

# TA7300/TA7100 Vector Network Analyzer

## Overview

TA7300/7100 is mainly applied for Communication, Satellite, TV & Broadcast industries and High education.

### 1. Application

- Communication: Antenna, Amplifying Module, Coaxial Cable, Connector and so on
- Satellite TV: Amplifiers, Splitters and so on
- Wireless Broadcasting & TV: Antenna, Transmitter
- CATV: Amplifiers, Splitters and so on
- Other industries: researching and manufacture of crystal, surface acoustic and cable
- Education instrument

### 2. Main Testing Functions

Transmission, Insertion Loss, Gain, Insertion Phase, Isolation, Group Delay, Return Loss, VSWR, Impedance, Center Frequency of Crystal, surface acoustic, 3dB Bandwidth, In-band flatness, Out-band Restrain, Rectangle Coefficient, Q-Value and so on

### 3. Model

TA7300A/TA7100A	50 Ω
TA7300B/TA7100B	75 Ω



## Features

- Two channels, Four traces display
- Fast sweep time
- Save/ print/ recall function
- USB, VGA, LAN interface
- Automatic PASS/FAIL judgement

## Specifications

	TA7300	TA7100
<b>Source</b>		
Frequency Range	300 kHz ~ 3.2 GHz	100 kHz ~ 1.8 GHz
Frequency stability	≤±5 ppm	≤±5 ppm
Frequency Resolution	1k Hz	1k Hz
Output Power Level	Typical 0 dBm, -30 dBm	Typical 0 dBm, -30 dBm
Directivity	≥50 dB (After Vector calibration)	≥50 dB (After Vector calibration)
VSWR	≤1.3	≤1.3
<b>Receiver</b>		
Resolution Bandwidth	1kHz ~ 50 kHz	1kHz ~ 50 kHz
Dynamic Range	≥80 dB (RBW=1 kHz)	≥80 dB (RBW=1 kHz)
Maximum Input Level	+ 5dBm	+ 5 dBm
VSWR	≤1.2	≤1.2
<b>Accuracy</b>		
Transmission	≤±0.1 dB/1° (+5~-20dB)	≤±0.1 dB/1° (+5~-20dB)
	≤±0.2 dB/2° (-20~-40dB)	≤±0.2 dB/2° (-20~-40dB)
	≤±0.4 dB/4° (-40~-60dB)	≤±0.4 dB/4° (-40~-60dB)
Reflection	≤±0.4 dB/3° (0~-15dB)	≤±0.4 dB/3° (0~-15dB)
	≤±0.8 dB/6° (-15~-25dB)	≤±0.8 dB/6° (-15~-25dB)
	≤±2.0 dB/15° (-25~-35dB)	≤±2.0 dB/15° (-25~-35dB)

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<b>Display</b>		
Sweep Time	100ms~20s	100ms~20s
Display	10.4" Color TFT LCD	10.4" Color TFT LCD
<b>Measurement</b>		
Measurement	Channels 2 channels, 4 tracks	
Measurement Format	A,B,R,A/R,B/R,A/B	
MeasurementParameters	Logarithm amplitude, Linearity amplitude, Phase, Group delay, Real part, Imaginary part, VSWR, Smith chart, Pole chart	
Interface	Front Panel Type-N Input and Output port, USB2.0 port, Standard VGA output and 10M/100M LAN port	
<b>Others</b>		
Power Supply	AC 90 V ~ 250 V / 50 Hz	
Working Environment: Temperature:	Temperature: -10°C ~ 40°C, Humidity: ≤75%	
Store Environment:	-10°C ~ 50°C	
Weight	6 kg	
Inside Storage	1 G Byte	
Dimension	365 mm × 160 mm × 260 mm	

## Application

TA7300/TA7100 is the best combination of high speed, accuracy, productive and low cost. It helps reduce the testing time, increase output, and lower the overall cost of components. The analyzer is qualified in testing typical RF components such as: Filter, Amplifier, Antennas, Cables, Taps, and Splitters.

### Amplifier Measurement

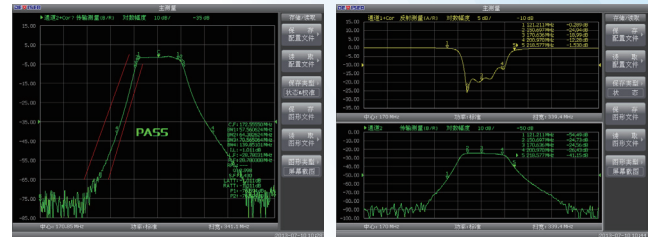
With high precision receiver and accurate signal level from signal source, TA7300/TA7100 can perform qualitative measurement: working frequency range, gain, flatness, AGC feature, return loss and isolation, and gain compression of amplifier. Also, power sweep function can catch 1dB compression point of amplifier. TA7300/TA7100 provides various tests and display modes to support high accuracy testing, especially for reflection strictly requested in bidirectional digital HFC network.



Gain and Reflection loss



The special two windows mode helps users to test filter both in narrowband and wideband and all filter parameters list can be displayed.

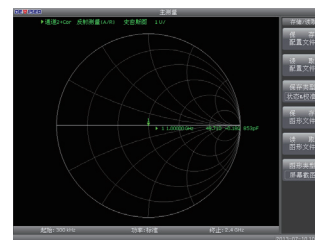


Auto Diagnose

Dual Windows

### Antenna Measurement

The main function parameters of antenna are gain, input impedance, standing wave ratio, polarization method, and return loss. With TA7300/TA7100 you can easily test medium wave antennas, short wave antennas and the antennas with the frequency under 3200MHz.

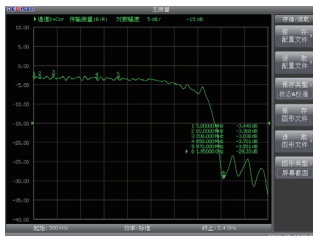


Antenna Impedance



### Splitter Measurement

TA7300/TA7100 can measure transmission and reflection parameter of splitter including insertion loss, flatness, isolation, return loss and so on.



300kHz~2400MHz



### Cable Measurement

TA7300/TA7100 can get the cable loss and transmission constant through measure the cable's parameters: insertion loss, impedance, return loss, standing wave ratio and so on. And every point measurement speed can be set between 0.3ms~20ms.

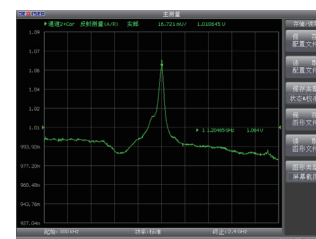


### Filter Measurement

TA7300/TA7100 can not only test various types of filter transmission and reflection, but also with intelligent analysis module accurately display center frequency, NdB bandwidth, insert loss, Q value and group delay. Also its automatic



Pass/Fail function can significantly speed up the test.



Impedance Mis-matching