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Anritsu

# MP1803A/MP1804A

43.5G MUX / 43.5G DEMUX

25 G to 43.5 Gbit/s



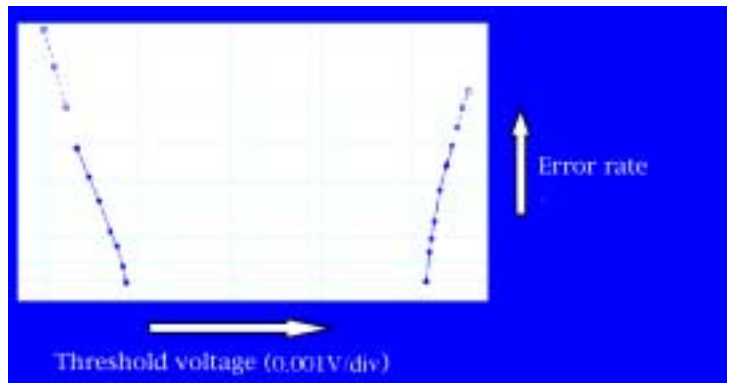
# Features

- Adopting high resolution variable delay unit (Resolution : 0.1ps)
- High resolution threshold voltage setting suitable for the Q factor analysis (Resolution : 0.001V)
- Digital display
- For various applications with the remote control.

# Applications

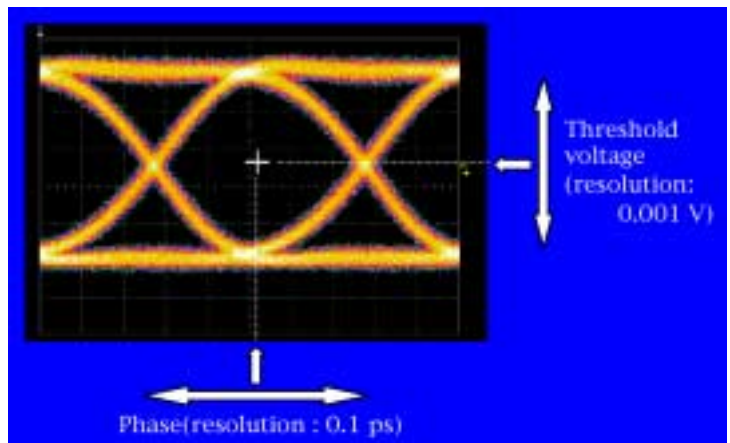
## High resolution threshold voltage setting suitable for the Q factor Analysis (0.001 V steps)

Q factor is measured by setting up threshold with high accuracy.



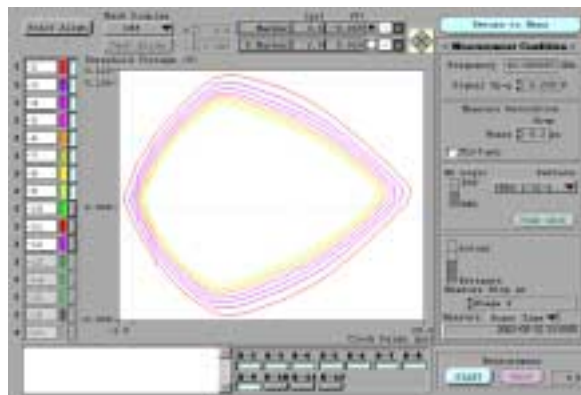
## Auto search function

“Auto Search” can determine the best threshold voltage and phase to measure error ratio for waveform automatically.

