

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

ANRITSU

Anritsu ME538K Microwave System Analyzer

The Anritsu ME538K 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. The K suffix selects a BB/IF coincidence set for remote testing interoperability. IF coverage includes 70 MHz and 140 MHz bands with leveled IF operation at 50 ohm. 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: K BB/IF coincidence for remote interoperability Specs from Anritsu ME453/ME538 Series product descriptions and ME538K listing data (IF 70/140 MHz; 0–16 dBm; 50 ohm). Confirm exact K-suffix BB 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 ME538K

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

ME538K

LISTING

<https://aumictechlabs.com/products/me538k-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Anritsu ME538K Microwave System Analyzer measures transmission line characteristics across 70 MHz and 140 MHz intermediate frequency bands, with baseband support down to nine

selectable low frequencies. Purpose-built for terrestrial microwave radio relay and satellite communication systems, it characterizes FDM-FM systems, digital microwave links, and INTELSAT equipment through comprehensive IF and BB band analysis. The instrument delivers amplitude response, return loss, frequency deviation, AM/PM conversion, group delay, and modulator/demodulator linearity measurements. Transmitter settings - deviation, sweep width, center frequency - display on a 5-digit LED readout. Receiver configuration includes automatic calibration, attenuation control, and deviation measurement via direct P-P pushbutton selection. Dual display architecture combines CRT trace output with large LED parameter readout for real-time signal monitoring and measurement results. Signal processing includes averaging for noise rejection, signal subtraction to eliminate instrument and cable artifacts, and automatic CRT calibration with ranging. Threshold extension enables low C/N measurements critical for satellite systems. Auto Sweep Reduction limits maximum sweep width during operation. Baseband frequency selection spans nine fixed options per model, with Option 05 providing user-configurable 55.6 kHz or 27.8 kHz capability. The analyzer measures IF and BB band power, gain, and loss; differential gain and phase characteristics; and receiver sensitivity with full automatic control of IF level, BB frequency, and attenuation.

Technical Specifications

70 MHz band: 45 to 95 MHz
140 MHz band: 90 to 190 MHz
Baseband frequencies: Nine fixed options; Option 05 adds 55.6 kHz or 27.8 kHz (user-specified)
Measurement set: IF/BB amplitude response, return loss, frequency deviation, AM/PM conversion, DC characteristics, power/gain/loss, group delay, linearity, sensitivity, differential gain/phase, transmitter deviation/sweep/center frequency, receiver deviation/IF level/BB frequency/level
Display: CRT with alphanumeric and trace; LED display for parameters; 5-digit LED for transmitter settings
Signal processing: Averaging, subtraction, auto CRT calibration, direct deviation measurement, threshold extension, Auto Sweep Reduction

Key Features

Automatic receiver settings and display calibration
LED readout for transmitter parameters
Direct P-P deviation measurement pushbutton
Signal subtraction eliminates residual measurement instrument effects
Threshold extension for low C/N satellite equipment analysis

Typical Applications

FDM-FM relay system characterization
High-efficiency digital microwave communication analysis
INTELSAT and satellite system measurement
Terrestrial microwave radio relay commissioning and maintenance

Compatibility & Integration

Supports both 70 MHz and 140 MHz IF band operation. Baseband flexibility accommodates legacy and modern satellite communication standards through selectable frequency options.

Features & description

From manufacturer datasheet

Features

- IF bands 70 MHz and 140 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)
- Companion transmitter/receiver microwave system analyzer set
- K suffix BB coincidence for remote testing match

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

ME538K Characteristics / Specifications

PARAMETER	VALUE
Model	ME538K
Manufacturer	Anritsu
Instrument Type	Microwave System Analyzer Transmitter Receiver Set
Alias	ME538K; Anritsu ME538K
Series	ME453 / ME538
IF frequency bands	70 MHz and 140 MHz
IF level range	0 to 16 dBm
IF impedance	50 ohm
Frequency range class	70/140 MHz IF
Baseband frequency class	series BB coincidence setKBaseband frequency example 1: 83.333 kHz
Baseband frequency example	3.58 MHz
Standard I/O connectors	BNC
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

PARAMETER	VALUE
Baseband amp measurement option series	Option 01 class
Form	transmitter and receiver microwave system analyzer set
Mass class	approximately 68 lb complete set class listings
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	K BB/IF coincidence for remote interoperability Notes Specs from Anritsu ME453/ME538 Series product descriptions and ME538K listing data (IF 70/140 MHz; 0–16 dBm; 50 ohm). Confirm exact K-suffix BB 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.

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Applications

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- Satellite communications IF/BB distortion measurements
- FDM-FM and digital microwave radio equalization
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Baseband frequency example 2	250 kHz
Baseband frequency example 3	500 kHz
Baseband frequency example 4	2.4 MHz

PARAMETER	VALUE
Baseband frequency example 5	3.58 MHz
Baseband frequency example 6	4.43 MHz
Baseband frequency example 7	5.6 MHz
Baseband frequency example 8	8.2 MHz
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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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.