

MICROWAVE REPEATER CHECKER MS75B1

For Maintaining Microwave Repeaters



Build-to order product

The Microwave Repeater Checker (MRC) is an integrated microwave measuring instrument packed in a handy carrying case. It consists of three devices most frequently used for the maintenance of microwave communications systems: a power meter (10 MHz to 14 GHz) and frequency counter (10 Hz to 18 GHz) are standard accessories, and a signal generator is sold separately. The signal generator can be changed according to the frequency band to be measured. There are two difference generators available for the frequency range 6.3 GHz to 7.8 GHz and 12 GHz to 13 GHz.

Features

- Maintains and adjusts microwave line repeaters
- All parts and accessories are contained in the carrying case so the measurement procedure is less time-consuming.
- When removed from the carrying case, the power meter can be mounted independently in a specially designed case (optional accessory). It can run on either batteries or AC line power when used separately.

Specifications

• MS75B1 Microwave Repeater Checker

Power Meter*1, *2	<p>Indicator section Frequency range: Depends upon power sensor (10 MHz to 14 GHz) Measurement level: -20 to +10 dB Measurement range (full scale): -10 dBm (0.1 mW), -5 dBm (0.3 mW), 0 dBm (1 mW), +5 dBm (3 mW), +10 dBm (10 mW) Accuracy: ±3% in full scale Calibration oscillator: 50 MHz, Output level: 0 dBm, Connector: N-type</p> <p>Power sensor Frequency range: 10 MHz to 14 GHz Input impedance: 50 Ω VSWR: ≤1.4 Maximum power: +22 dBm (150 mW) Input connector: N-type</p>
Frequency Counter	<p>Frequency range Input 1: 10 Hz to 200 MHz, Input 2: 200 MHz to 18 GHz</p> <p>Input level Input 1: 50 mV(rms), Input 2: -22 dBm (200 MHz to 14 GHz), -15 dBm (14 GHz to 18 GHz)</p> <p>Resolution: 0.1 Hz, 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz, 1 MHz (Display digit: 12)</p> <p>Measurement accuracy: ±1 count ± time base accuracy</p> <p>Input impedance Input 1: ≥1 MΩ/≤40 pF, 50 Ω, Input 2: 50 Ω</p> <p>Coupling/Input connector Input 1: AC (BNC), Input 2: DC (N)</p> <p>FM tolerance (Input 2): 25 MHzp-p (200 MHz to 500 MHz), 50 MHzp-p (500 MHz to 18 GHz)</p> <p>Reference oscillator stability: 2 × 10⁻⁹/day</p>
Power Supply	AC 100 V ⁺¹⁰ / ₋₁₅ %, 50 Hz/60 Hz, ≤100 VA
Dimensions and Mass	460 (W) × 180 (H) × 370 (D) mm, ≤15 kg

*1: The calibration factor accuracy of the power sensor is ±5% at 10 MHz to 10 GHz and ±7% at 10 GHz to 14 GHz.

*2: Power measurement error: During power measurement, impedance mismatch produces an error.
 The error varies according to VSWR CTS value at the signal output connector.
 The measurement error is as shown as below when the sensor VSWR is assumed to be 1.4.

• MG724E11/G11 Signal Generator (Sold separately, Build-to order product)

Model	MG724E11	MG724G11
Frequency Range	6.3 GHz to 7.8 GHz	12 GHz to 13 GHz
Frequency Dial Accuracy	0.3%	
Output Level*	-100 to -5 dBm (Max.: 0 dBm)	
Output Level Accuracy	±1.5 dB	
VSWR at Output Connector*	≤1.7	
FREQ. CHECK Output	≥-5 dBm	
Output Connector	N-type	

