

TUNG-SOL**DOUBLE-DIODE TRIODE**

MINIATURE TYPE

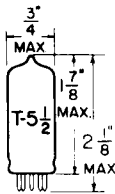
COATED UNIPOTENTIAL CATHODE

HEATER

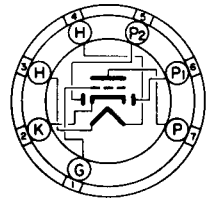
12.6 VOLTS 0.15 AMP.

AC OR DC

ANY MOUNTING POSITION



GLASS BULB


BOTTOM VIEW
 MINIATURE BUTTON
 7 PIN BASE

7BT

THE 12AE6 IS A COMBINED DOUBLE DETECTOR DIODE AND MEDIUM MU TRIODE WITH A COMMON UNIPOTENTIAL CATHODE IN THE 7-PIN MINIATURE CONSTRUCTION. THE TRIODE SECTION IS INTENDED FOR USE AS AN AF VOLTAGE AMPLIFIER WHERE THE HEATER AND PLATE POTENTIALS ARE OBTAINED DIRECTLY FROM AN AUTOMOTIVE BATTERY.

DIRECT INTERELECTRODE CAPACITANCES

	WITHOUT SHIELD	
GRID TO PLATE: (G TO P)	2.0	$\mu\mu\text{f}$
INPUT: G TO (H+K)	1.8	$\mu\mu\text{f}$
OUTPUT: P TO (H+K)	1.1	$\mu\mu\text{f}$
DIODE TO DIODE	.9	$\mu\mu\text{f}$

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

HEATER VOLTAGE*	12.6	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	± 30	VOLTS
MAXIMUM PLATE VOLTAGE	30	VOLTS
MAXIMUM CATHODE CURRENT	20	MA.
MAXIMUM AVERAGE DIODE CURRENT	1	MA.
MAXIMUM GRID CIRCUIT RESISTANCE	10	MEG OHMS

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICSCLASS A₁ AMPLIFIER - TRIODE UNIT

HEATER VOLTAGE	12.6	VOLTS
HEATER CURRENT	0.15	AMP.
PLATE VOLTAGE	12.6	VOLTS
GRID VOLTAGE	0	VOLTS
PLATE CURRENT	750	μAMPS
PLATE RESISTANCE	15 000	OHMS
TRANSCONDUCTANCE	1 000	μMHOS
AMPLIFICATION FACTOR	15	

* THIS TUBE IS INTENDED TO BE USED IN AUTOMOTIVE SERVICE FROM A NOMINAL 12 VOLT BATTERY SOURCE. THE HEATER IS THEREFORE DESIGNED TO OPERATE OVER THE 10.0 TO 15.9 VOLTAGE RANGE ENCOUNTERED IN THIS SERVICE. THE MAXIMUM RATINGS OF THE TUBE PROVIDE FOR AN ADEQUATE SAFETY FACTOR SUCH THAT THE TUBE WILL WITHSTAND THE WIDE VARIATION IN SUPPLY VOLTAGES.

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TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS - CONT'D
DIODE UNITS - TWO

AVERAGE DIODE CURRENT WITH
10 VOLTS APPLIED (EACH DIODE) 2.0 MA.

RESISTANCE COUPLED AMPLIFIER - TRIODE UNIT

PLATE SUPPLY VOLTAGE	14.4	VOLTS
CONTROL GRID VOLTAGE	0	VOLTS
PLATE LOAD RESISTOR	470 000	OHMS
CONTROL GRID RESISTOR	2.2	MEGOHMS
INPUT CONDENSER	0.01	μ f
OUTPUT CONDENSER	0.01	μ f
GRID RESISTOR OF FOLLOWING STAGE	2.2	MEGOHMS
SIGNAL SOURCE IMPEDANCE (MAX.)	1 000	OHMS
VOLTAGE GAIN AT 400 CPS**	10	

** MEASURED AT AN OUTPUT VOLTAGE OF 1 VOLT RMS.

