Test & Measurement
Product Information

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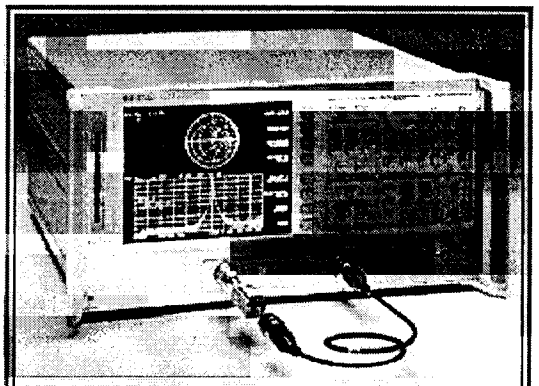
HP 8753E RF Network Analyzer, 30 kHz to 3 or 6 GHz



HP 8753E RF vector network analyzer, 30 kHz to 3 or 6 GHz

Summary Features Specifications Key Literature Ordering Assistance Related Info

The HP 8753E RF network analyzer offers an unbeatable combination of speed, performance and ease-of-use to solve your measurement needs, whether in the R&D laboratory or on the production floor. With an integrated S-parameter test set covering 30 kHz to 3 or 6 GHz, up to 110 dB of dynamic range, and both frequency and power sweeps, the HP 8753E gives you a complete solution for characterizing the linear and nonlinear behavior of active and passive networks, devices, components and sub-systems. A new processor has been incorporated which makes measurement and data-transfer speeds three to seven times faster than the previous model.

The network analyzer features two independent measurement channels that can measure and display all four S-parameters simultaneously.[1] You can choose to display any combination of reflection and transmission parameters, with magnitude, phase, group-delay, Smith-chart, polar, SWR, or time-domain formats. Easy-to-use softkeys let you access measurement functions quickly and you can view results in overlay or split-screen format on the crisp, LCD color display (with one, two or four graticules). A VGA-compatible output has been added to drive larger external monitors for optimum viewing.

[1]Available Q4 1998

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- 30 kHz to 3 or 6 GHz frequency range
- Integrated S-parameter test set with solid-state switching

- Up to 110 dB dynamic range
- Fast measurement speeds, data-transfer rates, and instrument-state recalls
- Large color LCD display with VGA output for external monitors
- Display all four S-parameters at the same time (available Q2 1998)
- Save/recall instrument states and data to built-in floppy-disk drive
- Optional time-domain and swept-harmonic measurements

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Specifications Summary

Test Set
Integrated S-parameter with complete forward and reverse measurements in 50 ohm (standard) or 75 ohm (Option 075). External test sets supported with Option 011 (deletes internal test set).

Test Port Output

Frequency Characteristics	
Range:	30 kHz to 3 GHz (std.) 300 kHz to 3 GHz (Option 011) 30 KHz to 6 GHz (Option 006)
Resolution:	1 Hz
Accuracy:	±10 ppm at 25 °C ±5 °C
Output Characteristics	
Power Range:	-85 to +10 dBm
Resolution:	0.05 dB
Sweep Range:	25 dB
Level Accuracy:	±1.0 dB relative to 0 dBm output level
Level Linearity:	(-15 to +5 dBm) ±0.2 dB (typical below 300 kHz) (+5 to +10 dBm) ±0.5 dB (typical below 300 kHz)
Impedance:	50 ohm
2nd Harmonic:	<-25 dBc at +10 dBm (16 MHz to 3 GHz)
3rd Harmonic:	<-25 dBc at +10 dBm (16 MHz to 2 GHz)
Nonharmonic Spurious (typical)	
Mixer Related:	<-30 dBc at +10 dBm (typical)

Test Port Input Characteristics

Frequency Range:	30 kHz to 3 GHz (std.); 30 kHz to 6 GHz (Option 006)
Average Noise Level	
3 kHz BW:	-82 dBm (<3 GHz), -77 dBm (3 to 6 GHz)
10 Hz BW:	-102 dBm (<3 GHz), -97 dBm (3 to 6 GHz)
Maximum Input Level:	+10 dBm
Damage Level:	+26 dBm or 35 Vdc
Impedance:	50 ohm (75 ohm with Option 075)

Group Delay Characteristics

Range:	1/(2 x minimum aperture)
Aperture	
Maximum:	20% of frequency span
Minimum:	(frequency span)/(no. of pts. -1)
Group Delay Accuracy(in seconds)	
	±(phase accuracy in degrees)/ (360 x aperture in Hz)

Option 002 Harmonic-Measurement Capability

2nd Harmonic:	<-15 dBc at +8 dBm
3rd Harmonic:	<-30 dBc at +8 dBm
Harmonic-Measurment Accuracy	(25 ° ±5 °C)
	±1 dB (16 MHz to 3 GHz)
	±3 dB (with Option 006) 3 GHz to 6 GHz
Harmonic-Measurement Dynamic Range	
	-40 dBc (output = -10 dBm, input <-15 dBm)

Physical Characteristics

Size:	425 mm W x 222 mm H x 457 mm D (16.75 in x 8.75 in x 18 in)
Weight	
Net:	21 kg (46 lb)
Shipping:	35 kg (77 lb)

Declarations of Conformity

This product adheres to European Regulations.

If you have Adobe's Acrobat Reader already available on your system, please click on the icon provided below to print or view the specifications.

If you do not have the Adobe Acrobat Reader necessary for viewing PDF documentation, download your free Acrobat Reader, and then click on the icon below.

European Regulatory Declarations of Conformity.

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HP 8753E	RF Network Analyzer, 30 kHz to 6 GHz
Opt 002	Harmonic-Measurement Upgrade
Opt 006	6 GHz Upgrade for Standard Units
Opt 010	Time-Domain Capability
Opt 011	Delete Built-In Test Set
Opt 075	75-ohm Impedance
Opt 1D5	High-Stability Frequency Reference Upgrade
Opt 1DT	Delete display
Opt 611	6 GHz Upgrade for Option 011 Units
Transit Case	9211-2657

HP 85047A	50-ohm S-Parameter Test Set -- 6 GHz
Opt 009	Mechanical Test-Port Switch
Opt 913	Rack-Mount Kit (HP 5062-4069)