Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 2 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, covering the cost of warranty returns BOTH ways (plus supplying a loan unit, if available) and supplying a free business tool with every order.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based near Heathrow Airport in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

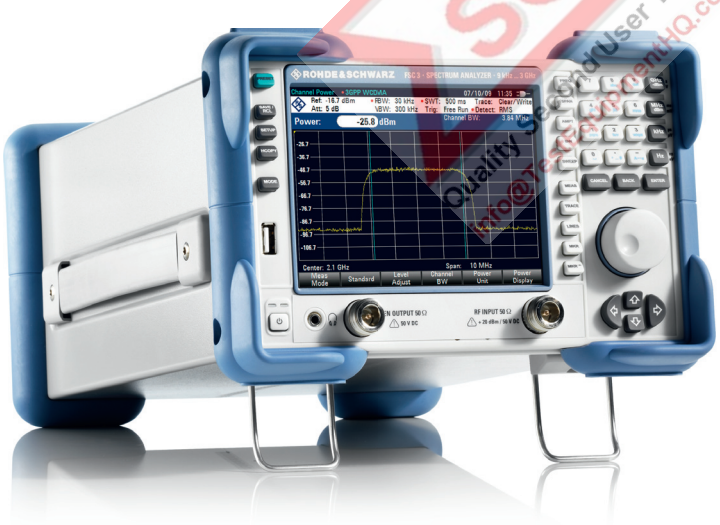
Test equipment Solutions Ltd
Unit 8 Elder Way
Waterside Drive
Langley
Berkshire
SL3 6EP

T: +44 (0)1753 596000
F: +44 (0)1753 596001

Email: info@TestEquipmentHQ.com
Web: www.TestEquipmentHQ.com

R&S®FSC
Spectrum Analyzer
Professional spectrum analysis – compact and cost-efficient

The R&S®FSC is a compact, cost-efficient solution that offers all essential features of a professional spectrum analyzer with Rohde&Schwarz quality. It covers a wide range of applications from simple development tasks to production, or can be used for training RF professionals. Moreover, it is ideal for applications in service or maintenance. The R&S®FSC features a wealth of functions for simplifying and speeding up the development and testing of RF products. Its good RF characteristics and its high measurement accuracy help to ensure reliable and reproducible measurement results.



ROHDE&SCHWARZ

R&S®FSC Spectrum Analyzer At a glance

Four different R&S®FSC models are available in the frequency range from 9 kHz to 3 GHz or 6 GHz. Separate models with tracking generator are available for each frequency range. An optional preamplifier that is available for all models increases sensitivity for measuring weak signals. Owing to its compact design, the R&S®FSC takes up only a minimum of space on a lab bench. When installed in a rack, two R&S®FSC or one R&S®FSC and one R&S®SMC signal generator situated next to each other fit into the 19" space.

Key facts

- Frequency range 9 kHz to 3 GHz or 6 GHz
- Resolution bandwidths 10 Hz to 3 MHz
- High sensitivity (< –141 dBm (1 Hz), with optional preamplifier < –161 dBm (1 Hz))
- High third order intercept (> 10 dBm, typ. 15 dBm)
- Low measurement uncertainty (< 1 dB)
- Internal tracking generator (model .13/.16)
- Storage of measurement results on USB stick
- LAN and USB interface for remote control and transfer of measurement data
- R&S®FSCView software for simple documentation of measurement results
- Compact dimensions
- Low power consumption (12 W)

Measurement functions

- Noise marker for determining the noise power referenced to 1 Hz measurement bandwidth
- Frequency counter with 0.1 Hz resolution
- Limit line monitoring (pass/fail function) for indicating whether the DUT complies with defined limits
- Modulation depth measurement of AM-modulated signals
- Measurement of harmonics and total harmonic distortion
- AM/FM audio demodulator (audio via built-in loudspeaker or via headphones)
- Scalar transmission measurement for fast and simple determination of the transmission characteristics of DUTs such as cables, filters or amplifiers (available for the R&S®FSC models .13 and .16 with tracking generator)
- Location of EMC problems on printed boards using the R&S®HZ-15 near-field probe set for emission measurements from 30 MHz to 3 GHz
- Field-strength measurements taking into account the specific antenna factors of the connected antenna, the field strength being displayed directly in dBµV/m
- Power measurement on pulsed signals in the time domain with predefined settings for the GSM and EDGE mobile radio standards
- Channel power measurement in a definable transmission channel with predefined settings for 3GPP WCDMA, cdmaOne, CDMA2000® and LTE mobile communications standards
- Measurement of occupied bandwidth (OBW)
- Adjacent channel power, absolute or referenced to the TX carrier for up to 12 channels and 12 adjacent channels
- Gated sweep for displaying the modulation spectrum of burst signals such as GSM or WLAN
- Measurement of spurious emissions