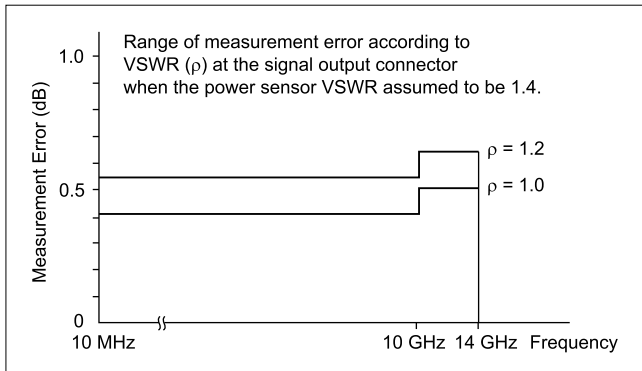
*: VSWR must be measured at the end of the 2 m cable.

Composition

- **MS75B1 Microwave Repeater Checker**
ML73B Power Meter, MA72A Power Sensor, Frequency Counter
- **MG724E11/G11 Signal Generator (Sold separately)**
MG724E11: 6.3 GHz to 7.8 GHz
MG724G11: 12 GHz to 13 GHz

Optional Accessories

Item	Remarks
B0057B Case for MG724[]11	240 (W) × 135 (H) × 120 (D) mm, ≤6 kg (with signal generator)
MP721D1 20 dB Coaxial Fixed Attenuator	20 dB, N-type, Max. input power: 2 W (+33 dBm), DC to 14 GHz
J0063 30 dB High-power Attenuator	30 dB, N-type, Max. input power: 10 W (+40 dBm), DC to 12.4 GHz
J0064A 5.8 GHz to 8.6 GHz Band Coaxial-to-waveguide Adaptor	5.8 GHz to 8.6 GHz, N-J · WRJ-7 (BRJ-7 flange)
J0064B 10 GHz to 15 GHz Band Coaxial-to-waveguide Adaptor	10 GHz to 15 GHz, N-J · WRJ-120 (BRJ-120 flange)



Ordering Information

Please specify the model/order number, name and quantity when ordering. The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Name
MS75B1	Main frame Microwave Repeater Checker (build-to order product)
ML73B MA72A	Composition (for MS75B1) Power Meter Power Sensor Frequency Counter
J0161 J0114B	Standard accessories (for MS75B1) Power Sensor Cable, 1.5 m (for MA72A): 1 pc Coaxial Cord (UG-21D/U · RG-9A/U · UG-21D/U), 2 m: 1 pc Power Cord: 1 pc
MP540A J0061 J0246 J0228 G0027 F0022 W0084AE	75 Ω /50 Ω Impedance Transformer: 1 pc UG-29B/U Transformer Connector (N-type, J-J): 1 pc MX-913/U Connector Cap (N-type): 1 pc U Link: 1 pc Screw Driver: 1 pc Fuse, 2 A: 2 pcs MS75B1 Operation Manual: 1 copy
MG724E11 MG724G11	Signal Generator (sold separately) Signal Generator (6.3 GHz to 7.8 GHz, build-to order product) Signal Generator (12 GHz to 13 GHz, build-to order product)
B0057B J0063 J0064A J0064B MP721D1 Z1434A Z1435A Z1436A Z1437A Z1438A Z1439A	Optional accessories Case for MG724[]11 30 dB High-power Attenuator (30 dB, Max. input power: 10 W, DC to 12.4 GHz) 5.8 GHz to 8.6 GHz Band Coaxial-to-waveguide Adaptor (5.8 GHz to 8.6 GHz, coaxial N/flange BRJ-7) 10 GHz to 15 GHz Band Coaxial-to-waveguide Adaptor (10 GHz to 15 GHz, coaxial N/flange BRJ-120) 20 dB Coaxial Fixed Attenuator (N-type, DC to 14 GHz) Modification for MS75B1 (at Anritsu) Modification for MG724E11 (at Anritsu) Modification for MG724E12 (at Anritsu) Modification for MG724G11 (at Anritsu) Modification for MG724G12 (at Anritsu) Modification for B0057B (at Anritsu)