ELECTRONIC COUNTERS, POWER METERS, VOLTMETER

POWER METER

ML4803A

100 kHz to 90 GHz

For Measuring Power in Quasi-Millimeter and Millimeter Wave Bands



CE

GPIB

The ML4803A consists of an indicator, which displays the detected electric signals as the power, and power sensors, which detect power and convert it to electric signals. Several types of power sensors are provided for accurately measuring power in a frequency range of 100 kHz to 90 GHz. The ML4803A has various functions to meet all power measurement requirements, from low frequency to super-high frequency such as the millimeter waveband.

Features

Abundant functions

(1) Three measurement modes

The ML4803A can measure absolute values in units of "W" or "dBm" in addition to relative values in units of "dB" or "%". When return loss is measured in absolute value measurement, VSWR can also be displayed.

(2) Automatic sensor sensitivity correction

The sensitivity of coaxial power sensor is corrected automatically by a one-touch operation using the built-in calibration oscillator.

- Excellent operability and efficient measurement with memory function
- (1) The corrections required in measurements (calibration coefficient, corrected value of attenuation or gain and reference value in relative measurements) can be easily set using the rotary encoder.

- (2) Since the amount of correction for 30 points corresponding to measured frequencies can be stored beforehand, it need not be set each time the measured frequency changes. This function improves measurement efficiency.
- (3) The amount of correction set is retained even when the power supply is turned off.

• Three power supplies

The ML4803A can be operated on AC, DC, or batteries and can therefore be used anywhere.

- Super-wide coaxial-type amorphous sensors
- (1) Supper-wide band: 100 kHz to 32 GHz
- (2) Wide dynamic range: -30 to +20 dBm
- (3) Low VSWR and high response speed
- (4) 75 Ω power sensor is provided

The amorphous detection element is field-replaceable.

- Diode sensor suitable for low-level and wide-band measurements
- (1) Wide band: 100 kHz to 26.5 GHz
- (2) Low-level measurement: -70 to -20 dBm
- (3) Compact and lightweight
- (4) 75 Ω power sensor
- Quasi-millimeter and millimeter waves can also be measured. The conventional waveguide-type power sensors can be used by connecting them to the ML4803A using adapter MA4002A/B.

Specifications

ML4803A indicator

Frequency range		100 kHz to 90 GHz			
Sensor	Coaxial types	For high level: MA4701A, MA4703A, MA4705A, MA4601A, MA4603A For low level: MA4702A, MA4704A, MA4602A, MA4604A			
	For quasi-millimeter and millimeter waves	MP737A, MP738A, MP712A[] , MP713A[] (used with MA4002A Adapter) MP714A[], MP715A[], MP716A[], MP717A[] (used with MA4002B Adapter)			
Display		W, dBm, or dB (REL) can be selected. 4-digit digital display (20% over range is equipped) Compact analog indicator is built-in (values cannot be used.)			
Calibration coefficient, offset value, and reference level setting		Calibration coefficient: 0 to 10 dB (accuracy: 0.01 dB) Offset value: 0 to ±99.99 dB (accuracy: 0.01 dB) Reference level: –99.99 to +99.99 dBm (accuracy: 0.01 dB)			
Power range		MA4701A/4703A/4705A/4601A/4603A full-scale values: –20, –10, 0, +10, +20 dBm (10 μW to 100 mW) MA4702A/4704A/4602A/4604A full-scale values: –60, –50, –40, –30, –20 dBm (1 nW to 10 μW) MP series sensors full-scale values: –20, –10, 0, +10, +20 dBm (10 μW to 100 mW)			
Range swi	tching	Automatic or manual (range hold) can be selected. When manual is selected, an arbitrary range can be set unrelated to input levels.			
Range disp	play	Selected range (when range is held) is displayed on range lamps 1 to 5. An under range or over range is also displayed.			
	Accuracy (at indicator)	WATT mode: ±0.5%, dBm mode: ±0.02 dBm, dB (REL) mode: ±0.02 dB			
	Zero adjustment	Automatically performed by pressing push-button key			
Accuracy	Zero setting	MA series sensors: ±0.5% of full scale (typical value) at the highest sensitivity range (range 1) MP series sensors: ±1.0% of full scale (typical value) at the highest sensitivity range (range 1)			
Nocuracy	Zero shift between each range	MA series sensors: ±0.2% of full scale after zero set at the highest sensitivity range MP series sensors ±0.8% of full scale: Range 2 after zero set at the highest sensitivity range ±0.5% of full scale: Range 3 to 5 after zero set at the highest sensitivity range			
Calibration oscillator		50 MHz calibration oscillator is built in. Output connector: N (J) Output power: 1.00 mW (0 dBm) Accuracy: Set to within 0.7% at factory (NIST traceable) ±1.2% worst case for one year			
Averaging		4 sample rates can be selected.			
RF blanking output		Low-level TTL (0 to +0.25 V) in zero set mode High-level TTL (5 ±0.25 V) when zero set mode is cancelled			
Recorder output		DC voltage proportional to indicated value is output (1 V in full-scale display). Output impedance: 1 kΩ, Output connector: BNC			
Remote-control		GPIB is standard. Front panel functions other than the power switch can be controlled externally. SH1, AH1, T5, L4, SR1, RL1, PP0, DC1, DT0, C0			
Memory function		Up to 30 frequencies, calibration coefficient, offset value, and reference level data combinations can be stored			
Power supply	AC power supply	100 V ⁺¹⁰ / ₋₁₅ %, 50/60 Hz, <20 VA			
	DC power supply	+7 to +12 V, ≤13 VA			
	External battery pack	Continuous operation with MZ5003A Battery Pack: 5 hours			
Operating temperature		0° to 50°C			
Dimensions and mass		213 (W) x 88 (H) x 250 (D) mm, ≤3 kg			
EMC*1		EN55011: 1991, Group 1, Class A EN50082-1: 1992			
Safety		EN61010-1: 1993 (Installation Category II, Pollution Degree II)			
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^{*1:} Electromagnetic Compatibility