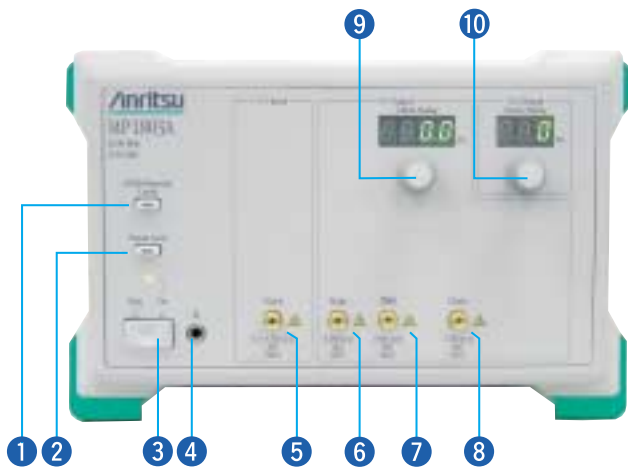


## Eye margin (eye diagram) measurement

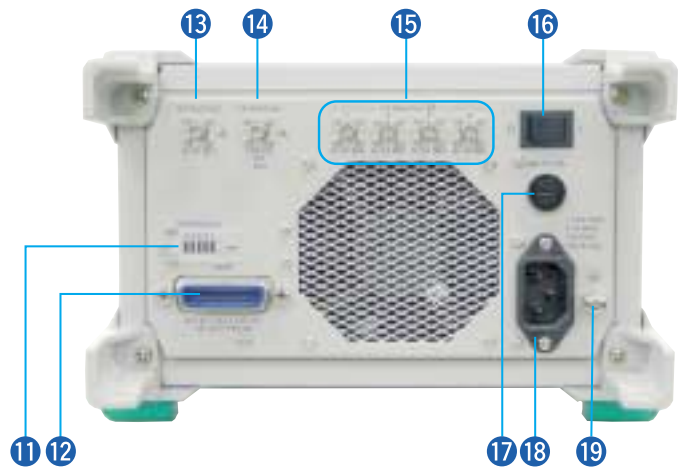
“Eye margin (eye diagram)measurement”evaluates the quality of the waveform on the basis of error rate .



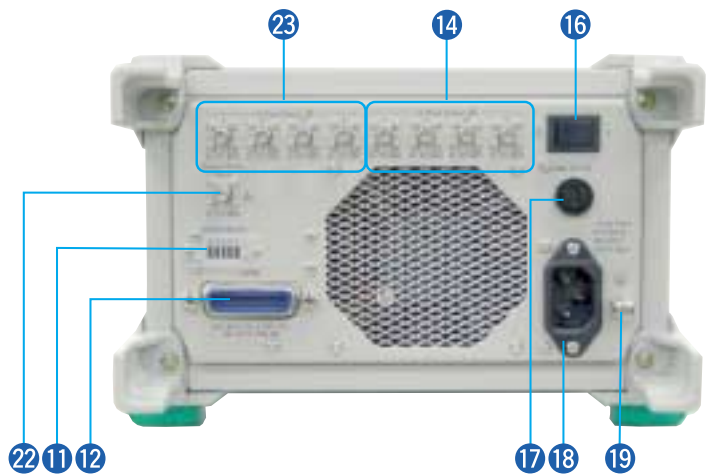
# Front/Rear Panel



Front Panel



Rear Panel



- 1)Remote / Local button 2)Panel lock button 3)Power switch 4)Ground 5)1/1 Clock input 6)1/1 Data output 7) 1/1 Data output 8)1/1 Clock output 9)Phase adjust knob ( 1/1 Clock) 10)Phase adjust knob ( 1/4 Clock) 11)GPIB address 12)GPIB connector 13)1/64 Clock output 14)1/4 Clock output 15)1/4 Data input 16)Main power switch 17)Fuse 18)Power supply 19)Ground 20)1/1 Data input 21) $V_{TH}$  adjust knob 22)DEMUX Reset input 23)1/4 Data output

# Specifications

## MP1803A 43.5G MUX

Operation frequency	25 to 43.5GHz (External clock)
Clock input	Input amplitude : 0.7 to 1.5 Vp-p, Waveform: Sine or rectangular wave (duty : 50 %), Input connector: V
Data output (25 to 43.5 Gbit/s)	Output waveform : NRZ, Number of Outputs : 2(DATA, DATA) Output amplitude : 2.0±0.2 Vp-p(AC coupled), Jitter : Less than 10ps Tr/Tf (20 to 80 %, >38Gbit/s) : 10 ps(typ.), Impedance : 50 Ω, Connector : V
Clock output (25 to 43.5 GHz)	Number of input : 1 (CLOCK), Output amplitude: 0.7 to 1.6 Vp-p (AC coupled) Clock delay : from - 70.0 to + 70.0 ps (0.1ps step), Impedance : 50 Ω, Connector : V
1/4 Data input (6.25 to 10.875 Gbi/s)	Number of input : 4 (D1,D2,D3,D4), Input Voltage : $V_{IH}= 0 V\pm 0.07 V$ , $V_{IL}= - 1 V\pm 0.07 V$ Impedance : 50 Ω, Connector : SMA
1/4 Clock output (6.25 to 10.875 GHz)	Number of output : 1(CLOCK), Output Voltage : $V_{OH}= 0 V\pm 0.04 V$ , $V_{amp}=1.40 V\pm 0.40 V$ Clock delay : from - 70 to +70 ps (1ps/div), Impedance : 50 Ω, Connector : SMA
Sync. Output	Number of output : 1 (1/64 Clock Output), Output Voltage : $V_{OH}= 0 V\pm 0.2 V$ , $V_{OL}= - 1 V\pm 0.2 V$ Impedance : 50 Ω/GND, Connector : SMA
Control interface	GPIB
Dimensions, mass and power	213 (W) X 132.5 (H) X 450 (D) mm, Less than 10 kg, AC100 to 240 V, Frequency : 47 to 63 Hz, Less than 100 VA
Operation temperature	20 to 30 centigrade