Easy operation

The R&S®FSC is operated via the keyboard and a rotary knob with an integrated enter function. All important settings such as frequency, bandwidth, span or marker can be directly accessed via hardkey buttons. Clearly arranged softkeys at the lower edge of the touch screen provide additional menu selections. The user interface is available in different languages: English, Korean, Japanese, Chinese, Russian, Italian, Spanish, Portuguese, French, Hungarian and German.

R&S®FSCView software for recording measurement results

The R&S®FSCView software that comes with the analyzer is an easy-to-use tool for managing, evaluating and documenting measurement results.

Benefits and key features

- Data transfer between the R&S®FSC and a PC via USB/LAN
- Easy postprocessing of measurement results by means of data export in ASCII or MS Excel format
- Storage of graphics data in standard formats
- Printout of measurement results, including the instrument settings used
- Simple comparison of measurement results
- Subsequent analysis of the measurement results using markers
- Subsequent display of limit lines
- Editor for creating limit lines and antenna factors
- Compatibility with Windows XP and Vista (32-bit version)

Remote-control operation

All functions of the R&S®FSC can be controlled via the USB or LAN interface using SCPI-compatible remote-control commands. For this purpose, drivers for LabWindows/CVI, LabView, VXI-Plug&Play and Linux are available.

CDMA2000® is a registered trademark of the Telecommunications Industry Association (TIA - USA).

Specifications in brief

		R&S®FSC3	R&S®FSC6
Frequency range		9 kHz to 3 GHz	9 kHz to 6 GHz
Resolution bandwidth		10 Hz to 3 MHz	
Displayed average noise level	without preamplifier, RBW = 1 Hz		
	10 MHz to 2 GHz 2 GHz to 3 GHz 3 GHz to 3.6 GHz 3.6 GHz to 5 GHz 5 GHz to 6 GHz	< –141 dBm, typ. –146 dBm < –138 dBm, typ. –143 dBm – – –	< –141 dBm, typ. –146 dBm < –138 dBm, typ. –143 dBm < –138 dBm, typ. –143 dBm < –142 dBm, typ. –146 dBm < –140 dBm, typ. –144 dBm
	with R&S®FSC-B22 preamplifier option, RBW = 1 Hz		
	10 MHz to 1 GHz 1 GHz to 2 GHz 2 GHz to 3 GHz 3 GHz to 5 GHz 5 GHz to 6 GHz	< –161 dBm, typ. –165 dBm < –159 dBm, typ. –163 dBm < –155 dBm, typ. –159 dBm – –	< –161 dBm, typ. –165 dBm < –159 dBm, typ. –163 dBm < –155 dBm, typ. –159 dBm < –155 dBm, typ. –159 dBm < –151 dBm, typ. –155 dBm
IP3	frequency 1 GHz	typ. 15 dBm	
Phase noise	frequency 500 MHz		
	30 kHz carrier offset 100 kHz carrier offset 1 MHz carrier offset	< –95 dBc (1 Hz) < –100 dBc (1 Hz) < –120 dBc (1 Hz)	
Detectors		sample, max/min peak, auto peak, RMS	
Level measurement uncertainty	10 MHz < f ≤ 3.6 GHz 3 GHz < f < 3.6 GHz 3.6 GHz < f ≤ 6 GHz	< 1 dB, typ. 0.5 dB	< 1 dB, typ. 0.5 dB < 1 dB, typ. 0.5 dB < 1.5 dB, typ. 1 dB
Tracking generator (model .13/.16)			
Frequency range Output power Dynamic range (transmission)	 100 kHz < f < 300 kHz 300 kHz < f < 3 GHz 3 GHz < f < 6 GHz	100 kHz to 3 GHz 0 dBm (nominal) > 60 dB, typ. 80 dB > 70 dB, typ. 90 dB –	100 kHz to 6 GHz 0 dBm (nominal) > 60 dB, typ. 80 dB > 70 dB, typ. 90 dB > 70 dB, typ. 90 dB
Display		5.7" (14.5 cm) color LCD with VGA resolution	
Dimensions	(W x H x D)	233 mm × 158 mm × 350 mm (9.2 in × 6.2 in × 13.8 in)	
Weight		4.5 kg (9.92 lbs)	

