

TEKTRONIX

2712

The Tektronix 2712 is a classic, high-value swept spectrum analyzer designed for RF analysis up to 1.8 GHz. Combining a 4-trace digital storage display with a true analog real-time display, it offers robust capabilities for bench and field use, including an internal frequency counter, built-in preamplifier, and optional tracking generator and quasi-peak detector for EMC measurements.

SPECIFICATIONS

General

Interfaces	GPIB (optional), RS-232 (optional)
Display	9-inch CRT, 4 Trace Digital Plus True Analog Display
User Input	Dedicated numeric keypad and logically grouped menu keys

Physical

Power Supply	90 to 250 VAC, 48 to 440 Hz
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	361 × 137 × 445 mm mm
Weight	9.5 kg (approx 21 lbs) kg

Frequency

Frequency Range	9 kHz to 1.8 GHz
Frequency Reference Accuracy	1 × 10 ⁻⁵ (10 ppm) (standard), 5 × 10 ⁻⁷ (0.5 ppm) (with Option 14)
Resolution Bandwidth (RBW) Range	300 Hz to 5 MHz (in 1-3 sequence)
Video Bandwidth (VBW) Range	3 Hz to 300 kHz
Frequency Span Range	Zero span, 1 kHz/div to 180 MHz/div, Max span (1.8 GHz)
Internal Frequency Counter	Standard built-in
Frequency Span Modes	Max Span (1.800 GHz), Zero Span, and Variable Span (1 kHz/div to 180 MHz/div)

Amplitude & Sensitivity

Displayed Average Noise Level (DANL)	-139 dBm (-92 dBmV) with built-in preamp
RF Input Impedance	50 Ohms (75 Ohms optional)
RF Input Connector Type	Type N female
Maximum DC Input Voltage	100 V
Maximum Safe RF Input Level	+20 dBm continuous (with minimum 10 dB attenuation)

Memory & Processing

Internal Memory (RAM)	124 KB
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Measurement Modes & Analysis

EMC Measurements	Supported with optional Quasi-peak detector
Swept Measurements	Up to 1.8 GHz (with optional internal or external tracking generator)

RF Input

RF Input Impedance Options	50 Ω (standard), 75 Ω (with Option 12)
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Amplitude

RF Attenuation Range	0 to 50 dB in 10 dB steps
Vertical Scale Factors	10 dB/div, 5 dB/div, 1 dB/div, and Linear
Reference Level Range	-110 dBm to +20 dBm (50 Ω)

Sweep

Sweep Time Range	50 μ s/div to 2 s/div (in 1-2-5 sequence), zoom down to 1 μ s/div in Zero Span
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Performance

Phase Noise (SSB)	-70 dBc/Hz at 10 kHz offset
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Tracking Generator (Option 04)

Tracking Generator Frequency Range	100 kHz to 1.8 GHz (with Option 04)
Tracking Generator Output Level	0 dBm to -48 dBm in 1 dB steps (with Option 04)

Memory & Storage

Stored Waveform Memory	Up to 108 non-volatile waveforms
Stored Instrument Setups	Up to 108 non-volatile front-panel setups

Amplitude Accuracy

Frequency Response	± 1.5 dB (9 kHz to 1.8 GHz, referenced to 100 MHz, 10 dB RF attenuation)
Absolute Amplitude Accuracy	± 0.4 dB (at 100 MHz, -20 dBm reference level, 10 dB RF attenuation, 3 MHz RBW, 20 °C to 30 °C)
Log Scale Fidelity	± 1.0 dB per 10 dB, up to ± 2.0 dB maximum cumulative error over 80 dB range
Linear Scale Fidelity	$\pm 5\%$ of full scale

Spurious & Distortion

Third-Order Intermodulation Distortion	-70 dBc or lower (for two -30 dBm signals at input mixer)
Second Harmonic Distortion	-70 dBc or lower (for a -40 dBm signal at input mixer)
Residual Responses	-100 dBm or lower (with 0 dB RF attenuation, terminated input, 9 kHz to 1.8 GHz)
LO Emissions at RF Input	-70 dBm or lower (with 0 dB RF attenuation)

Sweep & Trigger

Trigger Modes	Free Run, Internal, Line, External, Single Sweep, TV Line, TV Field
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Inputs & Outputs

Calibrator Output	-20 dBm ±0.3 dB at 100 MHz
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Display

Display Resolution	512 horizontal x 256 vertical points
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TECHNOLOGY

Superheterodyne / Swept-Tuned

APPLICATIONS

RF Analysis, EMC Testing, Signal Monitoring

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