

TUNG-SOL

PENTODE

MINIATURE TYPE

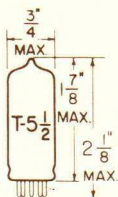
COATED UNIPOTENTIAL CATHODE

HEATER

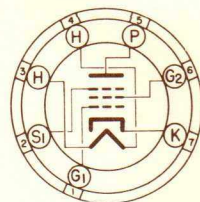
12.6* VOLTS 0.15 AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB



BOTTOM VIEW
MINIATURE BUTTON
7 PIN BASE
78K

THE 12AF6 IS A MINIATURE PENTODE INTENDED FOR USE AS A RADIO-FREQUENCY OR INTERMEDIATE-FREQUENCY AMPLIFIER IN AUTOMOBILE RADIO RECEIVERS. THE TUBE IS SPECIALLY DESIGNED TO OPERATE WITH PLATE AND SCREEN VOLTAGES SUPPLIED DIRECTLY FROM A 12-VOLT STORAGE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE, (MAX.)	0.006	$\mu\mu\text{f}$
INPUT	5.5	$\mu\mu\text{f}$
OUTPUT	4.8	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE	12.6	VOLTS
MAXIMUM PLATE VOLTAGE	16	VOLTS
MAXIMUM SCREEN VOLTAGE	16	VOLTS
MAXIMUM POSITIVE DC GRID #1 VOLTAGE	0	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE		
HEATER POSITIVE WITH RESPECT TO CATHODE	16	VOLTS
HEATER NEGATIVE WITH RESPECT TO CATHODE	16	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	2.2	MEG OHMS

* WHEN USED IN AUTOMOTIVE SERVICE FROM A 12-VOLT SOURCE, UNDER NO CIRCUMSTANCES SHOULD THE HEATER VOLTAGE BE LESS THAN 10.0 VOLTS OR MORE THAN 15.9 VOLTS. THESE EXTREME VARIATIONS IN HEATER VOLTAGE MAY BE TOLERATED FOR SHORT PERIODS; HOWEVER, OPERATION AT OR NEAR THESE ABSOLUTE LIMITS IN HEATER VOLTAGE NECESSARILY INVOLVES SACRIFICE IN PERFORMANCE AT LOW HEATER VOLTAGE AND IN LIFE EXPECTANCY AT HIGH HEATER VOLTAGE. EQUIPMENT RELIABILITY CAN BE SIGNIFICANTLY INCREASED WITH IMPROVED SUPPLY-VOLTAGE REGULATION.

DESIGN-MAXIMUM RATINGS ARE THE LIMITING VALUES EXPRESSED WITH RESPECT TO BOGIE TUBES AT WHICH SATISFACTORY TUBE LIFE CAN BE EXPECTED TO OCCUR. TO OBTAIN SATISFACTORY CIRCUIT PERFORMANCE, THEREFORE, THE EQUIPMENT DESIGNER MUST ESTABLISH THE CIRCUIT DESIGN SO THAT NO DESIGN-MAXIMUM VALUE IS EXCEEDED WITH A BOGIE TUBE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, AND ENVIRONMENTAL CONDITIONS.

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A₁ AMPLIFIER

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.15	AMP.
PLATE VOLTAGE	12.6	VOLTS
SUPPRESSOR VOLTAGE	0	VOLTS
SCREEN VOLTAGE	12.6	VOLTS
GRID #1 SUPPLY VOLTAGE	0	VOLTS
GRID #1 RESISTOR (BYPASSED)	2.2	MEGOHMS
PLATE RESISTANCE (APPROX.)	→ 0.35	MEGOHMS
TRANSCONDUCTANCE	→ 1500	μMHOS
PLATE CURRENT	→ 1.1	MA.
SCREEN CURRENT	→ 0.45	MA.
GRID #1 VOLTAGE (APPROX.) $G_m = 40 \mu\text{MHOS}$	→ -2.7	VOLTS
GRID #1 VOLTAGE (APPROX.) MEASURED *		
WITH GRID #1 TIED TO GRID #3,		
$R_{g1} = 0, G_m = 40 \mu\text{MHOS}$	-3.5	VOLTS

* INDICATES AN ADDITION.

→ INDICATES A CHANGE.