# Specifications

## MP1804A 43.5G DEMUX

Operation frequency	25 - 43.5 GHz
Data input (25 to 43.5 Gbit/s)	Number of input : 1 (DATA), Input amplitude : from 0.1 V to 1.0 Vp-p Threshold Voltage : from - 0.75 to + 0.25 V (0.001 V step), Impedance: 50 Ω, Connector : V
Clock input (25 to 43.5 GHz)	Number of input : 1 (CLOCK), Input amplitude : from 0.7 V to 1.5 Vp-p.(AC coupled) Clock delay : from - 70 to + 70 ps (0.1 ps step), Impedance : 50 Ω/GND, Connector : V
1/4 Data output (6.25 to 10.875 Gbi/s)	Number of output : 4 (D1,D2,D3,D4), Output Voltage : V <sub>OH</sub> = 0 ± 0.2 V, V <sub>OL</sub> =- 1 ± 0.2 V Impedance : 50 Ω, Connector : SMA
1/4 Clock output (6.25 to 10.875 GHz)	Number of output : 4 (CLOCK), Output Voltage : V <sub>OH</sub> = 0 ± 0.25V, V <sub>OL</sub> =- 1 ± 0.25 V Clock delay : from - 70 to + 70ps (1 ps step), Impedance : 50 Ω, Connector : SMA
DEMUX Reset input	Number of input : 1 (1/64 Clock Output), Input Voltage : V <sub>IH</sub> = 0 ± 0.1 V, V <sub>IL</sub> =- 1 ± 0.1 V Impedance : 50 Ω/GND, Connector : SMA
Control interface	GPIB
Dimensions, mass and power	213 (W) X 132.5 (H) X 450 (D) mm, Less than 10 kg, AC100 to 240 V, Frequency : 47 to 63 Hz, Less than 100 VA
Operation temperature	20 to 30 centigrade

## Ordering Information

Model/ Order No.	Name	Remarks	Model/ Order No.	Name	Remarks
MP1803A	-Main frame- 43.5G MUX		MP1804A	-Main frame- 43.5G DEMUX	
	-Standard Accessories-			-Standard Accessories-	
J1090	Coaxial Cable 3 PCS	V120MM-30CM (30 cm)	J1090	Coaxial Cable 2 PCS	V120MM-30CM (30 cm)
J0696E	Coaxial Cable 5 PC	AA-165-1500 (1.5 m)	J0696D	Coaxial Cable 1 PC	AA-165-2000 (2 m)
J1108	Coaxial Cable 1 PC	V120MM-50CM (50 cm)	J0696E	Coaxial Cable 8 PC	AA-165-1500 (1.5 m)
J1138	Coaxial Cable 1 PC	1.5m	J1145	Terminator 2 PCS	V210
J1145	Terminator 4 PCS	V210	J1137	Terminator 9 PCS	HRM-601
J1137	Terminator 6 PCS	HRM-601	J1144	Fixed Coaxial Attenuator 1 PC	41V-6,for MUX-DEMUX connection
J0008	GPIB Cable 2.0 m 1 PC	408JE-102	J0008	GPIB Cable 2.0 m 1 PC	408JE-102
F0012	Fuse 3.15 A 1 PC	T3.15 250 V	F0012	Power Code 2.5 m 1 PC	
Z0306A	Wrist strap 1 PC		Z0306A	Fuse 3.15 A 1 PC	T3.15 250 V
W2031AE	MP1803A 1 COPY		W2033AE	Wrist strap 1 PC	
W2032AE	MP1803A GPIB 1 COPY		W2034AE	MP1804A 1 COPY	
	Operation Manual			Operation Manual	
	Remote Control			MP1804A GPIB 1 COPY	
	Operation Manual			Remote Control	
	-Operation-			Operation Manual	
MP1803A-01	2.6 V Data Output			-Operation-	
MP1803A-11	Extended up to 48 Gbit/s		MP1804A-11	Extended up to 48 Gbit/s	



Specifications are subject to change without notice.

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