

ANRITSU

MS2711B

The Anritsu MS2711B is a legacy member of the Spectrum Master series of handheld spectrum analyzers, covering a frequency range of 100 kHz to 3.0 GHz. Known for its lightweight, rugged, and battery-operated design, it is optimized for field applications such as wireless transmitter testing, site surveys, and base station maintenance. The MS2711B features a built-in preamplifier as standard, support for optional scalar analysis with a tracking generator, and powerful one-button wireless measurement routines.

SPECIFICATIONS

General

Interfaces	RS-232 serial interface
Display	High-contrast monochrome LCD with backlighting (640 × 480 resolution)
Warm-up Time	5 minutes (typical)

Physical

Power Supply	External DC input (12.5 VDC to 15 VDC), rechargeable and field-replaceable battery
Operating Temperature	-10°C to 50°C °C
Dimensions (W×H×D)	178 mm × 300 mm × 61 mm mm

Frequency Specifications

Frequency Range	100 kHz to 3.0 GHz
Frequency Span Range	10 kHz to 2.99 GHz (plus 0 Hz / zero span)
Tracking Generator Range (Option 20)	10 MHz to 3.0 GHz

Bandwidth (Resolution and Video)

Resolution Bandwidth (RBW) Steps	10 kHz, 30 kHz, 100 kHz, 1 MHz
Video Bandwidth (VBW) Range	100 Hz to 300 kHz
Video Bandwidth Steps	1-3 sequence

Amplitude and Performance

Displayed Average Noise Level (DANL)	< -115 dBm (with standard preamplifier)
Amplitude Accuracy	±2 dB
Attenuator Control	Automatic and manual

RF and Interface Connectors

RF Input Impedance	50 Ω (75 Ω compatible with internal loss-correction for external adapter)
RF Input Connector	Type N female (50 Ω)

Measurement Functions & Features

Standard Measurement Modes	Channel Power, Adjacent Channel Power Ratio (ACPR), Occupied Bandwidth (OBW), Field Strength, Spurious Emissions
AM/FM Demodulation	Available via Option 8
Trace Averaging	Supported
Trace Overlay	Supported
Reference Level Offset	Supported
Marker Functions	4 Markers, delta markers, noise markers
Limit Lines	Standard and segmented limit lines

Display and User Interface

Quick Zoom Display	Zoom-in and Zoom-out in 1-2-5 sequence
Multilingual User Interface	English, Chinese, French, German, Japanese, Spanish

Data Storage and Connectivity

Saved Setup Configurations	Up to 10 measurement setups
Saved Trace Capacity	Up to 200 measurement traces
Alphanumeric Labeling	Supported for saved measurements
Data Timestamping	Automatic time and date stamp
PC Software Compatibility	Includes data analysis software

Hardware Options and Accessories

Preamplifier Type	Built-in, standard
Tracking Generator Option	Option 20, 10 MHz to 3.0 GHz
Standard Included Accessories	Soft carrying case, AC/DC power supply, 12.5V automobile adapter, user guide, data analysis software

Power and Battery System

Battery Type	Rechargeable, field-replaceable NiMH
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Environmental and Compliance

Storage Temperature Range	-20°C to 75°C
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RF Input

Maximum Safe Input Power	+20 dBm, ± 50 VDC
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Amplitude

Amplitude Measurement Range	-115 dBm to +20 dBm
Display Resolution	0.1 dB

Spectral Purity

SSB Phase Noise	≤ -75 dBc/Hz @ 30 kHz offset
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Spurious Responses

Second Harmonic Distortion	<-60 dBc
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Frequency

Frequency Reference Accuracy	±2 ppm
Frequency Reference Aging	±1 ppm/yr

Sweep

Sweep Time	≤ 1.1 s (full span), ≤ 50 ms (zero span)
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Options

Option 2 Narrow Bandwidth	Adds 1 kHz and 3 kHz RBW, 10 Hz and 30 Hz VBW
Option 5 Preamplifier	Option 5 Power Monitor = Power Monitor (requires external sensor)
Option 10 Transmission Measurement	Option 10 High Stability Timebase = +/- 0.2 ppm aging, +/- 0.05 ppm temp stability (0 to 50 °C)
Option 29 Power Meter	Internal Power Meter (3 MHz to 3.0 GHz)
Option 3 Color Screen	Replaces the standard monochrome display with a color LCD
Option 10 High Stability Timebase	+/- 0.2 ppm aging, +/- 0.05 ppm temp stability (0 to 50 °C)
Option 21 Transmission Measurement	Provides built-in RF source over 100 kHz to 3.0 GHz range

Performance

Third-Order Intermod Distortion (TOI)	<-70 dBc (for two -30 dBm tones at input)
Input-Related Spurious	<-70 dBc (for -30 dBm input)
Residual Spurious	<-80 dBm (preamp off, RF input terminated, 10 MHz to 3.0 GHz)
RF Input VSWR	<1.5:1 (100 kHz to 3.0 GHz)
Detector Modes	Peak, Negative Peak, Sample

Power

Battery Operating Time	2.5 hours continuous (typical)
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Environmental

Operating Altitude	up to 4,572 m (15,000 ft.)
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Interfaces

RS-232 Baud Rates	9600, 19200, 38400, 56000 bps
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TECHNOLOGY

Superheterodyne Spectrum Analysis

APPLICATIONS

Field RF Testing, Transmitter Analysis, Site Surveys

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