• Coaxial-type power sensors Amorphous power sensor

Model	MA4701A	MA4703A	MA4705A	MA4601A	MA4603A
Frequency range	10 MHz to 18 GHz	50 MHz to 26.5 GHz	50 MHz to 32 GHz	100 kHz to 5.5 GHz	100 kHz to 2 GHz
Nominal impedance		50	Ω	,	75 Ω
Maximum VSWR	1.4 (10 to 30 MHz) 1.18 (30 to 50 MHz) 1.1 (50 MHz to 2 GHz) 1.18 (2 to 12.4 GHz) 1.28 (12.4 to 18 GHz)	1.15 (50 to 100 MHz) 1.10 (0.1 to 2 GHz) 1.15 (2 to 12.4 GHz) 1.20 (12.4 to 18 GHz) 1.25 (18 to 26.5 GHz)	1.15 (50 to 100 MHz) 1.10 (0.1 to 2 GHz) 1.15 (2 to 12.4 GHz) 1.20 (12.4 to 18 GHz) 1.25 (18 to 26.5 GHz) 1.50 (26.5 to 32 GHz)	1.3 (100 to 300 kHz) 1.2 (0.3 to 1 MHz) 1.1 (1 MHz to 4 GHz) 1.2 (4 to 5.5 GHz)	1.4 (100 to 300 kHz) 1.15 (300 kHz to 2 GHz)
Measured power range	-30 to +20 dBm (1 μW to 100 mW)				
Maximum input power	300 mW in average				
Linearity	±3% in only +10 to +20 dBm range				
Input connector	N	APC-3.5		N	NC
Dimensions and mass	34 (W) x 25 (H) x 98 (L) mm, ≤200 g	34 (W) x 25 (H) x 87 (L) mm, ≤200 g		34 (W) x 25 (H) x 98 (L) mm, ≤200 g	

