2C43

LIGHTHOUSE TRIODE

GENERAL DATA

Electrical:

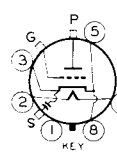
Heater for Unipotential Cathode:		
Voltage	6.3 ± 5%	ac or dc volts
Current	0.9	amp.
Direct Interelectrode Capacitances:		
Grid to Plate*	1.7	μμf
Grid to Cathode*	2.8	μμf
Plate to Cathode*Δ	0.02	μμf
Cathode to Shell	100 approx.	μμf
Characteristics, Class A_1 Amplifier:		
DC Plate Voltage	250	volts
Cathode-Bias Resistor**	100	ohms
Amplification Factor	48	
Plate Resistance	6000	ohms
Transconductance	8000	μmhos
Plate Current	20	ma.

Mechanical:

Operating Position	Any
Mounting	Tube should be 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	36 max.	ma.
PLATE DISSIPATION	10 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

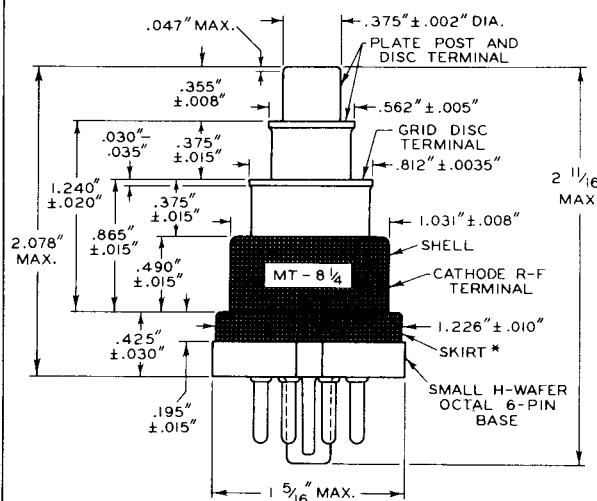

PLATE POST, GRID DISC TERMINAL, AND CATHODE RF TERMINAL ARE CONCENTRIC WITH RESPECT TO EACH OTHER WITHIN 1/64".

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

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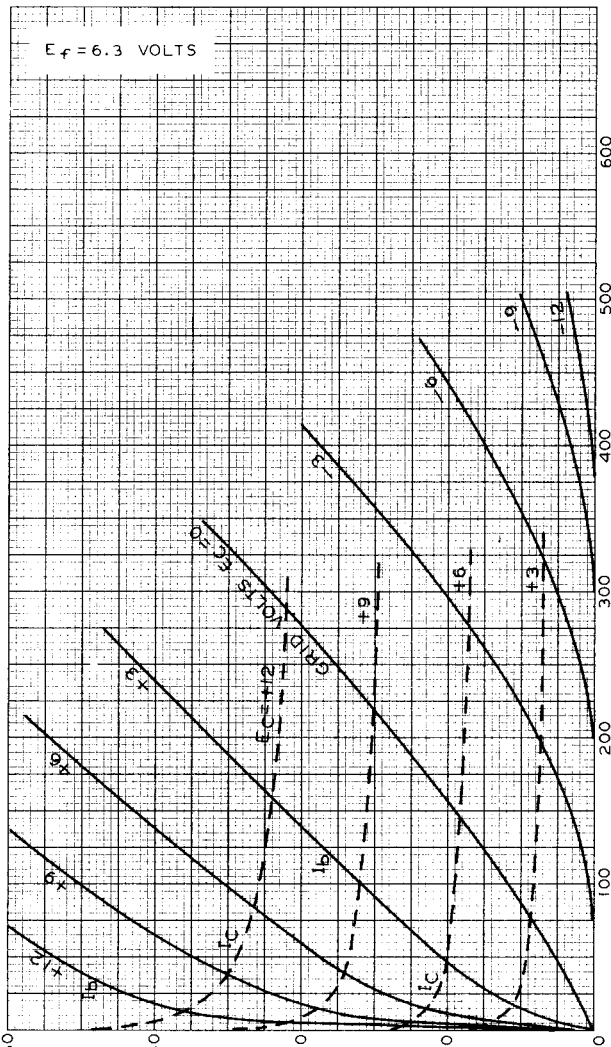
AVERAGE PLATE CHARACTERISTICS



MAR. 5, 1945 RCA VICTOR DIVISION 92CM-6508
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

Power Triode

LIGHTHOUSE TYPE

GENERAL DATA

Electrical:

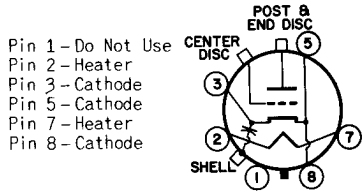
Heater, for Unipotential Cathode:		
Voltage (AC or DC)	6.3 ± 0.3	volts
Current at heater volts = 6.3	0.900	amp
Cathode Heating Time	See *Operating Considerations*	
Direct Interelectrode Capacitances:[a]		
Grid to plate	1.8	μμf
Grid to cathode	3.0	μμf
Plate to cathode	0.04 max.	μμf
Cathode rf terminal to cathode	100	μμf

Characteristics, Class A1 Amplifier:

Plate Supply Voltage	250	volts
Cathode Resistor	100	ohms
Amplification Factor	50	
Transconductance	8100	μmhos
Plate Current	21	ma

Mechanical:

Operating Position	Any
Maximum Overall Length	2.6875"
Maximum Seated Length	2.078"
Maximum Diameter	1.312"
Weight (Approx.)	1 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 1500 Mc

DC PLATE VOLTAGE	500 max.	volts
DC PLATE CURRENT	40 max.	ma

← Indicates a change.

DC CATHODE CURRENT	55 max.	ma
PLATE DISSIPATION	12 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

PLATE-PULSED OSCILLATOR

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

For frequencies up to 3370 Mc, maximum duty factor of plate pulse = 0.006, and maximum pulse duration of 10 microseconds

PEAK POSITIVE-PULSE PLATE SUPPLY VOLTAGE	3500 max.	volts
PLATE CURRENT:		
Average during plate pulse	2.75 max.	amp
CATHODE CURRENT:		
Average during plate pulse	4 max.	amp
PLATE DISSIPATION	12 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

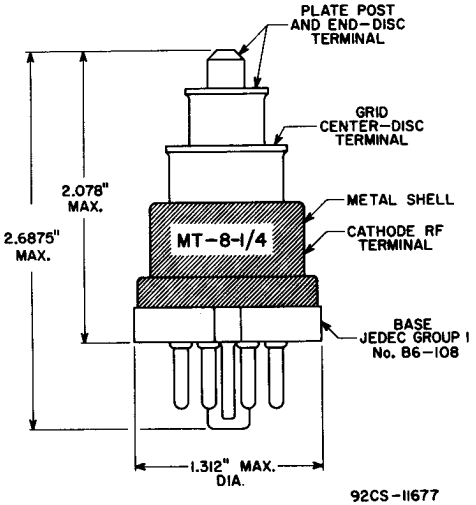
[a] Without external shield.
[b] Continuous Commercial Service.

→ Indicates a change.

OPERATING CONSIDERATIONS

In *Plate-Pulsed Oscillator Service*, the plate voltage must not be applied until a minimum of 1 minute after the application of the heater voltage.

In *RF Power Amplifier & Oscillator — Class C Telegraphy Service*, the plate voltage and the heater voltage may be applied simultaneously.



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