ANRITSU

MP1763B

The Anritsu MP1763B is a high-performance 12.5 GHz Pulse Pattern Generator (PPG) designed for testing high-speed digital systems, optical modules, and telecom/datacom networks. It provides accurate, low-jitter clock and data outputs over a frequency range of 50 MHz to 12.5 GHz, supporting both PRBS and large user-defined word patterns.

SPECIFICATIONS

General

Interfaces	GP-IB (IEEE-488.2), 3.5-inch Floppy Disk Drive (2HD/2DD)
Display	6.4-inch color TFT LCD

Physical

Power Supply	100 to 120 VAC / 200 to 240 VAC, 47.5 to 63 Hz, <= 450 VA
Operating Temperature	0 to +40 °C °C
Dimensions (W×H×D)	426 x 266 x 451 mm mm
Weight	27 kg

Timing and Clock Characteristics

Data Rate Range	50 MHz to 12.5 GHz
External Clock Input Frequency	50 MHz to 12.5 GHz
External Clock Input Amplitude	0.5 Vp-p to 2.0 Vp-p
External Clock Input Impedance	50 ohms (AC coupled)

Pattern and Data Generation

Pattern Types	PRBS, Word (User-defined), Alternate
PRBS Polynomial Sequences	2^7-1, 2^9-1, 2^11-1, 2^15-1, 2^23-1, 2^31-1
User-Defined Pattern Memory Depth	1 to 8,388,608 bits
Alternate Pattern Memory Depth	1 to 4,194,304 bits x 2

Pulse Output Performance

Number of Data Channels	1 (Complementary outputs: DATA, /DATA)
Number of Clock Channels	3 (CLK1, CLK2, /CLK2)
Output Amplitude Range	0.25 Vp-p to 2.0 Vp-p
Output Amplitude Resolution	10 mV
Offset Voltage Range	-2.0 V to +2.0 V (referenced to GND)
Offset Voltage Resolution	10 mV
Rise/Fall Time (20% to 80%)	<= 30 ps (typically 25 ps)
Output Connection Type	K-connector (female), 50 ohms

Channel Delay and Synchronization

Inter-channel Delay Range	-500 ps to +500 ps (CLK2 output)
Inter-channel Delay Resolution	1 ps
Pattern Sync Output Amplitude	>= 0.5 Vp-p (into 50 ohms)
Clock Sync Output Division Ratio	1/8 clock or 1/64 clock (selectable)

System Control and Connectivity

Internal State Storage Capacity	Up to 10 panel setup configurations

Environmental and Safety Compliance

Storage Temperature Range	-20°C to +60°C

Output Characteristics

Cross-point adjustment range	30% to 70% (in 1% steps)
Output configuration	Complementary DATA and CLOCK outputs

Pattern Generation & Control

Error insertion modes	Single, or internal rate of 10^-3 to 10^-9, or external trigger
Mark ratio pattern selections	1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8, 8/8, 0/8

Waveform Characteristics

Output Jitter	≤ 15 ps p-p
Waveform Distortion	≤ 10%
Output Impedance	50 Ω

Patterns

Zero Substitution Patterns	2^7, 2^9, 2^11, 2^15, 2^23

TECHNOLOGY

Silicon-Germanium / high-speed GaAs digital IC technology

APPLICATIONS

High-speed telecom, optical transponder testing, BERT transmitter