



Excellence in Electronics

TYPE
7MP7
7MP14

The 7MP — is a 7" magnetic focus and magnetic deflection cathode ray tube suitable for oscilloscopic usage such as radar indicators. Because of its cascade type screen it is usable with either low-speed non repeating information or high-speed repeating information.

MECHANICAL DATA

BASE: Small Shell Duodecal 5-Pin

CAP: Recessed Small Cavity

TERMINAL CONNECTIONS:

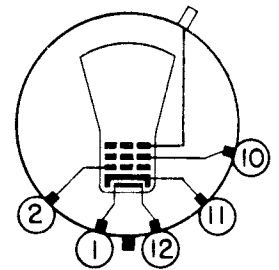
- Pin 1 Heater
- Pin 2 Grid #1
- Pin 10 Grid #2
- Pin 11 Cathode
- Pin 12 Heater
- Cap Grid #3 (Collector)

MOUNTING POSITION: Any

GENERAL DATA

- Phosphor
- Fluorescence
- Phosphorescence
- Persistence
- Focusing Method
- Deflecting Method
- Deflection Angle

7MP7	7MP14
#7	#14
Blue	Blue
Yellow	Orange
Long	Med. - Long
Electrostatic	Electrostatic
Magnetic	Magnetic
50°	50°



BOTTOM VIEW

12D

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: ($\mu\text{tfs.}$) (approx.)

Grid #1 to all other electrodes	6
Cathode to all other electrodes	5

DESIGN CENTER MAXIMUM RATINGS:

Heater Current	0.6 ± 10% amps.
Peak Heater-Cathode Voltage: ♦	
Heater Negative with Respect to Cathode	125 volts DC
Heater Positive with Respect to Cathode	125 volts DC
Collector Voltage ▲	8000 volts DC
Grid #2 Voltage:	
Positive Value (DC or Peak AC)	700 volts max.
Negative Value (DC or Peak AC)	180 volts max.
Grid #1 Voltage:	
Negative-Bias Value	180 volts DC
Positive-Bias Value *	0 volts DC
Positive-Peak Value	2 volts

CHARACTERISTICS AND TYPICAL OPERATION:

Heater Voltage	6.3	6.3 volts
Collector Voltage ▲	4000	7000 volts DC
Grid #2 Voltage	250	250 volts DC
Grid #1 Voltage ♦	-27 to -63	-28 to -63 volts DC
Focusing Coil Current DC (approx.)	64 ± 15%	85 ± 15% ma.
Spot Position (undeflected) □	0.3	0.3 inches

MAXIMUM CIRCUIT VALUES:

Grid #1 Circuit Resistance	1.5 max. megohms
----------------------------	------------------

Tentative Data

RAYTHEON MANUFACTURING COMPANY

RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS



CATHODE RAY TUBE

- * *At or near this rating, the effective resistance of the collector supply should be adequate to limit the collector input power to 6 watts.*
- ▲ *Brilliance and definition decrease with decreasing collector voltages. In general, collector voltage should not be less than 4000 volts.*
- ⊕ *Visual extinction of undeflected focused spot.*
- *The center of the undeflected, focused spot will fall within a circle of 0.30 inch radius concentric with the center of the tube face, with tube shielded.*
- ◆ *For focusing coil similar to JETEC coil no. 109 positioned with air gap toward faceplate and center line of air gap $2 \frac{1}{4}$ " from reference line and collector current of 200 μ a.*

CATHODE RAY TUBE