Ordering information

Designation	Type	Order No.
Spectrum Analyzer, 9 kHz to 3 GHz	R&S®FSC3	1314.3006.03
Spectrum Analyzer, 9 kHz to 3 GHz, with tracking generator	R&S®FSC3	1314.3006.13
Spectrum Analyzer, 9 kHz to 6 GHz	R&S®FSC6	1314.3006.06
Spectrum Analyzer, 9 kHz to 6 GHz, with tracking generator	R&S®FSC6	1314.3006.16
Accessories supplied		
Power cable, USB cable for connection to PC, quick start guide and CD-ROM with R&S®FSCView software and documentation		
Options		
Preamplifier, 100 kHz to 3 GHz/6 GHz, for the R&S®FSC3/FSC6	R&S®FSC-B22	1314.3535.02
Accessories		
LAN Cable	R&S®HA-Z210	1309.6152.00
Headphones	R&S®FSH-Z36	1145.5838.02
19" Rack Adapter, for installing two R&S®FSC side-by-side	R&S®ZZA-T33	1109.4458.00
19" Rack Adapter, for installing one R&S®FSC	R&S®ZZA-T34	1109.4464.00
19" Adapter for installing a combination of the R&S®FSC/R&S®SMC	R&S®ZZA-T37	1109.4529.00
Matching Pad, 50 Ω/75 Ω, bidirectional, 0 Hz to 2.7 GHz, N female/N male, power-handling capacity 2 W	R&S®RAM	0358.5414.02
Matching Pad, 50 Ω/75 Ω, unidirectional, 0 Hz to 2.7 GHz, N female/N male, power-handling capacity 2 W	R&S®RAZ	0358.5714.02
Matching Pad, 50 Ω/75 Ω, bidirectional, 0 Hz to 1 GHz, BNC female/N male, power-handling capacity 1 W	R&S®FSH-Z38	1300.7740.02
Near-Field Probe Set	R&S®HZ-15	1147.2736.02
Preamplifier for R&S®HZ-15	R&S®HZ-16	1147.2720.02

Service you can rely on

- Worldwide
- Local and personalized
- Customized and flexible
- Uncompromising quality
- Long-term dependability

About Rohde&Schwarz

Rohde&Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established more than 75 years ago, Rohde&Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Environmental commitment

- Energy-efficient products
- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system

Certified Quality System
ISO 9001

Rohde&Schwarz GmbH&Co. KG
www.rohde-schwarz.com

Regional contact

- Europe, Africa, Middle East
  +49 89 4129 137 74
  customersupport@rohde-schwarz.com
- North America
  1 888 TEST RSA (1 888 837 87 72)
  customer.support@rsa.rohde-schwarz.com
- Latin America
  +1 410 910 79 88
  customersupport.la@rohde-schwarz.com
- Asia/Pacific
  +65 65 13 04 88
  customersupport.asia@rohde-schwarz.com

PD 5214.3830.32 | Version 03.00 | July 2010 | R&S®FSC

R&S®FSC
Spectrum Analyzer
Specifications

ROHDE&SCHWARZ

CONTENTS

Specifications apply under the following conditions:
15 minutes warm-up time at ambient temperature, specified environmental conditions met, calibration cycle adhered to.
Data without tolerances: typical values only. Data designated as “nominal” applies to design parameters and is not tested.

