

*Excellence in Electronics*

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

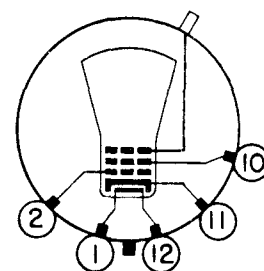
Phosphor
Fluorescence
Phosphorescence
Persistence
Focusing Method
Deflecting Method
Deflection Angle

7MP7

#7
Blue
Yellow
Long
Electrostatic
Magnetic
50

7MP14

#14
Blue
Orange
Med. - Long
Electrostatic
Magnetic
50



BOTTOM VIEW

ELECTRICAL DATADIRECT INTERELECTRODE CAPACITANCES: ($\mu\text{fids.}$) (approx.)

Grid #1 to all other electrodes

Cathode to all other electrodes

6
5

DESIGN CENTER MAXIMUM RATINGS:

Heater Current

Peak Heater-Cathode Voltage: ♦

Heater Negative with Respect to Cathode

Heater Positive with Respect to Cathode

Collector Voltage ▲

Grid #2 Voltage:

Positive Value (DC or Peak AC)

Negative Value (DC or Peak AC)

Grid #1 Voltage:

Negative-Bias Value

Positive-Bias Value *

Positive-Peak Value

0.6 ± 10% amps.

125 volts DC
125 volts DC
8000 volts DC

700 volts max.
180 volts max.

180 volts DC
0 volts DC
2 volts

CHARACTERISTICS AND TYPICAL OPERATION:

Heater Voltage

Collector Voltage ▲

Grid #2 Voltage

Grid #1 Voltage ♦

Focusing Coil Current DC (approx.)

Spot Position (undeflected) □

6.3	6.3 volts
4000	7000 volts DC
250	250 volts DC
-27 to -63	-28 to -63 volts DC
64 ± 15%	85 ± 15% ma.
0.3	0.3 inches

MAXIMUM CIRCUIT VALUES:

Grid #1 Circuit Resistance

1.5 max. megohms



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.*

RAYTHEON MANUFACTURING COMPANY

RECEIVING TUBE AND SEMICONDUCTOR OPERATIONS



TYPE 7MP7
7MP14

CATHODE RAY TUBE

