	BNC 577 (250 ps)	SRS DG535	SRS DG645
			
Channels	8	4	8
Internal Rate Generator			
Rate (T0 period)	0.001 Hz to 20.000 MHz (1000 s – 50 ns)	0.001Hz to 1 MHz	100µHz to 10MHz
Resolution	5 ns	Four digits, 0.001Hz below 10Hz	1µHz
Accuracy	1 ns + (0.0001 x period)	25 ppm	2 ppm
T0 Period Jitter	< 50 ps RMS	1:10,000	<25 ps (10MHz/N trigger rate) <100 ps (other trigger rates)
Burst	1 to 10,000,000 pulses	2 to 32766 pulses per burst at integer multiples (4 to 32767) of the trigger period	1 to 2^(32 – 1)
Timing Generator			
Pulse Width Range	10 ns to1000 s	<10 ns to 1000 s	<10 ns to 1000s
Width Accuracy	1 ns + 0.0001 x width setting	1.5 ns+timebase error×delay	1 ns+(timebase error×delay)
Width Resolution	250 ps	5 ps	5 ps
Pulse Delay Range	0 to 1000s	0 to 1000s	0 to 2000 s
Delay Accuracy	1 ns + 0.0001 x delay setting	1.5 ns+timebase error×delay	1 ns+(timebase error×delay)
Delay Resolution	250 ps	5 ps	5 ps
Jitter (channel to channel)	< 50ps RMS	<100 ps+(10^–8 ×delay)	15 ps+(timebase jitter×delay)
TTL/CMOS Outputs			
Output Level	4.0 V (typical) into Hi-Z	0 to 4 VDC	n/a
Rise Time	<3ns (1.5ns typical)	2 to 3 ns (typ.)	n/a
Jitter (channel to channel)	< 50 ps RMS	<100 ps+(10^–8 ×delay)	n/a
Adjustable Outputs			
Output Level	2 V to 20 VDC into Hi-Z 1 V to 10 VDC into 50 Ω	–3 and +4VDC	0.5 to 5.0V (level+offset <6.0V)
Amplitude Resolution	10 mV	10mV	10mV
Current	200 mA typical, 400 mA (short pulses)	n/a	n/a
Rise Time	15 ns (typical) @ 20V into Hi-Z 25 ns typ @ 10V into 50 Ω	2 to 3 ns (typ.)	<2 ns
Slew Rate	> 0.1V/ns	1V/ns	n/a
Overshoot	< 1 V + 10% of pulse amplitude	<100mV+10% of pulse amplitude	<100mV+10% of pulse amplitude
External Trigger Input(s)			
Number	1 or 2	1	1

	BNC 577 (250 ps)	SRS DG535	SRS DG645
Rate	DC to 1/ (200 ns + longest active pulse). Maximum of 5 MHz	DC to 1/(1us + longest delay)	DC to 1/ (100 ns + longest delay) (maximum of 10MHz)
Threshold	0.2 to 15 VDC	+/-2.56 VDC	± 3.50 VDC
Maximum Input Voltage	60 V Peak	unknown	unknown
Resolution	10 mV	10mV	10 mv
Slope	Rising or Falling	Rising or Falling	Rising or Falling
Impedance	5.3 kΩ + 40pF	1Mohm + 40pF or 50ohm	1 MΩ + 15 pF
Jitter	< 800 ps RMS	50 ps	25 ps+(timebase jitter×delay)
Insertion Delay	< 110 ns	85 ns	85 ns
Gate Input(s)			
Number	1	1	1
Threshold	0.2 to 15 VDC	TTL	TTL
Maximum Input Voltage	60 V Peak	n/a	n/a
Resolution	10mV	n/a	n/a
Polarity	Active High/Active Low	Active High	Active high
Function	Pulse Inhibit or Output Inhibit	Externally Triggered Pulse Inhibit	Externally Triggered Pulse Inhibit
Channel Behavior	Global w/ Individual Channel Enables	Global	Global
Memory and Connectivity			
Memory Storage	16 slots	9 slots	9 slots
External Clock In	10 MHz – 100 MHz user selectable in discrete values	10 MHz	10 MHz
External Clock Out	To or Ref out (10 to 100 MHz) user selectable in discrete values	10 MHz	10 MHz
General			
Computer Interface	USB, GPIB, Ethenet, RS-232	GPIB	GPIB, Ethenet, RS-232
Dimensions	10.5” L x 8.25” W x 5.5” H	14" L × 8.5" W× 4.75" H	13" L × 8.5" W× 3.5" H
Weight	8 lbs	10 lbs.	9 lbs
Options			
	L82: Dual channel, 820nm optical output module	**Option 02:** +/- 32 V Output	**Option 01**: Eight delay channels (5V)
	L130: Dual channel, 1300nm optical output module	**opt. SRD1:** 100 ps fast rise time	**Option 02:** Eight delay channels (30V)
	AT35: Dual channel, TTL/35 V high voltage output module	**opt. O4B:** 100 ps fast fall time	**Option 03:** Combinatorial outputs
	AT45: Dual channel, 45 V high and low impedance voltage output module (limited to 4 channels)		**SRD1:** 100 ps rise time module
	TZ50: Dual channel, high current TTL/CMOS (for driving 50 ohm loads) & adjustable output module		
	TZ35: Dual channel, high current TTL/CMOS (for driving 50 ohm loads) & 35V high voltage output module		