

스펙

FSH 핸드형 스펙트럼 분석기



Spectrum analysis					
		R&S®FSH4	R&S®FSH8	R&S®FSH13	R&S®FSH20
frequency range	models .04/.14/.08/ .18/.13/.23/20/30	9 kHz to 3.6 GHz	9 kHz to 8 GHz	9 kHz to 13.6 GHz	9 kHz to 20 GHz
	models .24/.28	100 kHz to 3.6 GHz	100 kHz to 8 GHz	-	-
Resolution bandwidths		1 Hz to 3 MHz			
Displayed average noise level	without preamplifier, RBW = 1 Hz (normalized)				
	9 kHz to 100 kHz (models .04/.14/ .08/.18 only)	<-108 dBm, -118 dBm typ.		<-96 dBm, -106 dBm typ.	
	100 kHz to 1 MHz	<-115 dBm, -125 dBm typ.			
	1 MHz to 10 MHz	<-136 dBm, -144 dBm typ.			
	10 MHz to 2 GHz	<-141 dBm, -146 dBm typ.			
	2 GHz to 3.6 GHz	<-138 dBm, -143 dBm typ.			
	3.6 GHz to 5 GHz	-	<-142 dBm, -146 dBm typ.		
	5 GHz to 6.5 GHz	-	<-140 dBm, -144 dBm typ.		
	6.5 GHz to 13.6 GHz	-	<-136 dBm, -141 dBm typ.		
	13.6 GHz to 18 GHz	-	-	-	<-134 dBm, -139 dBm typ.
	18 GHz to 20 GHz	-	-	-	<-130 dBm, -135 dBm typ.
	with preamplifier, RBW = 1 Hz (normalized)				
	100 kHz to 1 MHz	<-133 dBm, -143 dBm typ.			
	1 MHz to 10 MHz	<-157 dBm, -161 dBm typ.		<-155 dBm, -160 dBm typ.	
	10 MHz to 2 GHz	<-161 dBm, -165 dBm typ.			
	2 GHz to 3.6 GHz	<-159 dBm, -163 dBm typ.			
	3.6 GHz to 5 GHz	-	<-155 dBm, -159 dBm typ.		
	5 GHz to 6.5 GHz	-	<-151 dBm, -155 dBm typ.		
	6.5 GHz to 8 GHz	-	<-147 dBm, -150 dBm typ.		
	8 GHz to 13.6 GHz	-	-	<-158 dBm, -162 dBm typ.	
13.6 GHz to 18 GHz	-	-	<-155 dBm, -160 dBm typ.		
18 GHz to 20 GHz	-	-	-	<-150 dBm, -155 dBm typ.	
Third-order intercept (IP3)	300 MHz to 3.6 GHz	>10 dBm, +15 dBm typ.			
	3.6 GHz to 20 GHz	-	>3 dBm, +10 dBm typ.		
Phase noise	frequency 500 MHz				
	30 kHz carrier offset	<-95 dBc (1 Hz), -105 dBc (1 Hz) typ.			
	100 kHz carrier offset	<-100 dBc (1 Hz), -110 dBc (1 Hz) typ.			
	1 MHz carrier offset	<-120 dBc (1 Hz), -127 dBc (1 Hz) typ.			
Detectors	-	sample, max. peak, min. peak, auto peak, RMS			
Level measurement uncertainty	10 MHz < f ≤ 3.6 GHz	<1 dB, 0.5 dB typ.			
	3.6 MHz < f ≤ 20 GHz	-	<1.5 dB, 1 dB typ.		
Display		6.5" color LCD with VGA resolution			
Battery operating time (without tracking generator)	R&S®HA-Z204, 4.5 Ah	up to 3 h			
	R&S®HA-Z206, 6.75 Ah	up to 4.5 h			
Dimensions (W × H × D)		194 mm × 300 mm × 69 mm (144 mm) ¹⁾ 7.6 in × 11.8 in × 2.7 in (5.7 in)			
Weight		3 kg			

¹⁾ With carrying handle.

Vector network analysis ²⁾ /vector voltmeter ³⁾				
		R&S®FSH4	R&S®FSH8	R&S®FSH13/20
Frequency range	models .24 /.28 /.23 /.30	300 kHz to 3.6 GHz	300 kHz to 8 GHz	100 kHz to 8 GHz
Output power (port 1)		0 dBm to -40 dBm		-
Output power (port 2)		0 dBm to -40 dBm		0 dBm to -40 dBm
Reflection measurement (S ₁₁ , S ₂₂)				
Directivity	300 kHz to 3 GHz	>43 dB nominal	>43 dB nominal	>43 dB nominal ⁴⁾
	3 GHz to 3.6 GHz	>37 dB nominal	>37 dB nominal	>37 dB nominal ⁴⁾
	3.6 GHz to 6 GHz	-	>37 dB nominal	>37 dB nominal ⁴⁾
	6 GHz to 8 GHz	-	>31 dB nominal	>31 dB nominal ⁴⁾
Display modes	vector reflection and transmission measurement (R&S®FSH-K42)	magnitude, phase, magnitude + phase, Smith chart, VSWR, reflection coefficient, mp, on-port cable loss, electrical length, group delay		
	vector voltmeter (R&S®FSH-K45)	magnitude + phase, Smith chart		
Transmission measurements				
Dynamic range (S ₂₁)	100 kHz to 300 kHz	70 dB typ.	70 dB typ.	-
	300 kHz to 3.6 GHz	>70 dB, 90 dB typ.	>70 dB, 90 dB typ.	-
	3.6 GHz to 6 GHz	-	>70 dB, 90 dB typ.	-
	6 GHz to 8 GHz	-	50 dB typ.	-
Dynamic range (S ₁₂)	100[nbsp]kHz to 300 kHz	80 dB typ.	80 dB typ.	typ. 80 dB
	300 kHz to 3.6 GHz	>80 dB, 100 dB typ.	>80 dB, 100 dB typ.	80 dB, 100 dB typ.
	3.6 GHz to 6 GHz	-	>80 dB, 100 dB typ.	80 dB, 100 dB typ.
	6 GHz to 8 GHz	-	60 dB typ.	60 dB typ.
Display modes	vector reflection and transmission measurement (R&S®FSH-K42)	magnitude (attenuation, gain), phase, magnitude + phase, electrical length, group delay		
	vector voltmeter (R&S®FSH-K45)	magnitude + phase		

²⁾ Available for models .24/.28/.23/30 only; models .24/28 require R&S®FSH-K42 additionally.

³⁾ For models .24/28/23/30 only, requires R&S®FSH-K45.

⁴⁾ Only S22-measurements.