maximum Data Point	1601
Maximum Data Power	-5dBm
Maximum Input Voltage	10V
Input Power Limit	+10dBm
Input Voltage Limit	35V
Size(W*H*D)mm	115 x 40 x 25 mm
Weight	350g

Operation Environment	
Operating Temperature	+5°C to +40°C
Humility	90% (25°C)
Pressure	84 ~ 106.7 kPa

Hardware Configuration			
Models	Frequency Range	Connector type	
5801N50E-80010	300kHZ~8GHz	N type (male)	N type (female)
5801N50E-80011	300kHZ~8GHz	N type (female)	N type (female)
5801N50E-80012	300kHZ~8GHz	N type (male)	N type (male)
5801S50E-80020	300kHZ~8GHz	SMA type (male)	SMA type (female)
5801S50E-80021	300kHZ~8GHz	SMA type (female)	SMA type (female)
5801S50E-80022	300kHZ~8GHz	SMA type (male)	SMA type (male)

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