Specifications

Frequency

Range:	9 kHz to 3 GHz
Frequency reading accuracy:	± (Frequency reading x Frequency reference accuracy+ Span x Span accuracy + 0.15 x Resolution bandwidth + 1 kHz)
Marker counter accuracy:	± (Marker frequency x Frequency reference accuracy + 1 LSD) (S/N ≥ 25 dB, SPAN ≤ 200 MHz)
Marker counter resolution:	1 Hz to 1 kHz
Frequency reference source accuracy:	±2 ppm/year ±5 ppm at operating temperature range
Frequency span:	zero, 10 kHz to 3 GHz
Frequency span accuracy:	≤ ±3% (50 kHz ≤ span ≤ 3 GHz) ≤ ±10% (10 kHz ≤ span < 50 kHz, typ. ±3%)
Frequency stability Residual FM:	≤ 100 Hzp-p/100 ms (zero span)
Sideband noise:	≤ 100 dBc/Hz (20 kHz offset)
Resolution 3 dB bandwidth:	300 Hz to 1 MHz 1-3 step
Bandwidth accuracy:	≤ ±20% (RBW 1 kHz to 1 MHz) ≤ ±50% (RBW 300 Hz, typ. ±20%)
Selectivity (60 dB:3 dB):	≤ 15:1 (RBW 1 kHz to 1 MHz) ≤ 20:1 (RBW 300 Hz, 50 dB:3 dB)
6 dB bandwidth:	9 kHz, 120 kHz
Video bandwidth:	10 Hz to 1MHz 1-10 step

Amplitude

Amplitude measurement range:	+30 dBm to Average noise level
Maximum input level:	+30 dBm, 50 VDC
Display range LOG: LIN:	 10 dB/div 8 div, 1,2,5 dB/div 10 div 10%/div of reference level
Reference level range LOG: LIN:	 -64 dBm to + 40 dBm +141.1 µV to + 22.36 V
Input attenuator range:	0 to 50 dB 10 dB step

Sweep

Sweep time:	50 ms to 500 s
Sweep time accuracy:	≤ ±3%
Trigger mode:	FREE RUN, VIDEO, EXT, LINE
Sweep mode:	REPEAT, SINGLE

Dynamic range

Average noise level:	-113 dBm +2 f (GHz) dB (at RBW 1 kHz, VBW 10 Hz, INPUT ATT 0 dB, frequency ≥ 1 MHz)
1 dB gain compression:	> -5 dBm (mixer input level, f ≥ 20 MHz)
Secondary harmonic distortion:	≤ -70 dB (input frequency ≥ 10 MHz, mixer input level -30 dBm)
3rd Order Intermodualation:	≤ -70 dB (input frequency ≥ 10 MHz, mixer input level -30 dBm, Δf > 50 kHz)
Other input spurious:	≤ -60 dB (offset ≥ 20 MHz, mixer input level -30 dBm)
Residual response:	≤ -100 dBm (Frequency ≥ 1 MHz, INPUT ATT = 0 dB, input 50 Ω terminated)

Amplitude accuracy

Calibration signal:	30 MHz, -20 dBm ±0.3 dB
Frequency response:	≤ ±0.5 dB (100 kHz to 3 GHz, ATT = 10 dB) ≤ ±1 dB (100 kHz to 2 GHz) ≤ ±2 dB (9 kHz to 3 GHz) (after calibration at 30 MHz reference)
Scale display accuracy LOG: LIN:	 ≤ ±0.5 dB (0 to -20 dB) (after auto calibration) ≤ ±1.5 dB/70 dB (after auto calibration) ≤ ±1.0 dB/10 dB (after auto calibration) ≤ ±0.2 dB/1 dB (after auto calibration) ±5% of reference level
Input attenuator switching accuracy:	≤ ±0.3 dB (10 dB reference, 30 MHz)
Resolution bandwidth switching accuracy:	≤ ±0.5 dB (after auto calibration)
IF gain error:	≤ ±0.5 dB (after auto calibration)
Total level accuracy:	±1.5 dB (after auto calibration, REF = -50 to 0 dBm, ATT = 10 dB, 2 dB/div, RBW = 300 kHz, f > 100 kHz)

Input/output

RF input connector/impedance:	N type jack/50 Ω (nominal)
VSWR:	≤ 1.5 (100 kHz to 2 GHz, INPUT ATT ≥ 10 dB) ≤ 2.0 (9 kHz to 3 GHz, INPUT ATT ≥ 10 dB)
10 MHz REF. input:	BNC jack, 50 Ω
Input range:	-10 dBm to +10 dBm
Ext. trigger input:	BNC jack, 10 kΩ (nominal), DC coupling
Phone output:	Mini monophonic jack, 8 Ω
GPIB interface:	IEEE-488 bus connector
Serial interface:	D-SUB 9-pin
Printer interface:	D-SUB 25-pin, ESC/P, PCL
Floppy disk drive:	3.5-inch, 1.4 Mbyte, MS-DOS format

General specifications

Operating conditions:	0°C to +50°C, 85%RH max. (without condensation)
Storage conditions:	-20°C to + 60°C
Power supply:	100/200 VAC, auto switching 100 VAC ; 100 V to 120 V, 50 Hz/60 Hz 220 VAC ; 220 V to 240 V, 50 Hz/60 Hz
Power consumption:	200 VA max. (100 VAC)
Weight:	12 kg or less
Dimensions:	Approx. 424 mm (W) x 177 mm (H) x 300 mm (D)

OPT.74 Tracking Generator

Frequency range:	100 kHz to 3.0 GHz
Output level range:	0 dBm to -59.9 dBm (0.1 dB step)
Output level accuracy:	≤ ±0.5 dB (30 MHz, -10 dBm, 20°C to 30°C)
Output level flatness:	at -10 dBm,referenced to 30 MHz ≤ ±1.0 dB (100 kHz to 1.0 GHz) ≤ ±1.5 dB (100 kHz to 3.0 GHz)
Output level switching error:	at referenced to -10 dBm ≤ ±1.0 dB (100 kHz to1.0 GHz, output level ≥ -30 dBm) ≤ ±2.0 dB (100 kHz to 2.6 GHz) ≤ ±3.0 dB (100 kHz to 3.0 GHz)
Output spurious Harmonic: Non-harmonic:	 ≤ -20 dBc (output level =-10 dBm) ≤ -30 dBc (output level =-10 dBm)

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Specifications may change without notification.