5734
MECHANO-ELECTRONIC TRANSDUCER

TRIODE TYPE

GENERAL DATA

Electrical:

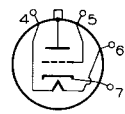
Heater, for Unipotential Cathode:		
Voltage	6.3	ac or dc volts
Current	0.15	amp

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
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
DC Grid Voltage	0	volts
Amplification Factor▲	20	
Plate Resistance▲	72000	ohms
Transconductance▲	275	micromhos
DC Plate Current▲	1.5	ma
Load Resistance	75000	ohms
Deflection Sensitivity♦	40 2300	volts/degree volts/radian
Moment of Inertia of Plate●	3.4	milligram cm²
Rotational Compliance of Diaphragm●	0.0013×10^{-3} 0.075	radian/dyne cm degree/gram cm

▲ 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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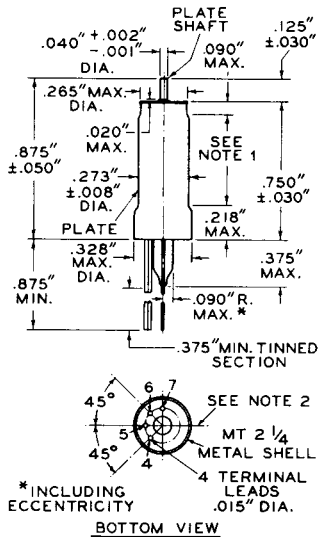

NOTE 1: TUBE SUPPORTING CLAMP ON METAL SHELL MUST BE WITHIN THIS SPACE, AND SHOULD BE FASTENED ONLY TIGHT ENOUGH TO INSURE GOOD CONTACT FOR THE PLATE CONNECTION.

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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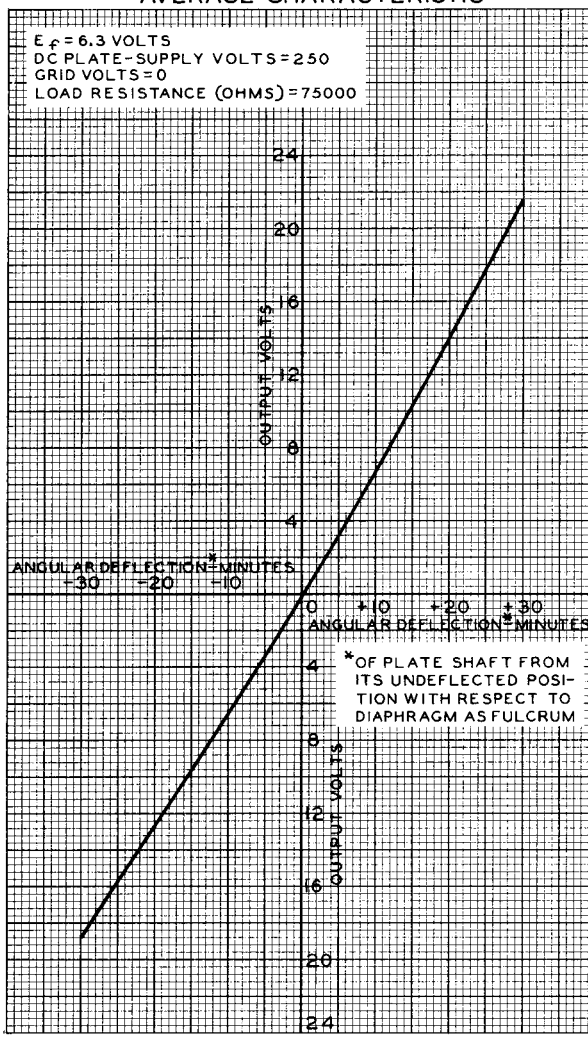
AVERAGE CHARACTERISTIC



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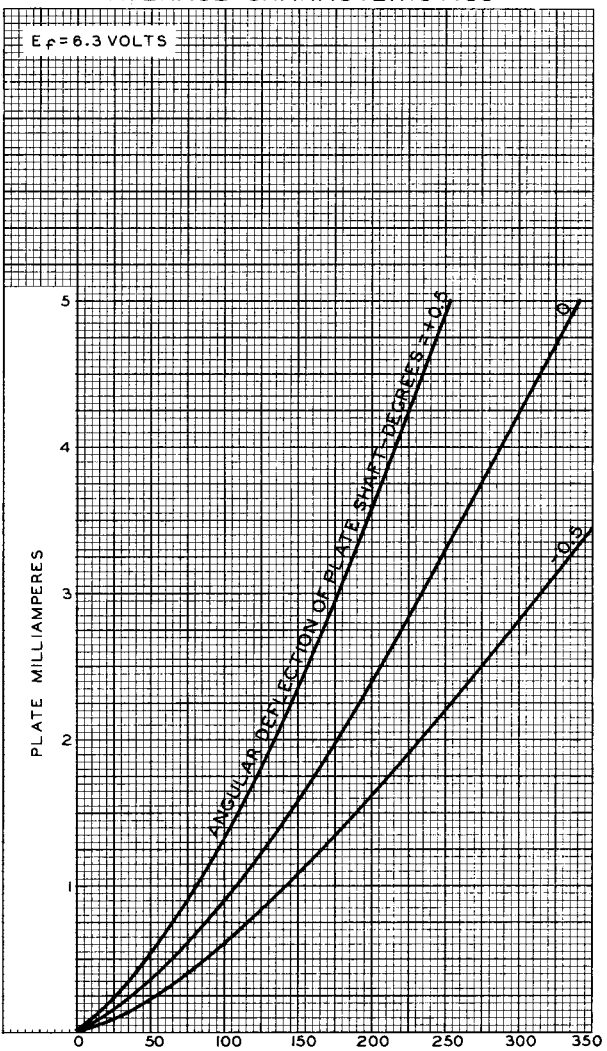
AVERAGE CHARACTERISTICS



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AVERAGE CHARACTERISTICS