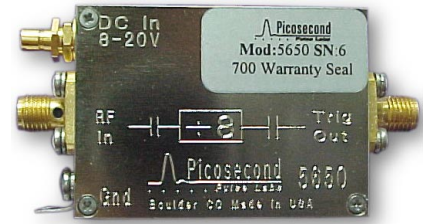


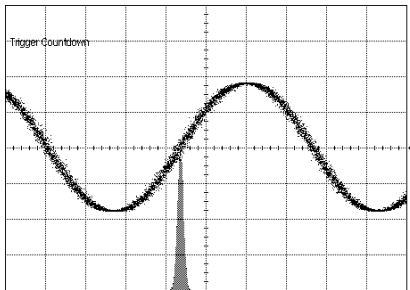
Model 5650 Trigger Countdown

200 MHz to 16 GHz
Divide Ratios of 2, 4, 8, 16, 32 and 64

The Model 5650 Trigger Countdown is a divide-by-n prescaler that extends the range of frequency counters to ≥ 16 GHz. It may also be used as a trigger countdown to extend the triggering capability of digital sampling oscilloscopes to ≥ 16 GHz. It requires no adjustments to achieve synchronization. Extremely low timing jitter trigger pulses are characteristic of the 5650. The waveform plot shown below is a 15 GHz, 0 dBm sine wave along with a jitter histogram measured on an Agilent 86100 oscilloscope using the 5650 as a trigger countdown. The measured timing jitter is a phenomenally low 0.8 ps rms, which includes the combined jitter of the countdown and the scope.



Trigger Countdown



Typical Low Jitter Performance. 15 GHz, 0 dBm input, 100 mV/div and 10 ps/div. Standard Deviation (Jitter) 755 fs @ 15 GHz, 2000 samples.

Compatible with many oscilloscopes including:

- Agilent 86100
- TEK 8000
- HP/Agilent 54750 and 83480
- TEK TDS-820
- TEK 11801 and CSA-803

Model Number	Connector Configuration
5650-106-D02	SMA Jacks (f)
5650-106-D04	SMA Jacks (f)
5650-106-D08	SMA Jacks (f)
5650-106-D16	SMA Jacks (f)
5650-106-D32	SMA Jacks (f)
5650-106-D64	SMA Jacks (f)

Divide Ratio	+2, +4	+8	+16, +32, +64
Frequency Range	< 200 MHz to >17 GHz 0.5 GHz to 16 GHz, guaranteed @ Pin = 0 dBm		
Typical Sensitivity	-17 dBm @ 1 GHz to -2 dBm @16 GHz		
Max. CW Input Power	+10 dBm, 0.5-12 GHz, +4 dBm, 12-16 GHz		
In/Out Impedance	50 Ω		
Port Coupling	AC		
Output Amplitude into 50 Ω	900 mV _{pp} , 400mV _{pp} , f _{out} ≥4 GHz	900 mV _{pp}	260 mV _{pp}
Output Risetime	80 ps		100 ps
Output Falltime	70 ps		100 ps
Jitter	< 1 ps rms		< 1.5 ps rms
Input Return Loss	>20 dB @ 1 GHz, 5 dB @ >4 GHz		
DC Power Requirements	+8 V to +16 V @ 100 mA	+8 V to +16 V @ 155 mA	
DC Connector	SMB		
Dimensions	1.25 x 1.75 x 0.625" (3.2 x 4.4 x 1.6 cm) + connectors		
Temperature Range	0 C to +65 C, operating case temp, -25 C to +90 C, storage		
Accessories Supplied	SMB power cable, 4 ft.		
Warranty	Static-Sensitive Devices Limited 30 day warranty		

Note: Parameters listed are typical values. They are guaranteed only when maximum and/or minimum limits are given.