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Data Sheet

August 13, 2026

ANRITSU

Anritsu ME453M Microwave System Analyzer

The Anritsu ME453M is a microwave system analyzer in the ME453/ME538 Series for measuring transmission-line characteristics in the BB and IF bands of terrestrial microwave radio relay and satellite communications systems. Japanese catalog data for ME453M lists 70 MHz IF with BB frequencies 83.333 kHz through 8.2 MHz and BNC standard I/O. The M suffix selects a BB/IF coincidence set for remote testing interoperability. Primary use: microwave radio IF/BB distortion analysis AC line voltage class: 100 to 127 Vac or 200 to 250 Vac transformer taps Suffix role: M BB/IF coincidence for remote interoperability Specs from Anritsu ME453M TechEyesOnline/catalog excerpts (IF 70 MHz; BB 83.333 kHz–8.2 MHz; BNC) and ME453/ME538 Series descriptions. Confirm exact M-suffix coincidence details, IF level range, and installed options on the unit.



MODEL

Anritsu ME453M

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ME453M

LISTING

<https://aumictechlabs.com/products/me453m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Anritsu ME453M Microwave System Analyzer is a precision instrument for frequency and power measurements across microwave transmission systems. It delivers detailed analysis of transmission line characteristics in Baseband (BB) and Intermediate Frequency (IF) bands, supporting both linear and non-linear distortion measurement. Engineered for defense, broadband communications, and satellite systems, the ME453M validates high-frequency signals in FDM-FM

relay systems, digital microwave radio links, and satellite communication networks. The instrument combines measurement precision with operational simplicity, making it essential for link device adjustment, construction, maintenance, and R&D applications.

Technical Specifications

Frequency coverage spans 70 MHz band (45 to 95 MHz) and 140 MHz band (90 to 190 MHz), with swept IF signal ranges of 45 to 90 MHz (70 MHz band) and 90 to 190 MHz (140 MHz band). Variable side markers accommodate ± 25 MHz (70 MHz band) and ± 50 MHz (140 MHz band). Baseband frequency range extends from 66.7 kHz to 12.39 MHz with automatic selection. Eight BB frequencies are selectable via pushbutton control; Option 05 adds one specified frequency at 55.6 kHz or 27.8 kHz. Modulation frequency ranges from 18 to 100 Hz.

Key Features

- CRT display with signal trace and alphanumeric parameter readout
- Large LED displays for all measurement values
- LED indication of transmitter settings: deviation, sweep width, center frequency
- Automatic receiver configuration and digital parameter display
- Automatic unit assignment for measured values
- Automatic CRT calibration and auto-ranging
- Signal averaging for noise reduction
- Y-STO and AVG-STO trace storage capabilities

Typical Applications

- Group delay and amplitude response characterization
- Modulator/demodulator linearity and sensitivity analysis
- Differential gain and differential phase measurement
- Return loss assessment in IF and BB bands
- Frequency deviation and spectrum analysis
- AM/PM conversion coefficient determination
- Power, gain, and loss measurement across IF/BB bands
- DC characteristic evaluation

Compatibility & Integration

The ME453M operates across 70 MHz and 140 MHz band configurations with independent frequency selection. BB frequency options support multiple standard allocations via Option 05 customization.

Features & description

From manufacturer datasheet

Features

• IF frequency 70 MHz band • BB frequencies through 8.2 MHz listed • Digital display of measurement parameters and results • Internal self control with partial automatic measurement • CRT and large LED measurement presentation • Signal averaging for noisy traces • BB to BB amplitude measurement capability • M suffix BB coincidence for remote testing match

Applications

• Terrestrial microwave radio relay BB/IF characterization • Satellite communications distortion measurements • FDM-FM link equalization and noise analysis • Digital microwave waveform distortion analysis • Link device adjustment, construction, and maintenance • R&D of microwave radio terminal equipment

