

Short monoaccelerator oscilloscope CRT with high electrostatic deflection sensitivity, electrostatic focusing, and a clear cylindrical faceplate. Its P1 screen provides green fluorescence for direct waveform observation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Cathode Ray
No fixed ratings recorded.
CRT section; maximum anode voltage 2750 V and capacitances retained in parameter table.

Focusing Method Electrostatic DEFLECTION SENSITIVITY—HIGH Deflecting Method Electrostatic LENGTH—SHORT Phosphor Number . Pi MONOACCELERATOR Fluorescent Color ... Green FACE PLATE —CLEAR, CYLINDRICAL Phosphorescent Color None DEFLECTION—ELECTROSTATIC

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 Waterman Products

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1960 WATERMAN PRODUCTS

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RAYONIC®	3	RAYONIC® 3XP1 CATHODE RAY TUBE QUICK REFERENCE DATA
Heater Voitage	6.3 V	Heater Voitage 6.3 Volts
Heater Current ... ettt e e e [1]	600 mA	Heater Current ... ettt e e e 0.6 =10% Amperes
Heater Current ... ettt e e e [2]	10 A	Heater Current ... ettt e e e 0.6 =10% Amperes
Cathode to all other electrodes	5.2	Cathode to all other electrodes 5.2 puf
Grid # [1]	1	Grid # 1 to all other electrodes 5.7 ppuf
Grid # [2]	5.7	Grid # 1 to all other electrodes 5.7 ppuf
Positive voliage on D1 deflects beam approximately toward pin	3	Positive voliage on D1 deflects beam approximately toward pin 3
Positive voltage on D3 deflects beam approximately toward pin	35	Positive voltage on D3 deflects beam approximately toward pin 35
DI1-D2 are nearest to the screen (	37	DI1-D2 are nearest to the screen (37 Dimension)
Anode Voltage (A2)	2750 V	Anode Voltage (A2) 2750 Volts DC
Anode (A2) Input	6	Anode (A2) Input .. 6 Watts
Anode # [1]	1 V	Anode # 1 (Focusing Electrode) Voltage . 1100 Volts
Anode # [2]	1100 V	Anode # 1 (Focusing Electrode) Voltage . 1100 Volts
Grid #	1	Grid #1 (G1) Voltage

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak voltage between Anode # [1]	2 V	Peak voltage between Anode #2 and any deflecting plate 550 Volts
Peak voltage between Anode # [2]	550 V	Peak voltage between Anode #2 and any deflecting plate 550 Volts
Focusing Electrode (A1) current for any operating condition ~ [1]	-15 A	Focusing Electrode (A1) current for any operating condition ~-15to +10 pAmps
Focusing Electrode (A1) current for any operating condition ~ [2]	10 A	Focusing Electrode (A1) current for any operating condition ~-15to +10 pAmps
Spot Position, Undelected (Note [1])	1 mm	Spot Position, Undelected (Note 1) 7.0 Max. mm
Spot Position, Undelected (Note [2])	7 mm	Spot Position, Undelected (Note 1) 7.0 Max. mm
A1 Voltage [1]	20	A1 Voltage 20% to 35% of A2 Voltage
A1 Voltage [2]	35	A1 Voltage 20% to 35% of A2 Voltage
G1 Voltage [1]	3.375	G1 Voltage 3.375 max% of A2 Voltage (Note 2)
G1 Voltage [2]	2	G1 Voltage 3.375 max% of A2 Voltage (Note 2)
Anode Voltage (A2) [1]	1000 V	Anode Voltage (A2) 1000 1500 2000 Volts
Anode Voltage (A2) [2]	1500 V	Anode Voltage (A2) 1000 1500 2000 Volts
Anode Voltage (A2) [3]	2000 V	Anode Voltage (A2) 1000 1500 2000 Volts
Focusing Electrode Voltage (A1) [1]	200 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Focusing Electrode Voltage (A1) [2]	350 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Focusing Electrode Voltage (A1) [3]	300 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Focusing Electrode Voltage (A1) [4]	525 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Focusing Electrode Voltage (A1) [5]	400 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Focusing Electrode Voltage (A1) [6]	700 V	Focusing Electrode Voltage (A1) 200 to 350 300 to 525 400 to 700 Volts
Grid # [1]	1	Grid # 1 Voltage (Note 2) —34 max. —51 max. —67.5 max. Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid # [2]	2	Grid # 1 Voltage (Note 2) —34 max. —51 max. —67.5 max. Volis
Grid # [3]	-34	Grid # 1 Voltage (Note 2) —34 max. —51 max. —67.5 max. Volis
Grid # [4]	-51	Grid # 1 Voltage (Note 2) —34 max. —51 max. —67.5 max. Volis
Grid # [5]	-67.5	Grid # 1 Voltage (Note 2) —34 max. —51 max. —67.5 max. Volis
Deflection Factor D1-D2 [1]	3410 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D1-D2 [2]	46 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D1-D2 [3]	51 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D1-D2 [4]	69 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D1-D2 [5]	68 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D1-D2 [6]	92 V	Deflection Factor D1-D2 3410 46 51 to 69 68 to 92 Volts DC/Inch
Deflection Factor D3-D4 [1]	14 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Deflection Factor D3-D4 [2]	19 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Deflection Factor D3-D4 [3]	2110 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Deflection Factor D3-D4 [4]	28.5 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Deflection Factor D3-D4 [5]	2 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Deflection Factor D3-D4 [6]	38 V	Deflection Factor D3-D4 14 to 19 2110 28.5 2B to 38 Volts DC/Inch
Grid # [1]	1	Grid #1 Circuit Resistance 1.5 Megohms
Grid # [2]	1.5	Grid #1 Circuit Resistance 1.5 Megohms
Resistance in any Deflecting Electrode Circuit (Note [1])	3	Resistance in any Deflecting Electrode Circuit (Note 3) 1.0 Megohms
Resistance in any Deflecting Electrode Circuit (Note [2])	1	Resistance in any Deflecting Electrode Circuit (Note 3) 1.0 Megohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value	1	1. With deflecting electrodes connected to Anode (A2).
Published value	2	2. For visual extinction of undeflected focused spot.
Published value	3	3. The resistance in each deflecting electrode circuit should be approximately equal.

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