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Diode power sensor

Model	MA4702A	MA4704A	MA4602A	MA4604A
Frequency range	10 MHz to 18 GHz	50 MHz to 26.5 GHz	100 kHz to 5.5 GHz	100 kHz to 2 GHz
Nominal impedance		50 Ω		75 Ω
Maximum VSWR	1.4 (10 to 30 MHz) 1.15 (30 MHz to 4 GHz) 1.2 (4 to 8 GHz) 1.3 (8 to 18 GHz)	1.15 (50 MHz to 4 GHz) 1.2 (4 to 8 GHz) 1.3 (8 to 18 GHz) 1.54 (18 to 26.5 GHz)	1.3 (100 to 300 kHz) 1.15 (300 kHz to 3 GHz) 1.2 (3 to 5.5 GHz)	1.4 (100 to 300 kHz) 1.2 (300 kHz to 2 GHz)
Measured power range				
Maximum input power	200 mW in average/peak, 0 Vdc			
Linearity	±2% in only -30 to-20 dBm range			
Input connector	N	APC-3.5	N	NC
Dimensions and mass	34 (W) x 25 (H) x 98 (L) mm, ≤200 g	34 (W) x 25 (H) x 87 (L) mm, ≤200 g	34 (W) x 25 (H) x 98 (L) mm, ≤200 g	

• Waveguide sensors

For quasi-millimeter waveband

Model	MP737A	MP738A	MP712A[]	MP713A[]	MP714A[]
Frequency range	17 to 22 GHz	21.7 to 33 GHz	18 to 26.5 GHz	26.5 to 40 GHz	33 to 50 GHz
Maximum VSWR	1.6	1.5	1.6	1	.5
Measured power range	-30 to +20 dBm (1 μW	-30 to +20 dBm (1 μW to 100 mW)			
Maximum input power	aximum input power +22 dBm (160 mW)				
Linearity error	±3% only +10 to +20 d	±3% only +10 to +20 dBm range			
Dimensions and mass		52ø x 103L mm, ≤450 g 52ø x 78L mm, ≤700 g			
Required adapter type		MA4002A MA4002B			MA4002B

For millimeter waveband

Model	MP715A[]	MP716A[]	MP717A[]
Frequency range	40 to 60 GHz	50 to 75 GHz	60 to 90 GHz
Maximum VSWR	1.4		
Measured power range	-30 to +20 dBm (1 μW to 100 mW)		
Maximum input power	+22 dBm (160 mW)		
Linearity error	±3% in only +10 to +20 dBm range		
Dimensions and mass	52ø x 78L mm, ≤700 g (including cord)		
Required adapter type	MA4002B		

Please select the type of flanges from the below and put its number in the mark []. Blank: JIS flange, 1: MIL flange, 4: UG flange

Ordering information

Please specify model/order number, name, and quantity when ordering.

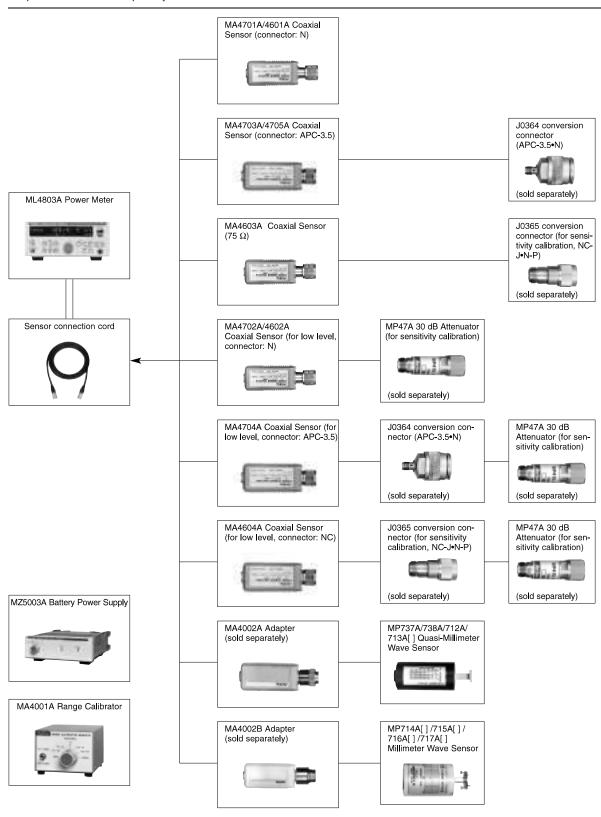
Model/Order No.	Name	
ML4803A	Main frame Power Meter	
J0370A J0017 F0018 W0081AE W0081BE	Standard accessories Sensor connecting cord, 1.5 m: Power cord, 2.5 m: Fuse, 0.5 A: ML4803A operation manual: ML4803A service manual:	1 pc 1 pc 1 pc 1 copy 1 copy
MA4601A MA4603A MA4701A MA4703A MA4705A MA4602A MA4602A MA4702A MA4702A MA712A[] MP713A[] MP715A[] MP714A[] MP717A[] MP717A[] MP717A[] MP737A MP738A	Sensors Amorphous Power Sensor (coaxial-type) Diode Power Sensor (coaxial-type) Waveguide Type Sensor*1	

