

DG535 Specifications

Delays

Channels	Four independent delay outputs
Range	0 to 999,999,999,999,995 seconds
Resolution	5 ps
Accuracy	1500 ps + timebase error × delay
Timebase	Standard: 25 ppm crystal oscillator Optional: 1 ppm TCXO (opt. 03) External: 10.0 MHz reference input
RMS jitter	<100 ps + (10 ⁻⁸ × delay)
Trigger delay (typ.)	85 ns (ext. trigger to T0 output)

External Trigger

Rate	DC to 1/(1 μs + longest delay)
Threshold	±2.56 VDC
Resolution	10 mV
Slope	Trigger on rising or falling edge
Impedance	1 MΩ + 40 pF or 50 Ω

Internal Rate Generator

Rate	Single shot, 0.001 Hz to 1.000 MHz, or line
Resolution	Four digits, 0.001 Hz below 10 Hz
Accuracy	Same as timebase
Jitter	1:10,000
Settling	<2 seconds for any rate change
Burst mode	2 to 32766 pulses per burst at integer multiples (4 to 32767) of the trigger period

Outputs

Load	50 Ω or high impedance
Rise time	2 to 3 ns (typ.)
Slew rate	1 V/ns
Overshoot	<100 mV + 10 % of pulse amplitude
Levels	TTL: 0 to 4 VDC (normal or inverted) ECL: -1.8 to -0.8 VDC (normal or inverted) NIM: -0.8 to 0.0 VDC (normal or inverted) VAR: Adjustable offset and amplitude between -3 and +4 VDC with 10 mV resolution. 4 V maximum transition.
Accuracy	±(50 mV + 3 % of pulse amplitude)
Option 02	Rear-panel 1 μs pulses corresponding to T0, A, B, C, D outputs with nominal amplitude of 8× the front-panel outputs (1 kHz rep. rate). Output level is reduced by 2 V/mA of additional average output current.

Fast Rise Time (opt. SRD1)

Output amplitude	+0.5 to 2.0 VDC
Output offset	-0.8 VDC (typ.)
Transition time	
Rise (20/80 %)	100 ps (max.)
Fall (20/80 %)	2000 ps (max.)
Pulse aberrations	
Foot	4 % (typ.)
Ring	±5 % (typ.)

Fast Fall Time (opt. O4B)

Output amplitude	-0.5 to -2.0 VDC
Output offset	+0.8 VDC (typ.)
Transition time	
Rise (20/80 %)	2500 ps (max.)
Fall (20/80 %)	100 ps (max.)
Pulse aberrations	
Foot	4 % (typ.)
Ring	±5 % (typ.)

General

Display	backlit 20-character LCD
Computer interface	GPIB (IEEE-488). All instrument functions and settings may be controlled over the interface bus. Interface queue can be viewed from the front panel.
Dimensions	8.5" × 4.75" × 14" (WHD)
Weight	10 lbs.
Power	70 W, 100/120/220/240 VAC, 50/60 Hz
Warranty	One year parts and labor on defects in materials and workmanship