



SS-7840H

DC – 470 MHz, 4 CH, 10 traces

SS-7840

DC – 400 MHz, 4 CH, 10 traces

SS-7825

DC – 250 MHz, 4 CH, 10 traces

- Save/recall of up to 256 panel settings
- Quick auto setup
- Full NTSC, PAL (SECAM), HDTV TV triggering with field and line
- 2 mV/div high sensitivity and 500 ps/div sweep rate (SS-7840, H)
- 5-digits frequency counter
- Cursor function
- 100 mV, 500 mV/div CH3 ranges
- Probe power for FET or current probe
- Offset function
- TV pedestal clamp function

■ DC – 470 MHz, 4 CH, 10 traces

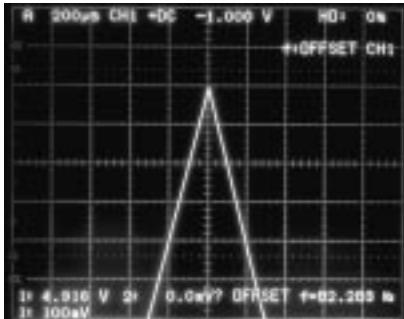
Four channels of up to 470 MHz are available with CH1 and CH2 boasting the widest frequency range.

SS-7840H

- DC – 470 MHz (-3 dB) at 5 mV ~ 50 mV/div
- DC – 440 MHz (-3 dB) at 2 mV, 100 mV ~ 5 V/div
- All other features and specifications are same as SS-7840.

■ Input offset function

Suitable for the observation of small amplitude signals, the DC input offset function features an offset equivalent to ± 500 div. max. that can be applied to CH1 or CH2.



■ Counter measurement function

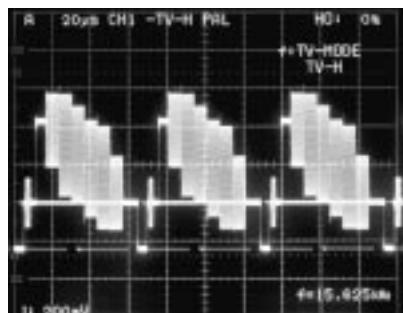
Built-in 5-digit counter displays frequencies of up to 400 MHz.
(6 digit: Factory option)

■ Quick auto setup (CH1, CH2)

Pressing the button automatically displays the optimum range for the input waveform on the CRT (for CH1 and CH2).

■ TV/HDTV trigger

TV triggering is available for NTSC, PAL (SECAM) and HDTV. Field (EVEN/ODD/BOTH) and line select functions are provided.



■ Save/recall of up to 256 settings

Turning the FUNCTION knob recalls the panel setup. Up to 256 settings can be stored in memory.

■ Power supply for FET probe

■ Pedestal clamp function (CH1 or CH2)