Base unit

Frequency

Frequency range	model .03/.13	9 kHz to 3 GHz
	model .06/.16	9 kHz to 6 GHz
Frequency resolution		1 Hz

Reference frequency, internal, nominal		
Aging per year		1×10^{-6}
Temperature drift	0 °C to +30 °C	1×10^{-6}
	+30 °C to +50 °C	3×10^{-6}
Achievable initial adjustment accuracy		5×10^{-7}
Total reference uncertainty		(time since last adjustment × aging rate) + temperature drift + calibration accuracy

Frequency readout		
Marker resolution		0.1 Hz
Uncertainty		±(marker frequency × reference uncertainty + 10 % × resolution bandwidth + ½ (span/(sweep points – 1)) + 1 Hz)
Number of sweep (trace) points		631
Marker tuning frequency step size		span/630
Frequency counter resolution		0.1 Hz
Count uncertainty	S/N > 25 dB	±(frequency × reference uncertainty + ½ (last digit))
Frequency span		0 Hz, 10 Hz to 3 GHz/6 GHz
Span setting uncertainty		±span/630

Spectral purity, SSB phase noise	f = 500 MHz, carrier offset	
	30 kHz	< –95 dBc (1 Hz), typ. –105 dBc (1 Hz)
	100 kHz	< –100 dBc (1 Hz), typ. –110 dBc (1 Hz)
	1 MHz	< –120 dBc (1 Hz), typ. –127 dBc (1 Hz)

Sweep time

Sweep time	span = 0 Hz	200 µs to 100 s
	10 Hz ≤ span ≤ 600 MHz	20 ms to 1000 s
	span > 600 MHz	20 ms × span/600 MHz to 1000 s
Uncertainty	span = 0 Hz	1 %, nominal
	span ≥ 10 Hz	3 %, nominal

Bandwidths

Resolution bandwidths		
Range	–3 dB bandwidth	10 Hz to 3 MHz in 1/3 sequence
Bandwidth accuracy	10 Hz ≤ RBW ≤ 300 kHz	< 5 %, nominal
	RBW > 300 kHz	< 10 %, nominal
Selectivity	60 dB:3 dB	< 5 (Gaussian type filters), nominal
Video filters		
Range	–3 dB bandwidth	10 Hz to 3 MHz in 1/3 sequence

Level

Display range		displayed noise floor to +30 dBm
Maximum rated input level with RF attenuation ≥ 10 dB		
DC voltage		50 V
CW RF power		30 dBm (= 1 W)
Peak RF power	< 3 s duration	33 dBm (= 2 W)
Max. pulse voltage		150 V
Max. pulse energy	pulse width 10 µs	10 mWs
Maximum rated input level with RF attenuation < 10 dB		
DC voltage		50 V
CW RF power		20 dBm (= 100 mW)
Peak RF power	< 3 s duration	23 dBm (= 200 mW)
Max. pulse voltage		50 V
Max. pulse energy	pulse width 10 µs	1 mWs
Intermodulation		
Third-order intermodulation (TOI), nominal values	intermodulation-free dynamic range, signal level 2 × –20 dBm, RF attenuation = 0 dB, without RF preamplifier (R&S®FSC-B22 option) or RF preamplifier = OFF	
	f_{in} < 300 MHz	> 54 dBc (TOI > +7 dBm, typ. +11 dBm)
	300 MHz ≤ f_{in} < 3.6 GHz	> 60 dBc (TOI > +10 dBm, typ. +15 dBm)
	3.6 GHz ≤ f_{in} ≤ 6 GHz	> 46 dBc (TOI > +3 dBm, typ. +10 dBm)
	signal level 2 × –40 dBm, RF attenuation = 0 dB, RF preamplifier (R&S®FSC-B22 option) = ON	
	f_{in} < 300 MHz	> 50 dBc (TOI –15 dBm)
	300 MHz ≤ f_{in} ≤ 6 GHz	> 56 dBc (TOI –12 dBm)
Second harmonic intercept (SHI), nominal values	RF attenuation = 0 dB, without RF preamplifier (R&S®FSC-B22 option) or RF preamplifier = OFF	
	f_{in} = 20 MHz to 1.5 GHz	+40 dBm
	f_{in} = 1.5 GHz to 3 GHz	+30 dBm
	RF attenuation 0 dB, RF preamplifier (R&S®FSC-B22 option) = ON	
	f_{in} = 100 MHz to 3 GHz	0 dBm
Displayed average noise level	RF attenuation 0 dB, termination 50 Ω, RBW = 100 Hz, VBW = 10 Hz, sample detector, log scaling, tracking generator = OFF, normalized to 1 Hz, without RF preamplifier (R&S®FSC-B22 option) or RF preamplifier = OFF	
	frequency	
	9 kHz to 100 kHz	< –108 dBm, typ. –118 dBm
	100 kHz to 1 MHz	< –115 dBm, typ. –125 dBm
	1 MHz to 10 MHz	< –136 dBm, typ. –144 dBm
	10 MHz to 2 GHz	< –141 dBm, typ. –146 dBm
	2 GHz to 3.6 GHz	< –138 dBm, typ. –143 dBm
	3.6 GHz to 5 GHz	< –142 dBm, typ. –146 dBm
	5 GHz to 6 GHz	< –140 dBm, typ. –144 dBm
	RF attenuation 0 dB, termination 50 Ω, RBW = 100 Hz, VBW = 10 Hz, sample detector, log scaling, tracking generator = OFF, normalized to 1 Hz, RF preamplifier (R&S®FSC-B22 option) = ON	
	frequency	
	100 kHz to 1 MHz	< –133 dBm, typ. –143 dBm
	1 MHz to 10 MHz	< –157 dBm, typ. –161 dBm
	10 MHz to 1 GHz	< –161 dBm, typ. –165 dBm
	1 GHz to 2 GHz	< –159 dBm, typ. –163 dBm
	2 GHz to 5 GHz	< –155 dBm, typ. –159 dBm
	5 GHz to 6 GHz	< –151 dBm, typ. –155 dBm