 $[\]star$ 1: Refer to the data sheet for ML4803A. Specify waveguide type when ordering.

MA4001A MA4002A MA4002B Range Calibrator (for indicator full-scale calibration) Sensor Adapter for quasi-millimeter wave (for MP712A/713A/737A/738A) MA4002B Sensor Adapter for millimeter wave (for MP714A/715A/716A/717A) J0364 APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) MP47A ARTO-3.6 to N conversion connector for sensitivity calibration (required for MP4703A/4704A) MP721D J0077 Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0078 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0035 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0064A J0064B J0064C J0076 J0064C J0077 J0064B J0064C J0078 J0064C J0078 J0064C J0078 J0078 J0064C J0078 J0078 J0079 J0064C J0079 J0064C J0079 J0079 J0064C J0079 J0079 J0064C J0079	Model/Order No.	Name
MA4002A Sensor Adapter for quasi-millimeter wave (for MP712A/713A/737A/738A) Sensor Adapter for millimeter wave (for MP712A/713A/737A/738A) Jo364 APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) JO365 NC-J+N-P conversion connector for sensitivity calibration (required for MA4603A/4604A) MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4702A/4704A) MP721D J0077 Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0035 Fixed attenuator (30 dB, N-type, 10 W, DC to 12.4 GHz) J0035 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0064A J0064B J0064B J0064B J0064B J0064C J0074 J0064C J0074 J0064C J0074 J0064C J0075 J0064C J0076 J0076 J0076 J0077 J0077 J0077 J0077 J0077 J0077 J0077 J0077 J0077 J0078 J0084 J0084 J0084 J0085 J0086 J0086 J0086 J0086 J0086 J0086 J0087 J0087 J0087 J0088 J0087 J0088 J008		Optional accessories
(for MP712A/713A/737A/738A) Sensor Adapter for millimeter wave (for MP714A/715A/716A/717A) J0364 APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) J0365 NC-J-N-P conversion connector for sensitivity calibration (required for MA4603A/4604A) MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4702A/4704A) MP721D Fixed attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0083 Fixed attenuator (20 dB, N-type, 10 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0084 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0066C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-120) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-P) J0633B Conversion connector (NC-J • BNC75-P) J0633B Conversion connector (NC-P • SP3C-J) J063B Conversion connector (NC-P	MA4001A	Range Calibrator (for indicator full-scale calibration)
MA4002B Sensor Adapter for millimeter wave (for MP714A/715A/716A/717A) J0364 APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) J0365 NC-J-N-P conversion connector for sensitivity calibration (required for MA4603A/4604A) MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4702A/4704A) MP721D Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (30 dB, N-type, 10 W, DC to 18.6 GHz) J0078 Fixed attenuator (30 dB, N-type, 10 W, DC to 18.6 GHz) J0083 Fixed attenuator (30 dB, N-type, 10 W, DC to 18.6 GHz) J0084A Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064B Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0632A 18 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0633B Conversion connector (NC-J • BNC75-P) J0633B	MA4002A	
(for MP714Å/715A/716A/717A) APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) NC-J+N-P conversion connector for sensitivity calibration (required for MA4603A/4604A) MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4702A/4704A) MP721D Joorn Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0083 Fixed attenuator (20 dB, N-type, 10 W, DC to 12.4 GHz) J0395 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0395 J0064A J064B J076 J086B J087 J086B J087 J086B J087 J087 J088 J088 J088 J088 J088 J088		(for MP712A/713A/737A/738A)
J0364 APC-3.5 to N conversion connector (required for MP4703A/4704A/4705A) NC-JN-P connector for sensitivity calibration (required for MA4603A/4604A) MP47A MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/460A/44702A/4704A) Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0083 Fixed attenuator (20 dB, N-type, 10 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0396 J064A T GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B J06Hz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J066C J06Hz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-10) J0366 BGHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 J0368 J0632A J0632A BGHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632B GGHz band coaxial waveguide connector (27.7 to 22 GHz, SMA-J to FUBR180) J0633B J0633A Conversion connector (NC-J • BNC75-J) Conversion connector (NC-J • BNC75-P) J0633B Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0639B J0818 Back mount kit-1 (for one ML4803A) Each mount kit-1 (for one ML4803A) Each mount kit-1 (for one	MA4002B	Sensor Adapter for millimeter wave
