2C40

LIGHTHOUSE TRIODE

Supersedes Types 446-A and 446-B in Military Equipment

GENERAL DATA

Electrical:

Heater for Unipotential Cathode:		
Voltage	6.3 ± 5%	ac or dc volts
Current	0.75	amp.
Direct Interelectrode Capacitances:		
Grid to Plate*	1.3	μμf
Grid to Cathode*	2.1	μμf
Plate to Cathode*Δ	0.02	μμf
Cathode to Shell	100 approx.	μμf
Characteristics, Class A_1 Amplifier:		
DC Plate Voltage	250	volts
Cathode-Bias Resistor**	200	ohms
Amplification Factor	36	
Plate Resistance	7500	ohms
Transconductance	4800	μmhos
Plate Current	16.5	ma.

Mechanical:

Operating Position . . . . . Any

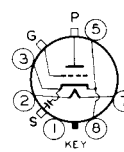
Mounting . . . . . Tube shouldbe supported by its metal shell and not by its base or other terminals

Dimensions and Terminals . . . . . See Outline Drawing

Base . . . . . Small H-Wafer Octal 6-Pin

BOTTOM VIEW

Pin 1 - Internal Con. Do Not Use
Pin 2 - Heater
Pin 3 - Cathode
Pin 5 - Cathode
Pin 7 - Heater
Pin 8 - Cathode



Shell (S) — Cathode, RF Terminal
Center Disc (G) — Grid Terminal
Post & End Disc(P) — Plate Terminal

RF AMPLIFIER & OSCILLATOR - Class C Telegraphy

Maximum Ratings, *Design-Center Values*:

DC PLATE VOLTAGE	450 max.	volts
DC PLATE CURRENT	22 max.	volts
PLATE DISSIPATION	5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts
PLATE-SEAL TEMPERATURE#	150 max.	°C

* With cathode connected directly to shell.
** Fixed bias is not recommended.
Δ With shield having diameter of 2-3/8" in plane of grid disc terminal.
Under extremely high ambient temperatures, the plate-seal temperature must never exceed 200°C.

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LIGHTHOUSE TRIODE

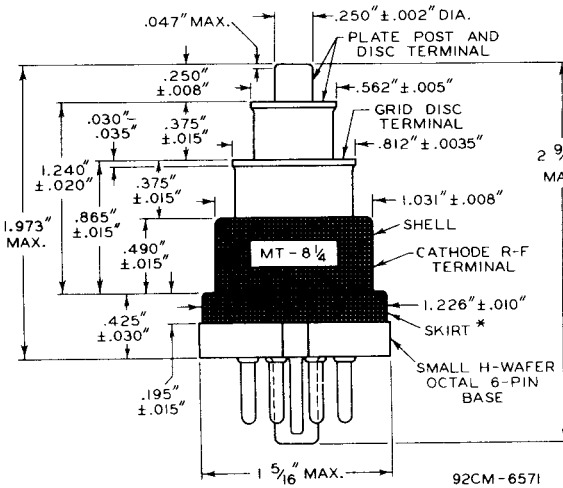

PLATE POST, GRID DISC TERMINAL, AND CATHODE RF TERMINAL ARE CONCENTRIC WITH RESPECT TO EACH OTHER WITHIN 1/64".

* NOT TO BE USED FOR RF CONTACT IN NEW EQUIPMENT DESIGNS.

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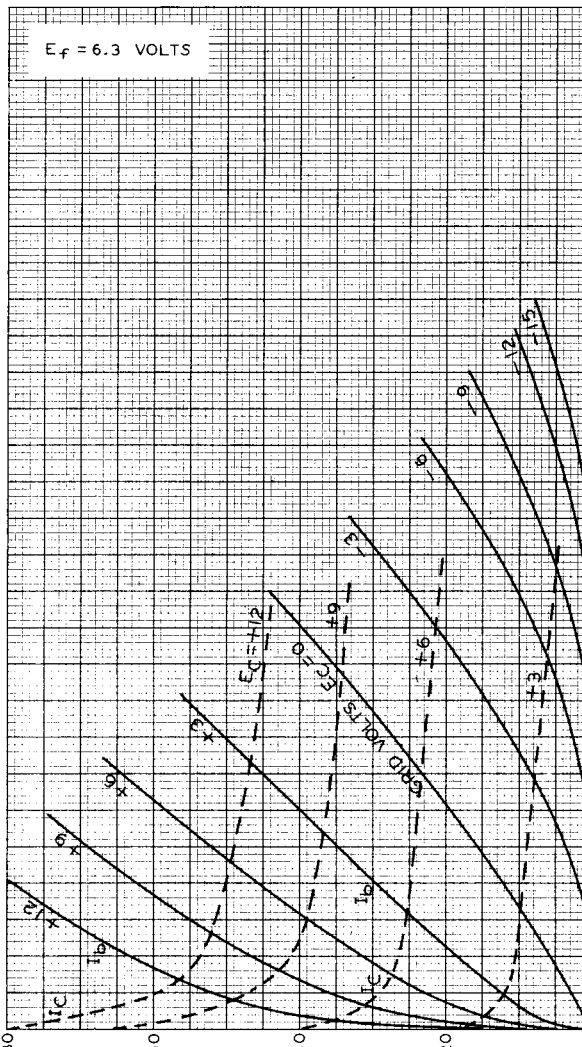
AVERAGE PLATE CHARACTERISTICS



MAR. 3, 1945 RCA VICTOR DIVISION 92CM-6507
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

Power Triode

LIGHTHOUSE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3 ± 0.3	volts
Current at heater volts = 6.3	0.750	amp
Direct Interelectrode Capacitances:[a]		
Grid to plate	1.3	μμf
Grid to cathode	2.2	μμf
Plate to cathode	0.03 max.	μμf
Cathode rf terminal to cathode	100	μμf

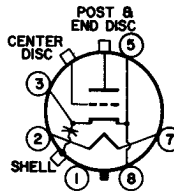
Characteristics, Class A_1 Amplifier:

Plate Supply Voltage	250	volts
Cathode Resistor	200	ohms
Amplification Factor	36	
Transconductance	4850	μmhos
Plate Current	17	ma

Mechanical:

Operating Position	Any
Maximum Overall Length	2-9/16"
Maximum Seated Length	1.973"
Maximum Diameter	1.312"
Weight (Approx.)	1.2 oz
Base	Small H-Wafer 6-Pin (JEDEC Group 1, No.B6-108)
Basing Designation for BOTTOM VIEW	6BY

Pin 1 – Do Not Use
Pin 2 – Heater
Pin 3 – Cathode
Pin 5 – Cathode
Pin 7 – Heater
Pin 8 – Cathode



Shell – Cathode RF Terminal
Center Disc–Grid Terminal
Post & End Disc–Plate Terminal

Thermal:

Cooling	Convection and Conduction
Seal Temperature	175 max. °C

RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy

Maximum CCS[b] Ratings, *Absolute-Maximum Values:*

For frequencies up to 3370 Mc

DC PLATE VOLTAGE	500 max.	volts
DC GRID VOLTAGE:		
Negative-bias value	50 max.	volts

← Indicates a change.

2C40

DC PLATE CURRENT	25 max.	ma
DC GRID CURRENT	8 max.	ma
PLATE DISSIPATION	6.5 max.	watts
PEAK HEATER–CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts
PEAK CATHODE–SHELL VOLTAGE:		
Shell negative with respect to cathode.	90 max.	volts
Shell positive with respect to cathode.	90 max.	volts

[a] Without external shield.
[b] Continuous Commercial Service.