



5734

MECHANO-ELECTRONIC TRANSDUCER

TRIODE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage 6.3 ac or dc volts

Current. 0.15 amp

Mechanical:

Mounting Position. Any

Maximum Angular Deflection of Plate Shaft ± 0.5 degree

Maximum Overall Length (Excluding flexible leads). . . . 1.300"

Maximum Diameter 0.328"

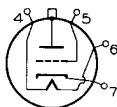
Envelope Metal Shell MT-2-1/4

Terminal Connections, BOTTOM VIEW

Lead 4 – Heater

Lead 5 - Grid

Lead 6 – Heater



Lead 7 - Cathode,
Internal
Shield

Shell - Plate

Maximum Ratings, Design-Center Values:

DC PLATE-SUPPLY VOLTAGE. 300 max. . . volts

DC PLATE CURRENT 5 max. ma

PLATE DISSIPATION.	0.4	max.	..	watt
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with
respect to cathode. . . . 90 max. . . volts

Heater positive with
respect to cathode. . . . 90 max. . . volts

Typical Operation:

DC Plate-Supply Voltage. 300 volts

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DC Plate Supply Voltage: . . . . . 300 . . . . . volts
DC Grid Voltage: . . . . . 0 . . . . . volts
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Amplification Factor[▲] 20

Plate Resistance	72000	ohms
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Transconductance [▲]	275	micromhos
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DC Plate Current [▲]	1.5	ma
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Load Resistance.	75000	ohms
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Deflection Sensitivity	40	volts/degree
	2300	volts/radian

Moment of Inertia

of Plate • • • • • 3.4 milligram cm²

Rotational Compliance of Diaphragm	0.0013 $\times 10^{-3}$ 0.075	radian/dyne cm degree/gram cm
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▲ For plate shaft in undeflected position.

◆ Average change in voltage across 75000-ohm plate-load resistor when the plate shaft is deflected from -0.5 to $+0.5$ degree.
The plane of deflection of the plate shaft must coincide with the plane through terminal No. 5 and the axis of the tube.

- Based on external plate-shaft length of 1/8" and the center of the diaphragm as pivot.



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OPERATING PRINCIPLES

The plate shaft extends through the center of a thin metal diaphragm. Angular displacement of the plate shaft changes the distance between the fixed grid and the plate and results in a change in the plate current. The plane of deflection of the plate shaft coincides with the plane through terminal No.5 and the axis of the tube.

The part of the plate shaft within the tube has a minimum free cantilever resonance of 12000 cycles per second permitting, with suitable mechanical coupling to the external end of the plate shaft, measurements of vibration up to 12000 cycles per second.

OPERATING NOTES

The 5734 may be mounted by means of a supporting clamp which should firmly grip the metal shell of the tube within the designated clamping space indicated on the Outline Drawing. It is essential, however, that the pressure exerted on the shell by the clamp be held to a minimum to prevent possible fracture of the seals.

Under no circumstances should the plate shaft be displaced from its normal position by more than 0.5 degree. A larger displacement of the plate shaft will distort the flexible diaphragm and may damage the tube electrodes.

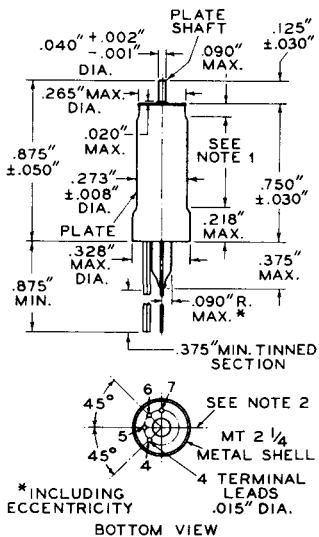
A non-corrosive flux must be used in soldering the actuating stylus to the plate shaft. Unless this precaution is observed, the plate shaft and the diaphragm will be damaged.



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NOTE 1: TUBE SUPPORTING CLAMP ON METAL SHELL MUST BE WITHIN THIS SPACE, AND SHOULD BE FASTENED ONLY TIGHT ENOUGH TO INSURE GOOD CONTACT FOR THE PLATE CONNECTION.

NOTE 2: THE PLANE OF DEFLECTION OF THE PLATE SHAFT WILL COINCIDE WITH THE PLANE THROUGH TERMINAL LEAD No. 5 AND THE AXIS OF THE TUBE.