ME453M Characteristics / Specifications

PARAMETER	VALUE
Model	ME453M
Manufacturer	Anritsu
Instrument Type	Microwave System Analyzer
Alias	ME453M; Anritsu ME453M
Series	ME453 / ME538
IF frequency band	70 MHz
IF impedance	50 ohm
Standard I/O connectors	BNC
Baseband frequency	83.333 kHz
Measurement domains	BB and IF transmission characteristics
Linear distortion measures	amplitude and phase / group delay
Nonlinear distortion use case	analog FDM FM noise contributors
Digital radio use case	waveform distortion / intersymbol interference analysis
Display	CRT plus large LED digital readouts
Transmitter settings readout	LED
Receiver settings	automatic with display
Units display	automatic
Signal averaging	yes for noisy traces
BB to BB amplitude measurement	yes
Remote interface series option	GPIB on receiver class
Recorder option series	XYrecorder output Option 02 class
Slow sweep option series	18 Hz Option 03 class
Baseband amp measurement option series	Option 01 class
Form	transmitter and receiver microwave system analyzer set
Primary use	microwave radio IF/BB distortion analysis

PARAMETER	VALUE
AC line voltage class	100 to 127 Vac or 200 to 250 Vac transformer taps
Suffix role	M BB/IF coincidence for remote interoperability
Related ME538 peer	ME538M
RelatedLsuffix	ME453L
RelatedKsuffix	ME453K
Frequency range class	70 MHz IF Notes Specs from Anritsu ME453M TechEyesOnline/catalog excerpts (IF 70 MHz; BB 83.333 kHz–8.2 MHz; BNC) and ME453/ME538 Series descriptions. Confirm exact M-suffix coincidence details, IF level range, and installed options on the unit.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

characteristics in the BB and IF bands of terrestrial microwave radio relay and satellite communications systems. Japanese catalog data for ME453M lists 70 MHz IF with BB frequencies 83.333 kHz through 8.2 MHz and BNC standard I/O. The M suffix selects a BB/IF coincidence set for remote testing interoperability.

- Applications
- Terrestrial microwave radio relay BB/IF characterization
 - Satellite communications distortion measurements
 - FDM-FM link equalization and noise analysis
 - Digital microwave waveform distortion analysis
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- Key Features
- IF frequency 70 MHz band
 - BB frequencies through 8.2 MHz listed
 - Digital display of measurement parameters and results
 - Internal self control with partial automatic measurement
 - CRT and large LED measurement presentation
 - Signal averaging for noisy traces
 - BB to BB amplitude measurement capability
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PARAMETER	VALUE
Model	ME453M
Manufacturer	Anritsu
Instrument Type	Microwave System Analyzer
Alias	ME453M; Anritsu ME453M
Series	ME453 / ME538
IF frequency band	70 MHz
IF impedance	50 ohm
Standard I/O connectors	BNC
Baseband frequency 1	83.333 kHz
Baseband frequency 2	250 kHz
Baseband frequency 3	500 kHz
Baseband frequency 4	2.4 MHz
Baseband frequency 5	3.58 MHz
Baseband frequency 6	4.43 MHz
Baseband frequency 7	5.6 MHz

PARAMETER	VALUE
Baseband frequency 8	8.2 MHz
Measurement domains	BB and IF transmission characteristics
Linear distortion measures	amplitude and phase / group delay
Nonlinear distortion use case	analog FDM FM noise contributors
Digital radio use case	waveform distortion / intersymbol interference analysis
Display	CRT plus large LED digital readouts
Transmitter settings readout	LED
Receiver settings	automatic with display
Units display	automatic
Signal averaging	yes for noisy traces
BB to BB amplitude measurement	yes
Remote interface series option	GPIB on receiver class
Recorder option series	XYrecorder output Option 02 class
Slow sweep option series	18 Hz Option 03 class
Baseband amp measurement option series	Option 01 class
Form	transmitter and receiver microwave system analyzer set
Primary use	microwave radio IF/BB distortion analysis
AC line voltage class	100 to 127 Vac or 200 to 250 Vac transformer taps
Suffix role	M BB/IF coincidence for remote interoperability
Related ME538 peer	ME538M
RelatedLsuffix	ME453L
RelatedKsuffix	ME453K
Frequency range class	70 MHz IF

Notes

Specs from Anritsu ME453M TechEyesOnline/catalog excerpts (IF 70 MHz; BB 83.333 kHz–8.2 MHz; BNC) and ME453/ME538 Series descriptions. Confirm exact M-suffix coincidence details, IF level range, and installed options on the unit.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.