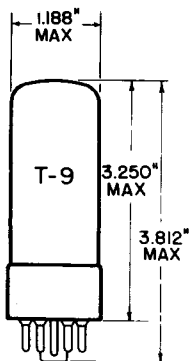


TUNG-SOL

HALF-WAVE VACUUM RECTIFIER



GLASS BULB
JEDEC GROUP 1 85-85
SHORT
INTERMEDIATE-SHELL
5 PIN OCTAL
WITH EXTERNAL BARRIERS
PINS 1, 4, & 6 ARE OMITTED
OUTLINE DRAWING
JEDEC 9-44

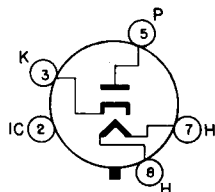
UNIPOTENTIAL CATHODE

HEATER

22.4 VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

BASING DIAGRAM
JEDEC 4CG

THE 22DE4 IS A HALF-WAVE VACUUM RECTIFIER OF THE GLASS-OCTAL TYPE. IT IS DESIGNED SPECIFICALLY FOR USE AS A DAMPER DIODE IN HORIZONTAL-DEFLECTION CIRCUITS OF BLACK-AND-WHITE TELEVISION RECEIVERS.

EXCEPT FOR HEATER RATINGS AND HEATER WARM-UP TIME, THE 22DE4 IS IDENTICAL TO THE 6DE4 AND 17DE4.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.
WITHOUT EXTERNAL SHIELD

PLATE TO HEATER AND CATHODE	8.5	$\mu\mu\text{f}$
CATHODE TO HEATER AND PLATE	11.5	$\mu\mu\text{f}$
HEATER TO CATHODE	4	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM
DAMPER SERVICE

MAXIMUM PEAK INVERSE PLATE VOLTAGE	→ 5500 ^A	VOLTS
MAXIMUM PEAK PLATE CURRENT	1100	MA.
MAXIMUM DC PLATE CURRENT	→ 180	MA.
MAXIMUM PLATE DISSIPATION	6.5	WATTS
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE	→ 5500 ^B	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	300 ^C	VOLTS
HEATER WARM-UP TIME (APPROX.)*	11.0	SECONDS

→ INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

NOTES

A FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCAST STATIONS: FEDERAL COMMUNICATIONS COMMISSION, THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE.

B THE DC COMPONENT MUST NOT EXCEED 900 VOLTS.

C THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

* HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