(required for MP4703A/4704A/4705A) NC-J-N-P conversion connector for sensitivity calibration (required for MA4603A/4604A) MP47A Attenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4704A) Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 J0063 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0084 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0084 J0084 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A J6Hz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-T) J0064B J0064C J0 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0366 J8 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 Z2 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 J0632A J0633A J0633B J0633B J0633B J0633B Conversion connector (NC-J • BNC75-P) J0633C Conversion connector (NC-J • BNC75-P) Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0633C Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J06		(for MP714A/715A/716A/717A)
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MP47A Ättenuator for sensitivity calibration (30 dB, required for MA4602A/4604A/4702A/4704A) MP721D Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0078 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0084 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-T) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-T20) J0064C 10 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-P) J0633C Conversion connector (NC-J • BNC75-P) J0633E Conversion connector (NC-P • BNC75-P)	J0365	NC-J•N-P conversion connector for sensitivity calibration
MAY21D MP721D J0077 Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0078 J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 12.4 GHz) Fixed attenuator (20 dB, N-type, 10 W, DC to 12.4 GHz) J00845 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J00846 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J00647 J00648 J00640 J		(required for MA4603A/4604A)
MP721D Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz) J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0063 Fixed attenuator (30 dB, N-type, 10 W, DC to 18 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-10) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-10) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR260) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-P • BNC75-J) J0633C Conversion connector (NC-P • BNC75-P) J0633F Conversion connector (NC-P • SP3C-J)	MP47A	Attenuator for sensitivity calibration (30 dB, required for
J0077 Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz) J0083 Fixed attenuator (30 dB, N-type, 10 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-120) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633		
J0063 Fixed attenuator (30 dB, N-type, 10 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-120) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5991U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0632B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-P) J0633B Conversion connector (NC-J • BNC75-P) J0633C Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0633B	MP721D	Fixed Attenuator (20 dB, N-type, 2 W, DC to 12.4 GHz)
J0063 Fixed attenuator (30 dB, N-type, 10 W, DC to 12.4 GHz) J0078 Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz) J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-120) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5991U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0632B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-P) J0633B Conversion connector (NC-J • BNC75-P) J0633C Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-J) J0633B	J0077	Fixed attenuator (20 dB, N-type, 2 W, DC to 18 GHz)
J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-10) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633A Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-P • BNC75-P) J0633F Conversion connector (NC-P • BNC75-P) J0633F Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P	J0063	Fixed attenuator (30 dB, N-type, 10 W, DC to 12.4 GHz)
J0395 Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz) J0064A 7 GHz band coaxial waveguide connector (5.8 to 8.2 GHz, N-J to BRJ-7) J0064B 10 GHz band coaxial waveguide connector (10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-10) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633A Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-P • BNC75-P) J0633F Conversion connector (NC-P • BNC75-P) J0633F Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P	J0078	Fixed attenuator (20 dB, N-type, 10 W, DC to 18 GHz)