Immunity to interference, nominal values		
Image frequencies	f_{in} – 2 × 21.4 MHz	< –70 dBc, typ. –80 dBc
	f_{in} – 2 × 831.4 MHz	< –70 dBc, typ. –90 dBc
	f_{in} – 2 × 4881 MHz	–60 dBc
Intermediate frequencies	21.4 MHz, 831.4 MHz, 4881.4 MHz	–60 dBc, typ. –80 dBc
	8931.4 MHz	–50 dBc
Other interfering signals, signal level – RF attenuation < –20 dBm	f ≤ 3.6 GHz spurious at f_{in} – 2440.7 MHz	< –60 dBc
	3.6 GHz < f ≤ 6 GHz spurious at f_{in} – 4465.7 MHz	< –60 dBc
Other interfering signals, related to local oscillators	f ≤ 3.6 GHz	
	Δf < 300 kHz	–60 dBc
	Δf ≥ 300 kHz	< –60 dBc
	f > 3.6 GHz	
	Δf < 300 kHz	–54 dBc
	Δf ≥ 300 kHz	< –54 dBc
	f = receive frequency	
Residual spurious response	input matched with 50 Ω, without input signal, RBW ≤ 30 kHz, RF attenuation = 0 dB, tracking generator = OFF	< –90 dBm

Level display		
Logarithmic level axis		1/2/5/10/20/50/100 dB, 10 divisions
Linear level axis		0 % to 100 %, 10 divisions
Number of traces		2
Trace detectors		max peak, min peak, auto peak, sample, RMS
Trace functions		clear/write, max hold, min hold, average, view
Setting range of reference level		–80 dBm to +30 dBm
Units of level axis		dBm, dBmV, dBµV, V, W

Level measurement uncertainty		
Absolute level uncertainty at 100 MHz	+20 °C to +30 °C	±0.3 dB (σ = 0.1 dB)
Frequency response (+20 °C to +30 °C)	9 kHz ≤ f < 10 MHz	±1.5 dB, nominal
	10 MHz ≤ f ≤ 3.6 GHz	±1 dB (σ = 0.33 dB)
	3.6 GHz < f ≤ 6 GHz	±1.5 dB (σ = 0.5 dB)
Attenuator uncertainty		±0.3 dB (σ = 0.1 dB)
Uncertainty of reference level setting		±0.1 dB, nominal
Display nonlinearity	S/N > 16 dB, 0 dB to –50 dB, logarithmic level display	±0.2 dB (σ = 0.067 dB)
Bandwidth switching uncertainty	reference: RBW = 10 kHz	±0.1 dB, nominal
Total measurement uncertainty	95 % confidence level, +20 °C to +30 °C, S/N > 16 dB, 0 dB to –50 dB below reference level, RF attenuation auto	
	10 MHz < f ≤ 3.6 GHz	±1 dB, typ. ±0.5 dB
	3.6 GHz < f ≤ 6 GHz	±1.5 dB, typ. ±1 dB