Specifications

CRT Shape	6-inch rectangular, internal graticule, meshless CRT with scale illumination	Event trigger	COUNT, BURST
Effective area	8 x 10 div (1 div = 10 mm)	Count range	1 – 65535
Accelerating voltage	Approx. 20 kV	Max. count frequency	50 MHz
Vertical deflection system (Y axis)		Burst time range	0.15 µs – 9.99 s
Vertical mode	CH1, CH2, CH3, CH4 ADD (CH1 + CH2) ALT, CHOP (555 kHz ± 1%)	AUTO SETUP	
● CH1, CH2		Input channel	CH1, CH2
Sensitivity		Frequency range	50 Hz – 100 MHz
Range	2 mV/div – 5 V/div(1-2-5 sequence in 11 steps)	Horizontal deflection system (X axis)	
Variable adjuster	2 mV/div – 12.5 V/div. continuously variable	Display (HORIZ DISPLAY)	A, ALT, B, X-Y
Accuracy	±2%	● A sweep	
Frequency bandwidth		Sweep mode	AUTO, NORMAL, SINGLE
Bandwidth	DC – 470 MHz -3 dB (SS-7840H)	Sweep rate	5 ns/div – 500 ms/div (1-2-5 sequence in 25 steps) (SS-7840)
	DC – 400 MHz -3 dB (SS-7840)	Max. sweep rate	10 ns/div – 500 ms/div (1-2-5 sequence in 24 steps) (SS-7825)
	DC – 250 MHz -3 dB (SS-7825)	Hold-off time	500 ps/div (SS-7840), 1 ns/div (SS-7825)
	Note: The lower limit frequency is 10 Hz with AC coupling	● B sweep	Variable
Bandwidth limiter	DC – 20 MHz, 100 MHz (SS-7840/7840H)	Delay	TRIG'D DELAY, RUNS AFTER DELAY
	DC – 20 MHz (SS-7825)	Sweep rate	5 ns/div – 20 ms/div (1-2-5 sequence in 21 steps) (SS-7840)
Rise time	Approx. 745 ps (SS-7840H)	Max. sweep rate	0 ns/div – 20 ms/div (1-2-5 sequence in 20 steps) (SS-7825)
	Approx. 875 ps (SS-7840)	Delay time	500 ps/div (SS-7840) 1 ns, div (SS-7825)
	Approx. 1.4 ns (SS-7825)	Range	0.2 div – 10.2 div of A sweep
	Note: Calculated from the following formula	Delay jitter	1/20000 at 1 ms/div of A sweep, 500 ns/div of B sweep
	$Tr = \frac{350}{\text{Bandwidth [MHz]}} \quad [\text{ns}]$	● Sweep magnification	X10
Signal delay time	20 ns or more (on the screen)	■ X-Y operation	(CH1)
Input coupling	AC, DC, GND	● X axis	Same as CH1
Input RC	1 MΩ ± 1.5% // 16 pF ± 2 pF,	Sensitivity	±2%
	50 Ω input: 50 Ω ± 1%	Accuracy	DC – 2 MHz -3 dB
Max. input voltage	± 400 V (DC + AC peak)	Frequency bandwidth	CH1, CH2, CH3, CH4, ADD
1 MΩ input	5 Vrms	● Y axis	Within 3° (DC – 200 kHz)
50 Ω input	1.35 or less (with DC – 400 MHz, DC – 250 MHz for SS-7825)	Phase difference	
VSWR		■ CAL (calibration signal)	
Offset voltage		Waveform	Square-wave
		Frequency	1 kHz, ±0.1%
		Duty ratio	49% – 51%
		Output voltage	0.6 V, ±1%
		■ CH2 OUT	20 mV/div, ±30% (50 Ω load)
		Output voltage	200 MHz, -3 dB (50 Ω load)
		Frequency bandwidth	(100 MHz for SS-7825)
		Output resistance	50 Ω, ±20%
Polarity switching	CH2 only	■ Probe power	2
Probe sense	1:1, 10:1, 100:1	Connector number	+12V, -12V
● CH3, CH4		Voltage	0.5 Vp-p or more
Sensitivity		■ Z AXIS IN	With positive voltage, dark: with negative voltage, bright
Range	100 mV/div, 500 mV/div	Modulation voltage	DC – 5 MHz
Accuracy	± 3%	Polarity	5 kΩ ±20%
Frequency bandwidth	DC – 400 MHz, -3 dB (SS-7840)	Frequency bandwidth	±40 V max.
	DC – 250 MHz, -3 dB (SS-7825)	Input resistance	Time difference (Δt), voltage difference (ΔV)
Input coupling	AC, DC	Max. input voltage	5-digit (A trigger source)
Input RC	1 MΩ, ±1.5%/16 pF ±3 pF	■ Cursor measurement	±0.01%
Max. input voltage	±400 V max. (DC + AC peak)	■ Counter	2 Hz – 400 MHz (SS-7840) 2 Hz – 250 MHz (SS-7825)
Probe sense	1:1, 10:1, 100:1	Display digits	Max. 256 panel settings
■ Triggering		Accuracy	Approx. 30,000H (at 25 °C)
● A triggering		Frequency range	
Trigger mode	EDGE, EVENT, TV	■ Save/ Recall	AC 100 V – 240 V
Source	CH1, CH2, CH3, CH4, LINE	Backup time	50 Hz – 400 Hz
Coupling	AC, DC, HF-REJ, LF-REJ	■ Power supply	Max. 120 VA
Slope	+, –	Voltage range	
Sensitivity		Frequency range	
		Power consumption	
● B triggering		■ Weight and dimensions	
Source	CH1, CH2, CH3, CH4	Weight	Approx. 8.5 kg (without accessories)
Coupling	AC, DC, HF-REJ, LF-REJ	Dimensions	Approx. 320W x 160H x 420L mm
Slope	+, –	■ Environmental conditions	
Sensitivity		Performance guaranteed	+10 – +35 °C
		temperature	
		Operating range	0 – +40 °C
		Temperature	90% RH (0 – 40 °C)
		Humidity	
		Storage range	-20 – +40 °C
		Temperature	80% RH (-20 – +40 °C)
		Humidity	
		■ Accessories	Power cord (x1), probe (x2), panel cover (1), fuse (x2), operation manual (x1), accessory bag (x1)
HF-REJ: Attenuates at 10 kHz or more			
HF-REJ: Attenuates at 10 kHz or less			
CH1, CH2, CH3, CH4			
AC, DC, HF-REJ, LF-REJ			
+ , –			
Frequency	0.4 div		
DC – 10 MHz	0.4 div		
10 MHz – 100 MHz	1.0 div		
*100 MHz – 250 MHz	2.0 div		
**SS-7840/7840H			
HF-REJ: Attenuates at 10 kHz or more			
HF-REJ: Attenuates at 10 kHz or less			
NTSC, PAL (SECAM), HDTV			
Format	TV-V (ODD, EVEN, BOTH), TV-H		
Trigger mode			
NTSC	1 H – 525 H		
PAL (SECAM)	1 H – 625 H		
HDTV	1 H – 1125 H		
TV clamp			
Clamp position	Back porch level		
Clamp level	Within ±1 div		
Signal amplitude	1.5 div – 8 div		