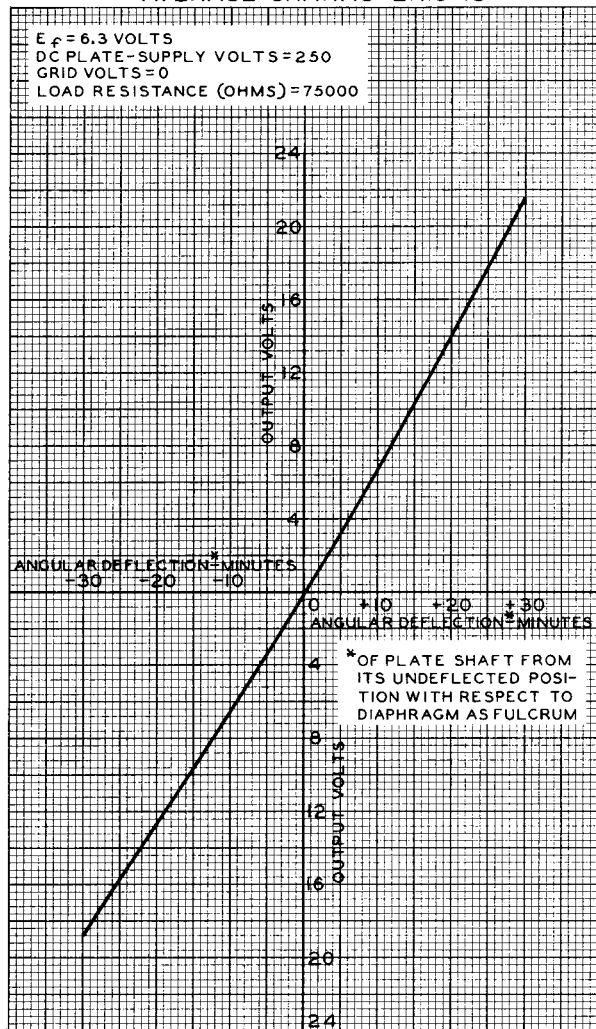
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AVERAGE CHARACTERISTIC

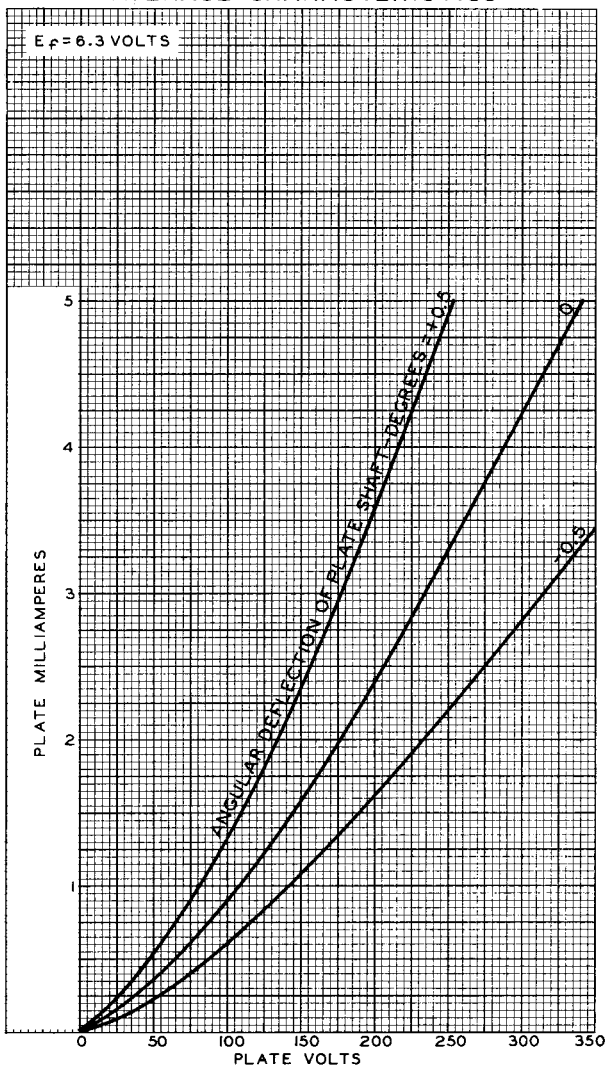




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AVERAGE CHARACTERISTICS



AUG. 17, 1948

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7059



AVERAGE CHARACTERISTICS