Trigger functions

Trigger		
Trigger source		free run, video, external
External trigger level	low → high transition	2.4 V, nominal
	high → low transition	0.7 V, nominal

Tracking generator (model .13/.16 only)

Frequency range	model .13	100 kHz to 3 GHz
	model .16	100 kHz to 6 GHz
Connector		N female, 50 Ω
VSWR	100 kHz ≤ f ≤ 1 GHz	< 1.5, nominal
	1 GHz < f ≤ 3 GHz	< 2, nominal
	3 GHz < f ≤ 6 GHz (model .16 only)	< 2, nominal
Output level	tracking generator attenuation = 0 dB	0 dBm, nominal
Tracking generator attenuator		0 dB to 40 dB in 1 dB steps
Dynamic range	RF attenuation = 0 dB, tracking generator attenuation = 10 dB, RBW = 1 kHz	
	100 kHz ≤ f < 300 kHz	> 60 dB, typ. 80 dB
	300 kHz ≤ f < 3 GHz	> 70 dB, typ. 90 dB
	3 GHz ≤ f < 6 GHz (model .16 only)	> 70 dB, typ. 90 dB
Reverse power		
DC voltage		50 V
CW RF power		+20 dBm (= 0.1 W)
Max. pulse voltage		50 V
Max. pulse energy (10 µs)		1 mWs

Inputs and outputs

RF input		
Impedance		50 Ω
Connector		N female
VSWR	100 kHz ≤ f ≤ 1 GHz	< 1.5, nominal
	1 GHz < f ≤ 6 GHz	< 2, nominal
Setting range of input attenuator		0 dB to 40 dB in 5 dB steps
RF preamplifier gain	with R&S®FSC-B22 option	20 dB, nominal
AF output		
AF demodulation types		AM and FM
Connector		3.5 mm mini jack
Output impedance		32 Ω, nominal
Voltage (open circuit)		V_{RMS} adjustable from 0 V to > 100 mV
USB interface		
Front panel		USB host interface, version 1.1
Connector		USB type A plug, version 1.1
Memory sticks supported		≤ 4 Gbyte, USB version 1.1 or 2.0
Rear panel		USB device interface, version 1.1
Connector		USB type B plug, version 1.1
External reference, external trigger		
Connector		BNC female, 50 Ω
Mode	selectable	external reference, external trigger
External reference input	required level	0 dBm
	frequency	10 MHz
External trigger threshold	low → high transition	2.4 V, nominal
	high → low transition	0.7 V, nominal
IF out		
Connector		BNC female, 50 Ω
Frequency		21.4 MHz
DC supply input		
Connector		5 mm DIN 45323 female
Input voltage range		14 V to 16 V, nominal
Input current		0.9 A to 0.7 A

General data

Power supply		
AC supply	input specifications	100 V AC to 240 V AC, 50 Hz to 60 Hz, 400 Hz, 75 VA
DC supply	input specifications	14 V to 16 V, 0.9 A to 0.7 A, nominal
Power consumption		12 W, nominal
Safety		in line with IEC 1010-1, EN 61010-1, UL 3111-1, CSA C22.2 No. 1010-1
Test mark		VDE, GS, CSA, CSA-NRTL