(5.8 to 8.2 GHz, N-J to BŘJ-7) J0064B (5.6 to 8.2 GHz, N-J to BRJ-120) J0064C J006	J0395	Fixed attenuator (30 dB, N-type, 30 W, DC to 8.6 GHz)
J0064B	J0064A	7 GHz band coaxial waveguide connector
(10.0 to 15.0 GHz, N-J to BRJ-120) J0064C 10 GHz band coaxial waveguide connector (8.2 to 13.0 GHz, N-J to BRJ-10) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0632B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR180) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-J • BNC75-P) Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • BNC75-P) J0633G Conversion connector (NC-P • SP3C-J) J0633B Conversion connector (NC-P • SP3C-P) J0633C Conversion connector (NC-P • SP3C-P) J0633B Conversion connector (NC-P • SP3C-P) J0639B Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) Rack mount kit-1 (for one ML4803A) B184 B0185 Carrying bag B0186 B0187 B0188 B0189 B0189 B0180 B0180 B0180 Conversion condector (DC-P • SP3C-P) Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) D0370G Sensor cord, 10 m (for extension) D0370G B0187 DC power cord (for +7 to +12 V power supply)		(5.8 to 8.2 GHz, N-J to BRJ-7)
J0064C	J0064B	10 GHz band coaxial waveguide connector
(8.2 to 13.0 GHz, N-J to BRJ-10) J0366 18 GHz band coaxial waveguide connector (17.7 to 21.2 GHz, SMA-J to FUBR180) J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633A Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-P • BNC75-P) J0633E Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0639B J0809 Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 10 m (for extension) DC power cord (for +7 to +12 V power supply)		(10.0 to 15.0 GHz, N-J to BRJ-120)
J0366	J0064C	
(17.7 to 21.2 GHz, SMA-J to FUBR180)		(8.2 to 13.0 GHz, N-J to BRJ-10)
J0367 22 GHz band coaxial waveguide connector (18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-J) Conversion connector (NC-P • BNC75-J) J0633C Conversion connector (NC-P • BNC75-J) Conversion connector (NC-P • SP3C-J) Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) Conversion connector (NC-P • SP3C-J) J0638 Rack mount kit-1 (for one ML4803A) Rack mount kit-2 (for two ML4803A) Carrying bag B0186 Carrying bag Protective front cover Sensor cord, 2.5 m (for extension) Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 10 m (for extension) Sensor cord, 10 m (for extension) DC power cord (for +7 to +12 V power supply)	J0366	18 GHz band coaxial waveguide connector
(18 to 26.5 GHz, APC-3.5-J to UG-5971U) J0368 30 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A 18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0633B 26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-J • BNC75-P) Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-P) Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 5 m (for extension) Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)		(17.7 to 21.2 GHz, SMA-J to FUBR180)
J0368 J0 GHz band coaxial waveguide connector (26.5 to 34 GHz, APC-3.5-J to UG-5991U) J0632A J0632B J0632B J0632B J0633A J0633B J0633B Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-J • BNC75-J) J0633C Conversion connector (NC-P • BNC75-J) J0633B Conversion connector (NC-P • BNC75-P) Conversion connector (NC-P • BNC75-P) J0633B Conversion connector (NC-P • BNC75-P) Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-P) J0633B J0633H Conversion connector (NC-P • SP3C-P) J0638B J0869 J0870B Back mount kit-1 (for one ML4803A) Bol184 Rack mount kit-2 (for two ML4803A) Carrying bag Bol185 Carrying bag Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 10 m (for extension) J03701 DC power cord (for +7 to +12 V power supply)	J0367	22 GHz band coaxial waveguide connector
(26.5 to 34 GHz, APC-3.5-J to UG-5991U)		(18 to 26.5 GHz, APC-3.5-J to UG-5971U)
18 GHz band coaxial waveguide connector (17.7 to 22 GHz, SMA-J to FUBR180) J0632B	J0368	30 GHz band coaxial waveguide connector
(17.7 to 22 GHz, SMA-J to FUBR180) J0632B (26 GHz band coaxial waveguide connector (22 to 33 GHz, K-J to FUBR260) J0633A (Conversion connector (NC-J • BNC75-J) J0633B (Conversion connector (NC-J • BNC75-P) J0633D (Conversion connector (NC-P • BNC75-P) J0633E (Conversion connector (NC-P • BNC75-P) J0633E (Conversion connector (NC-P • SP3C-J) J0633G (Conversion connector (NC-P • SP3C-J) J0633G (Conversion connector (NC-P • SP3C-P) J0633B (Conversion connector (NC-P • SP3C-P) J0633E (Conversion connector (NC-P • SP3C-P) J0633E (Conversion connector (NC-P • SP3C-P) J0633E (Conversion connector (NC-P • SP3		(26.5 to 34 GHz, APC-3.5-J to UG-5991U)
