



EM84

EM84/6FG6

ELECTRON-RAY TUBE

9-PIN MINIATURE INDICATOR TYPE WITH TRIODE UNIT

GENERAL DATA

Electrical:

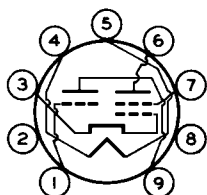
Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3	volts
Current	0.27	amp

Mechanical:

Operating Position	Any
Maximum Overall Length	2-27/32"
Maximum Seated Length	2-13/32"
Length, Base Seat to Bulb Top (Excluding tip).	2-7/32" $\pm$ 3/32"
Diameter	0.750" to 0.875"
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW	9GA

Pin 1—Triode Grid
 Pin 2—Internal Connection—
 Do Not Use
 Pin 3—Cathode
 Pin 4—Heater
 Pin 5—Heater



Pin 6—Fluorescent
 Target*
 Pin 7—Ray-Control
 Electrode
 Pin 8—Internal Connection—
 Do Not Use
 Pin 9—Triode Plate

* Fluorescent target is on inner surface of glass envelope above pin 7.

INDICATOR SERVICE

Maximum and Minimum Ratings, Design-Center Values:

RAY-CONTROL-ELECTRODE VOLTAGE:

Without current flowing through series triode-plate resistor.	550 max.	volts
With current flowing through series triode-plate resistor.	300 max.	volts

FLUORESCENT-TARGET VOLTAGE:

Without current flowing through series triode-plate resistor.	550 max.	volts
With current flowing through series triode-plate resistor.	{ 300 max. 150 min.	volts

CATHODE CURRENT	3 max.	ma
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TRIODE-PLATE DISSIPATION.	0.5 max.	watt
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . .	100 max.	volts
Heater positive with respect to cathode . .	100 max.	volts

BULB TEMPERATURE (At hottest point on bulb surface).	120 max.	°C
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Typical Operation:

With ray-control electrode connected to triode plate

Triode-Plate Supply Voltage.	250	250	volts
Fluorescent-Target Voltage	250	250	volts



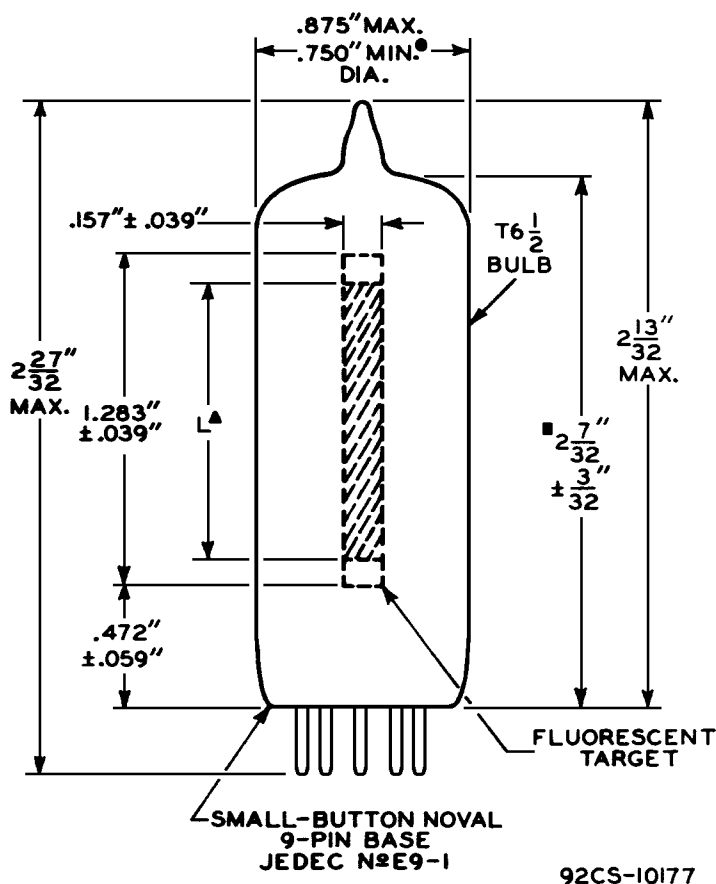
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Series Triode-Plate Resistor	0.47	0.47	megohm
Triode-Grid Supply Voltage	0	-22	volts
Triode-Grid Resistor	3	3	megohms
Triode-Plate Current	0.45	0.06	ma
Fluorescent-Target Current	1.1	1.6	ma
Length of Dark Part of Fluorescent Target (Dimension "L" on Dimensional Outline)	0.83 ± 0.20	0	inch
Length of Dark Part of Fluorescent Target when triode-grid resistor = 0	0.94 ± 0.20	-	inch

Maximum Circuit Values:

Triode-Grid-Circuit Resistance	3 max.	megohms
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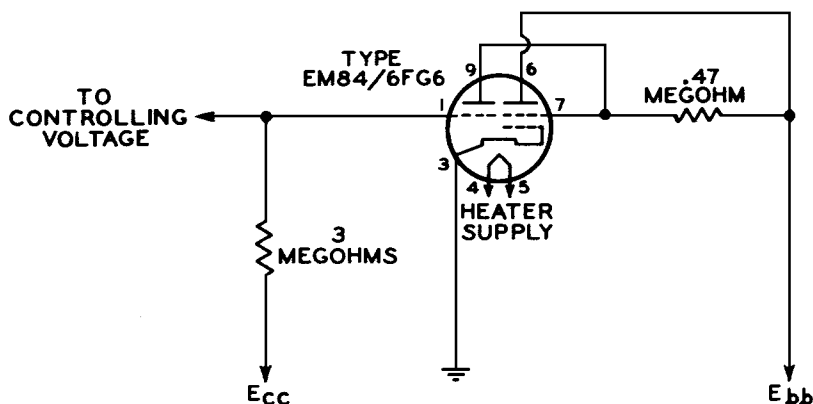
- APPLIES IN ZONE STARTING 0.375" FROM BASE SEAT.
- MEASURED FROM BASE SEAT TO BULB-TOP LINE AS DETERMINED BY RING GAUGE OF 7/16" INSIDE DIAMETER.
- ▲ "L" = LENGTH OF DARK PART OF FLUORESCENT TARGET.



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TYPICAL CIRCUIT



92CS-10174

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TYPICAL OPERATION CHARACTERISTIC

 $E_f = 6.3$ VOLTS

RAY-CONTROL ELECTRODE CONNECTED TO TRIODE PLATE.

TRIODE-PLATE SUPPLY VOLTS = 250

FLUORESCENT-TARGET VOLTS = 250

SERIES TRIODE-PLATE RESISTOR

(MEGOHMS) = 0.47

TRIODE-GRID RESISTOR (MEGOHMS) = 3

