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Data Sheet

August 13, 2026

ANRITSU

Anritsu ME538L Microwave System Analyzer

The Anritsu ME538L is a microwave system analyzer (transmitter/receiver set) in the ME453/ME538 Series for measuring transmission-line characteristics in baseband and IF bands of terrestrial microwave radio relay and satellite communications systems. It targets FDM-FM, high-capacity digital microwave, and INTELSAT-class links with digital parameter display, self control, and partial automation for group delay, amplitude, and nonlinear distortion analysis. AC line voltage class: 100 to 127 Vac or 200 to 250 Vac transformer taps Form: transmitter and receiver microwave system analyzer set Primary use: microwave radio IF/BB distortion analysis Specs from Anritsu ME453/ME538 Series product descriptions and ME538L listing data (IF 70/140 MHz; BB frequencies listed). Confirm exact L-suffix BB/IF coincidence set, installed options (01-05 class), and transmitter/receiver pairing on the unit. Finer accuracy limits belong on the OEM operation manual and calibration certificate.



MODEL

Anritsu ME538L

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ME538L

LISTING

<https://aumictechlabs.com/products/me538l-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Anritsu ME538L Microwave System Analyzer is a specialized instrument for testing and verifying microwave communication systems in the Baseband (BB) and Intermediate Frequency (IF) bands. It measures transmission line characteristics across 70 MHz and 140 MHz frequency bands, delivering accurate amplitude, group delay, and frequency measurements essential for validating terrestrial microwave radio relay systems, satellite communication infrastructure, and

FDM-FM relay deployments. Technical Specifications Frequency bands: 70 MHz and 140 MHz Baseband frequencies: 8.2 MHz and 12.39 MHz (ME538L model) Nine selectable BB frequencies via pushbutton control CRT display with alphanumeric readout and automatic calibration LED display for simultaneous measurement parameters IF Band Frequency Counter for CW and swept signal center frequency measurement IF Band Sweep Width Measurement with numerical CRT display Automatic Sweep Reduction Control for limiting maximum sweep width including modulated sidebands Threshold Extension Function for low C/N INTELSAT equipment group delay measurement Key Features Amplitude measurement at IF input terminal and Return Loss input terminal Group delay measurement with threshold extension capability AM-PM conversion measurement with one-button operation FM deviation display in RECEIVING MODE IF Automatic receiver settings for deviation, IF level, BB frequency, and signal level Signal averaging for noisy trace enhancement Scale intensity switch for CRT screen photography Automatic display of units and scale sensitivity Typical Applications Terrestrial microwave radio relay system validation FDM-FM relay system verification INTELSAT and satellite communication system testing RF troubleshooting and transmission line characterization Telecom infrastructure validation Optional Functions MSA-01: BB Amplitude Measurement MSA-02: Receiver GP-IB and Direct CRT Output Plotting MSA-03: Sweeper Frequency Addition MSA-04: X-Y Recorder Output

Features & description

From manufacturer datasheet

Applications

- Terrestrial microwave radio relay link characterization

ME538L Characteristics / Specifications

PARAMETER	VALUE
Model	ME538L
Manufacturer	Anritsu
Instrument Type	Microwave System Analyzer Transmitter Receiver Set
Alias	ME538L; Anritsu ME538L
Series	ME453 / ME538
IF frequency bands	70 MHz and 140 MHz
Baseband frequency	83.333 kHz
Standard I/O connectors	BNC
IF impedance class	50 ohm
IF level range class series	0 to 16 dBm
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
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
AC line voltage class	100 to 127 Vac or 200 to 250 Vac transformer taps

PARAMETER	VALUE
Form	transmitter and receiver microwave system analyzer set
Primary use	microwave radio IF/BB distortion analysis Notes Specs from Anritsu ME453/ME538 Series product descriptions and ME538L listing data (IF 70/140 MHz; BB frequencies listed). Confirm exact L-suffix BB/IF coincidence set, installed options (01–05 class), and transmitter/receiver pairing on the unit. Finer accuracy limits belong on the OEM operation manual and calibration certificate.

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 baseband and IF bands of terrestrial microwave radio relay and satellite communications systems. It targets FDM-FM, high-capacity digital microwave, and INTELSAT-class links with digital parameter display, self control, and partial automation for group delay, amplitude, and nonlinear distortion analysis.

Applications

- Terrestrial microwave radio relay link characterization
- Satellite communications IF/BB distortion measurements
- FDM-FM and digital microwave radio equalization
- Group delay and amplitude response at 70/140 MHz IF
- BB to BB amplitude and distortion measurements
- Production and field alignment of microwave radios

Key Features

- IF bands 70 MHz and 140 MHz
- Multiple baseband test frequencies from 83.333 kHz to 12.39 MHz
- 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
- Receiver GPIB and direct plotting functions (series options)
- Standard BNC I/O connectors
- Companion transmitter/receiver microwave system analyzer set

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	ME538L
Manufacturer	Anritsu
Instrument Type	Microwave System Analyzer Transmitter Receiver Set

Specifications

PARAMETER	VALUE
Alias	ME538L; Anritsu ME538L
Series	ME453 / ME538
IF frequency bands	70 MHz and 140 MHz

Specifications

PARAMETER	VALUE
Baseband frequency 1	83.333 kHz
Baseband frequency 2	250 kHz
Baseband frequency 3	500 kHz

Specifications

PARAMETER	VALUE
Baseband frequency 4	2.4 MHz
Baseband frequency 5	3.58 MHz
Baseband frequency 6	4.43 MHz

Specifications

PARAMETER	VALUE
Baseband frequency 7	5.6 MHz
Baseband frequency 8	8.2 MHz
Baseband frequency 9	12.39 MHz

Specifications

PARAMETER	VALUE
Standard I/O connectors	BNC
IF impedance class	50 ohm
IF level range class series	0 to 16 dBm

Specifications

PARAMETER	VALUE
Measurement domains	BB and IF transmission characteristics
Linear distortion measures	amplitude and phase / group delay
Nonlinear distortion use case	analog FDM FM noise contributors

Specifications

PARAMETER	VALUE
Digital radio use case	waveform distortion / intersymbol interference analysis
Display	CRT plus large LED digital readouts
Transmitter settings readout	LED

Specifications

PARAMETER	VALUE
Receiver settings	automatic with display
Units display	automatic
Signal averaging	yes for noisy traces

Specifications

PARAMETER	VALUE
BB to BB amplitude measurement	yes
Remote interface series option	GPIB on receiver
Recorder option series	XYrecorder output Option 02 class

Specifications

PARAMETER	VALUE
Slow sweep option series	18 Hz Option 03 class
Baseband amp measurement option series	Option 01 class
AC line voltage class	100 to 127 Vac or 200 to 250 Vac transformer taps

Form: transmitter and receiver microwave system analyzer set

Primary use: microwave radio IF/BB distortion analysis

Notes

Specs from Anritsu ME453/ME538 Series product descriptions and ME538L listing data (IF 70/140 MHz; BB frequencies listed). Confirm exact L-suffix BB/IF coincidence set, installed options (01-05 class), and transmitter/receiver pairing on the unit. Finer accuracy limits belong on the OEM operation manual and calibration certificate.

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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<https://aumictechlabs.com>

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.