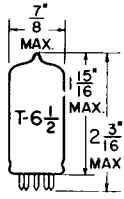
TUNG-SOL

TRIODE PENTODE

MINIATURE TYPE

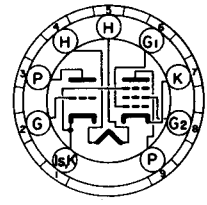


GLASS BULB

COATED UNIPOTENTIAL CATHODE

HEATER
4.7 VOLTS 0.6 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
MINIATURE BUTTON
9 PIN BASE
9EC

THE 588 IS A MEDIUM-MU TRIODE AND A SHARP CUTOFF PENTODE USING THE 9 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR USE AS A VHF OSCILLATOR AND MIXER IN 600 MA. SERIES HEATER OPERATED TELEVISION RECEIVERS. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES – APPROX.
WITH NO EXTERNAL SHIELD

TRIODE GRID TO TRIODE PLATE	1.7	μμf
PENTODE GRID #1 TO PENTODE PLATE (MAX.)	0.032 ←	μμf
TRIODE GRID TO (TRIODE CATHODE, PENTODE GRID #3, I.S., HEATER)	1.9	μμf
TRIODE PLATE TO (TRIODE CATHODE, PENTODE GRID #3, I.S., HEATER)	1.4	μμf
PENTODE GRID #1 TO (PENTODE CATHODE, GRID #2, HEATER)	6.0	μμf
PENTODE PLATE TO (PENTODE CATHODE, GRID #2, GRID #3, TRIODE CATHODE, I.S., HEATER)	2.6	μμf
PENTODE PLATE TO (PENTODE CATHODE, GRID #2, HEATER)	0.15	μμf
TRIODE GRID TO PENTODE PLATE	0.0078	μμf
PENTODE GRID #1 TO TRIODE PLATE	0.0033	μμf
TRIODE PLATE TO PENTODE PLATE	0.060	μμf

RATINGS
INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

	TRIODE	PENTODE	
HEATER VOLTAGE	4.7		VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER POSITIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200		VOLTS
DC	100		VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE			
TOTAL DC AND PEAK	200		VOLTS
MAXIMUM PLATE VOLTAGE	300	300	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	---	300	VOLTS
MAXIMUM GRID #2 VOLTAGE		SEE RATING CHART	
MAXIMUM POSITIVE GRID #1 VOLTAGE	0	0	VOLTS
MAXIMUM PLATE DISSIPATION	2.5	2.0	WATTS
MAXIMUM GRID #2 DISSIPATION	---	0.5	WATT
MAXIMUM GRID #1 CIRCUIT RESISTANCE[A]:			
FIXED BIAS	0.5	0.25	MEGOHM
SELF BIAS	1.0	1.0	MEGOHM
HEATER WARM-UP TIME (APPROX.)*	11.0		SECONDS

[A] IF EITHER UNIT IS OPERATING AT MAXIMUM RATED CONDITIONS, GRID #1 CIRCUIT RESISTANCES FOR BOTH UNITS SHALL NOT EXCEED THE STATED VALUES.

*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.

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CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A_1 AMPLIFIER

	TRIODE	PENTODE[B]	
HEATER VOLTAGE	4.7		VOLTS
HEATER CURRENT	0.6		AMP.
PLATE VOLTAGE	200	200	VOLTS
GRID #2 VOLTAGE	---	150	VOLTS
GRID #1 VOLTAGE	-6	0	VOLTS
CATHODE BIAS RESISTOR	---	180	OHMS
PLATE CURRENT	13	9.5	MA.
GRID #2 CURRENT	---	2.8	MA.
AMPLIFICATION FACTOR	19	---	
TRANSCONDUCTANCE	3 300	6 200	μMHOS
PLATE RESISTANCE (APPROX.)	5 750	300 000	OHMS
GRID #1 VOLTAGE (APPROX.) FOR I_b = 10 μAMP.	-19	-8	VOLTS

[B] WHEN READING CHARACTERISTICS OF THE PENTODE SECTION, ALL TRIODE ELEMENTS SHALL BE AT GROUND POTENTIAL. THUS, BECAUSE OF INTERNAL CONNECTIONS TO PIN #1, THE PENTODE SUPPRESSOR WILL ALSO BE AT GROUND.