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REVISIONS			DDC. NO. SPC-F004 * Effective: 12/21/98 * DCP No: 680						
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE	
1852	A	RELEASED	JWM	4/23/02	JN	03/13/08	JN	03/13/08	

FEATURES:

- 200MHz, Dual Channel, Delayed Sweep
- Built-In 6 Digit Universal Counter
- Auto Set
- TV-Line Selection (NTSC, PAL, SECAM)
- 10 Sets Memory for SAVE & RECALL of Front Panel Setting
- Cursor Readout with 7 Measurements
- Panel Setup Lock of Digital-Control Functions
- Buzzer Alarm
- LED Indicators
- Trigger Signal Output
- Z-Axis Modulation Input
- SMD Technology, High Stability and Reliability



SPC-F004.DWG

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	Jeff McVicker	4/23/02	200MHz Dual Trace/Channel Oscilloscope			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	Jason Nash	03/13/08	A	72-6825	18C2257.dwg	A
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: Millimeters	SHEET: 1 OF 3
Jason Nash	03/13/08					

SPECIFICATIONS

CRT

Type: 6-inch rectangular type with internal graticule;
 0%, 10%, 90% and 100% markers. 8 x 10 DIV (1 DIV=1 cm)
Phosphor : P31
Accelerating Potential: 14 kV approx.
Illumination: Continuously adjustable
Z-axis input:
 Coupling: DC
 Sensitivity: 5V or more
 Maximum input voltage: 30V (DC+AC peak) at 1kHz or less
 Bandwidth: DC ~ 5MHz

VERTICAL SYSTEM

Sensitivity : 2mV ~ 5V/DIV, 11 step in 1-2-5 sequence
Sensitivity Accuracy : ≤3% (5 DIV at the center of display)
Vernier Vertical Sensitivity : Continuously variable to 1/2.5 or less panel-indicate value
Bandwidth (-3dB): DC ~ 200MHz (2mV/DIV : DC ~ 20MHz)
Rise Time: 1.75nS (2mV/DIV : 17.5 nS)
Signal Delay : Leading edge can be monitored
Max. Input Voltage : 400V (DC+AC peak) at 1kHz or less
Input Coupling: AC, DC, GND
Input Impedance: 1 Megohm ± 2% // approx. 25pF
Vertical Mode : CH1, CH2, DUAL (CHOP/ALT), ADD, CH2 INV.
Bandwidth Limited: 20MHz
Common-Mode Rejection Ratio : 50:1 or better at 50kHz
Dynamic Range : 8 div at 100MHz; 5 div at 200MHz

HORIZONTAL SYSTEM

Horizontal Modes : MAIN(A), ALT, DELAY(B)
A (main) Sweep Time : 20nS ~ 0.5S / DIV, continuously variable (UNCAL)
B (delay) Sweep Time : 20nS ~ 50mS/DIV
Accuracy : ±3% (±5% at x 10 MAG)
Sweep Magnification : x 10 (maximum sweep time 2nS / DIV)
Hold Off Time: Variable
Delay Time : 1µS ~ 5S
Delay Jitter: Better than 1:20000
Alternate Separation : Variable

TRIGGER

Trigger Modes : AUTO, NORM, TV
Trigger Source : CH1, CH2, LINE, EXT, EXT/10
Trigger Coupling : AC, DC, HFR, LFR, NR
Trigger Slope : "+" or "-" polarity or TV sync polarity
Trigger Sensitivity :

Mode	Frequency	INT	EXT	EXT/10
AUTO	10Hz~20MHz	0.35 DIV	50 mV	500 mV
	20MHz~200MHz	1.5 DIV	150 mV	1.5 V
NORM	DC~20MHz	0.35 DIV	50 mV	500 mV
	20MHz~200MHz	1.5 DIV	150 mV	1.5 V
TV	sync signal	1 DIV	200 mV _{pp}	2 V _{pp}

Trigger Level Range: INT: ±4DIV or more; EXT: ±0.4V or more; EXT/10: ±4V or more

TV Triggering: Mode: TV-V, TV-H, TV-LINE

TV-Line Selection :

Standard	Filed 1	Filed 2
NTSC (525H)	1H~263H	1H~262H
PAL (625H)	1H~313H	1H~312H
SECAM (625H)	1H~313H	1H~312H

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Max. External Input Voltage : 400V (DC+AC peak) at 1kHz
External Input Impedance : 1 Megohm $\pm 5\%$, // approx. 25pF

X-Y OPERATION

Mode: X-axis: selectable CH1, EXT, EXT/10; Y-axis: selectable CH1, CH2, CH1 and CH2
Sensitivity Accuracy : 2mV ~ 5V/DIV $\pm 3\%$; EXT: 0.1V/DIV $\pm 5\%$; EXT/10: 1V/DIV $\pm 5\%$
X-axis Bandwidth : DC ~ 500kHz (-3dB)
Phase Error : 3° or less from DC ~ 50kHz

OUTPUT SIGNAL

Trigger Signal Output : Voltage: approx. 25mV/DIV into 50 ohms; Frequency response: DC~10MHz
Calibrator Output : 1kHz square wave, 2Vpp $\pm 2\%$

CURSOR READOUT FUNCTION

Cursor Measurement Function : ΔV , $\Delta V\%$, ΔVdB , ΔT , $1/\Delta T$, $\Delta T\%$, $\Delta \theta$
Cursor Resolution : 1/100 DIV
Effective Cursor Range : Vertical: $\pm 3DIV$; Horizontal: $\pm 4DIV$
Panel Setting Display : Vertical: V/DIV(CH1,CH2), UNCAL, ALT/CHOP/ADD, INV, probe factor, AC/DC/GND
Horizontal : S/DIV(MTB,DTB), UNCAL, x 10MAG, delay time, HO
Trigger : source, coupling, slope, level, TV-V, TV-H
Others : X-Y, lock, save/recall MEM 0-9

AUTO MEASUREMENT FUNCTION

Parameter Function : FREQ, PERIOD, $\pm WIDTH$, $\pm DUTY$ (+ or - polarity selected by trigger slope)
Display Digits : Max. 6-digits, decimal
Frequency Range : 50Hz ~ 200MHz
Accuracy : 1kHz ~ 200MHz : $\pm 0.01\%$; 50Hz ~ 1kHz : $\pm 0.05\%$
Measuring Sensitivity : >2 div (Measuring source selected from CH1 and CH2 as synchronous signal sources)

SPECIAL FUNCTION

Auto Set : Input Channel: CH1, CH2; Frequency Response 50Hz~50MHz
Panel Setting Save & Recall : 10 sets
Panel Setups Lock : Provided

POWER SOURCE: AC 100V / 120V / 230V $\pm 10\%$, 50 / 60Hz

ACCESSORIES: Power cord
Instruction manual
2 Probes(10:1/1:1)

DIMENSIONS & WEIGHT: 310(W) x 150(H) x 470(D)mm; Approx. 9kg

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