J0632B	J0632A	18 GHz band coaxial waveguide connector
(22 to 33 GHz, K-J to FUBŘ260) J0633B J0633B Conversion connector (NC-J • BNC75-P) J0633C J0633C Conversion connector (NC-J • BNC75-P) Conversion connector (NC-P • BNC75-P) J0633E Conversion connector (NC-P • BNC75-P) J0633F J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0639B Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) Sensor cord, 5 m (for extension) Sensor cord, 10 m (for extension) Sensor cord, 10 m (for extension) Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)		(17.7 to 22 GHz, SMA-J to FUBR180)
J0633A Conversion connector (NC-J • BNC75-J) J0633B Conversion connector (NC-P • BNC75-P) J0633C Conversion connector (NC-P • BNC75-J) J0633D Conversion connector (NC-P • BNC75-J) J0633E Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0369 Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0184 Rack mount kit-1 (for one ML4803A) B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 10 m (for extension) J0370G Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)	J0632B	
J0633B J0633C J0633C J0633D Conversion connector (NC-P • BNC75-J) J0633D Conversion connector (NC-P • BNC75-J) J0633E J0633F J0633F J0633G Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-P) J0633H J0633H Conversion connector (NC-P • SP3C-J) J0369 B0183 B0184 Rack mount kit-1 (for one ML4803A) B0185 B0186 J0370C J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 10 m (for extension) J0370G Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)		
J0633C J0633C J0633B J0633B Conversion connector (NC-P • BNC75-J) J0633E Conversion connector (NC-P • SP3C-J) J0633F J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0639B J089 J089 J089 J089 J089 J089 J089 J089	J0633A	
J0633D Conversion connector (NC-P • BNC75-P) J0633E Conversion connector (NC-P • SP3C-J) J0633F Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-J) J0633H Conversion connector (NC-P • SP3C-J) J0369 Taper waveguide: WRJ-320 (FUBR320)WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370E Sensor cord, 5 m (for extension) J0370G Sensor cord, 10 m (for extension) J0370G Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)	J0633B	
J0633E J0633F J0633F J0633G Conversion connector (NC-P • SP3C-J) J0633G Conversion connector (NC-P • SP3C-P) J0633G J0633H J0369 J0369 B0183 Rack mount kit-1 (for one ML4803A) R0184 Rack mount kit-2 (for two ML4803A) R0185 R0186 J0370C J0370C J0370C Sensor cord, 2.5 m (for extension) J0370G J0370G MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)	J0633C	
J0633F J0633G J0633G Conversion connector (NC-P • SP3C-P) J0633H Conversion connector (NC-P • SP3C-J) J0633H J0369 September S		
J0633G J0633H J0633H J0633H J0633H J0639 September 2012 September		
J0633H J0369 Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 10 m (for extension) MZ5003A Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)		
J0369 Taper waveguide: WRJ-320 (FUBR320)/WRJ-260 (FUBR260) B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 5 m (for extension) MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)		
B0183 Rack mount kit-1 (for one ML4803A) B0184 Rack mount kit-2 (for two ML4803A) B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 5 m (for extension) J0370G Sensor cord, 10 m (for extension) MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)		
B0184 Rack mount kit-2 (for two ML4803A) B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370E Sensor cord, 5 m (for extension) J0370G Sensor cord, 10 m (for extension) MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)		
B0185 Carrying bag B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370G Sensor cord, 5 m (for extension) J0370G Sensor cord, 10 m (for extension) MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)		
B0186 Protective front cover J0370C Sensor cord, 2.5 m (for extension) J0370E Sensor cord, 5 m (for extension) J0370G Sensor cord, 10 m (for extension) MZ5003A Battery Power Supply (for DC operation) J0371 DC power cord (for +7 to +12 V power supply)		
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MZ5003A Battery Power Supply (for DC operation) DC power cord (for +7 to +12 V power supply)		
J0371 DC power cord (for +7 to +12 V power supply)		
J0008 GPIB cable, 2 m		
	20008	GPIB cable, 2 m

List of power meter components

When ordering sensors, refer to the following figure to order required components that are sold separately.



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