

ELECTRONIC TUBE REFERENCE

7MP7

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
CATHODERAY

Seven-inch magnetic-focus and magnetic-deflection CRT primarily intended for radar indication, using a P7 long-persistence phosphor. Manufacturer sources give high-voltage operation to approximately 8 kV.

GENERAL CHARACTERISTICS

BASE DESIGNATION	65-57	BASE PINS	5
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	
MAXIMUM PLATE VOLTAGE	8000 V
MAXIMUM SCREEN VOLTAGE	770 V
CRT maximum accelerating/anode/ultor voltage is promoted to MaxPlateVoltage; additional electrode ratings, capacitances, operating conditions, deflection/focus and optical data are preserved as parameters.	

Seven-inch magnetic-focus and magnetic-deflection cathode-ray tube primarily intended for radar indication, using P7 phosphor.



SOURCE OPERATING CONDITIONS

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1938 Raytheon

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

1938 RAYTHEON

Section 1 · Cathode Ray

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Radar_Oscilloscope_Display text	—



SOURCE OPERATING CONDITIONS

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1950 Sylvania

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

1950 SYLVANIA

Section 1 · Cathode Ray

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Focusing method	Magnetic	—
Deflection method	Magnetic	—



SOURCE OPERATING CONDITIONS

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1960 Du Mont

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1960 DU MONT

Section 1 · Cathode Ray

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
DeflectionMethod	Magnetic	—
FocusingMethod	Magnetic	—
Deflection Angle	50 degree	—
MinimumUsefulScreenDiameter	6 in	—
Phosphor	P7	Radar



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1965 Sylvania Electronic Tubes Vol3

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1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Grid No. 2/screen voltage	770 V	Published maximum Grid No. 2 voltage
Maximum plate/anode voltage	8800 V	Published maximum plate/anode voltage
Anode Voltage	8800 V	Anode Voltage . 8,800Volts dc
Grid No. 2 Voltage	770 V	Grid No. 2 Voltage 770 Volts dc
Heater Negative with Respect to Cathode	140 V	Heater Negative with Respect to Cathode . 140 Volts
Heater Positive with Respect to Cathode	140 V	Heater Positive with Respect to Cathode 140 Volts
Anode Voltage2 4o00 7o	0 V	Anode Voltage2 4o00 7o00 Volts dc
Grid No. 2 Voltage 250	250 V	Grid No. 2 Voltage 250 250 Volts dc A Division of

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No. 1 Voltage for Cutoff3 -27 to -63 -27 to	-63 V	Grid No. 1 Voltage for Cutoff3 -27 to -63 -27 to -63 Volts dc SYLVANIA ELECTRIC PRODUCTS, Inc.
Grid No. 1 Circuit Resistance	1.5 Mohm	Grid No. 1 Circuit Resistance . 1.5 Megohms Max. EMPORIUM, PENNSYLVANIA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	Heater Voltage 6.3 Volts



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 1 of 7

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

1971 RCA HB3 BINDER 1 OF 7

Section 1 · Cathode Ray

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum grid 2 positive voltage	700 V	Positive
Maximum grid 2 negative voltage	180 V	Negative
Maximum grid 1 negative-bias voltage	180 V	NegativeBias
Maximum grid 1 positive-bias voltage	0 V	PositiveBias
Maximum grid 1 positive-peak voltage	2 V	PositivePeak
Maximum peak grid 1 drive from cutoff	65 V	—
Peak heater-cathode voltage	125 V	HeaterNegative
Peak heater-cathode voltage	125 V	HeaterPositive
Typical ultor voltage low	4000 V	TypicalOperationLow
Typical ultor voltage high	7000 V	TypicalOperationHigh
Typical grid 2 voltage	250 V	TypicalOperation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum accelerating/anode voltage	8000 V	—
Ultor Voltage* 4000	7000 V	—
Grid-No.2 Voltage 250	250 V	—
Grid-No.1 Voltage ° -27 to – 63 –27 to	-63 V	—
Grid-No.1–Circuit Resistance 1	5 MΩ	Maximum

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to all other electrodes capacitance	6 pF	Approximate
Cathode to all other electrodes capacitance	5 pF	Approximate

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Deflection angle	50 degrees	Approximate
Current	600 mA	—
Grid No.1 to All Other Electrodes	6 pF	—
Cathode to All Other Electrodes	5 pF	—
Ultor• VOLTAGE	8000 V	Maximum
PEAK GRID-No.1 DRIVE FROM CUTOFF	65 V	Maximum
Deflection angle	50 degrees	Approximate