Manual operation		
Languages		Chinese, English, French, German, Italian, Hungarian, Japanese, Korean, Portuguese, Russian, Spanish
Remote control		
Command set		SCPI 1997.0
LAN interface		10/100BaseT, RJ-45
USB interface	rear panel	USB device, type B
Display		
Type		14.5 cm (5,7") LCD TFT color
Resolution		640 × 480 pixel
Audio		
Speaker		internal
Mass memory		
Mass memory		flash memory (internal) USB memory stick (not supplied)
Data storage	internal	> 256 instrument settings and traces
	external, on 1 Gbyte USB memory stick	> 5000 instrument settings and traces
Temperature	operating temperature range	+0 °C to +50 °C
	permissible temperature range	+0 °C to +55 °C
	storage temperature range	–40 °C to +70 °C
Climatic loading	relative humidity	+25/+40 °C at 85 % relative humidity (IEC 60068-2-30)
Mechanical resistance		
Vibration	sinusoidal	IEC 60068-2-6
	random	IEC 60068-2-64
Shock		40 g shock spectrum, in line with MIL-STD-810E, method 516.4 procedure 1, IEC 60068-2-27
EMC		EMC Directive 2004/108/EC including: - IEC/EN 61326 class B (emission) - CISPR 11/EN 55011/group 1 class A (emission) [1] - IEC/EN 61326 Table A.1 (immunity, industrial)

Weight and dimensions		
Dimensions	W × H × D	233 mm × 158.1 mm × 350 mm (9.2 in × 6.2 in × 13.8 in)
Weight		4.5 kg (9.9 lb)

Recommended calibration interval		1 year

[1] **Note regarding use of instrument:**
The instrument complies with the emission requirements stipulated by EN 55011 class A. This means that the instrument is suitable for use in industrial environments. In line with EN 61000-6-4, operation in residential, commercial and business areas is not covered.
Thus, the instrument may not be operated in residential, commercial and business areas, unless additional measures are taken to ensure that EN 61000-6-3 is complied with.

Ordering information

Designation	Type	Order No.
Spectrum Analyzer, 9 kHz to 3 GHz	R&S®FSC3	1314.3006.03
Spectrum Analyzer, 9 kHz to 3 GHz, with tracking generator	R&S®FSC3	1314.3006.13
Spectrum Analyzer, 9 kHz to 6 GHz	R&S®FSC6	1314.3006.06
Spectrum Analyzer, 9 kHz to 6 GHz, with tracking generator	R&S®FSC6	1314.3006.16
Accessories supplied		
Power cable, USB cable for connection to PC, quick start guide and CD-ROM (with operating manual and service manual)		

Options

Designation	Type	Order No.
Preamplifier, 100 kHz to 3 GHz/6 GHz (for the R&S®FSC3/6)	R&S®FSC-B22	1314.3535.02

Recommended extras

Designation	Type	Order No.
Ethernet Cable	R&S®HA-Z210	1309.6152.00
Headphones	R&S®FSH-Z36	1145.5838.02
19” Rack Adapter	R&S®ZZA-T33	1109.4458.00
Matching pad 50/75 Ω, 0 Hz to 2700 MHz, matching at both ends, N-connectors	R&S®RAM	0358.5414.02
Matching pad 50/75 Ω, 0 Hz to 2700 MHz, matching at one end, N-connectors	R&S®RAZ	0358.5714.02
75 ohm matching pad N to BNC (female)	R&S®FSH-Z38	1300.7740.02
Near-Field Probe Set	R&S®HZ-15	1147.2736.02
Preamplifier for R&S®HZ-15	R&S®HZ-16	1147.2720.02

The product brochure containing further information is available under PD 5214. 3330.12 and at www.rohde-schwarz.com.


TEST EQUIPMENT
SOLUTIONS
Quality Second User Test Equipment for Sale or Rental
info@TestEquipmentHQ.com : www.TestEquipmentHQ.com

Service you can rely on

- Worldwide
- Local and personalized
- Customized and flexible
- Uncompromising quality
- Long-term dependability

About Rohde&Schwarz

Rohde&Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde&Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Environmental commitment

- Energy-efficient products
- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system

Certified Quality System
ISO 9001

Rohde&Schwarz GmbH&Co. KG
www.rohde-schwarz.com

Regional contact

- Europe, Africa, Middle East
  +49 89 4129 137 74
  customersupport@rohde-schwarz.com
- North America
  1 888 TEST RSA (1 888 837 87 72)
  customer.support@rsa.rohde-schwarz.com
- Latin America
  +1 410 910 79 88
  customersupport.la@rohde-schwarz.com
- Asia/Pacific
  +65 65 13 04 88
  customersupport.asia@rohde-schwarz.com

PD 5214.3330.22 | Version 01.01 | January 2010 | R&S®FSC
Subject to change