

TUNG-SOL

DETECTOR, AMPLIFIER, OSCILLATOR

ACORN TYPE

COATED UNIPOTENTIAL CATHODE ^B

HEATER

6.3 VOLTS ^E 0.15 AMPERE

AC OR DC

RATINGS

RF OR AF AMPLIFIER CLASS A

MAXIMUM PLATE VOLTAGE	250	VOLTS
MAXIMUM PLATE DISSIPATION	1.6	WATTS

DIRECT INTERELECTRODE CAPACITANCES

GRID TO PLATE	1.4	μf
GRID TO CATHODE	1.0	μf
PLATE TO CATHODE	0.6	μf

TYPICAL OPERATION AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

HEATER VOLTAGE	6.3	6.3	6.3	6.3	VOLTS
PLATE VOLTAGE	90	135	180	250	VOLTS
GRID VOLTAGE ^A	-2.5	-3.75	-5	-7	VOLTS
AMPLIFICATION FACTOR	25	25	25	25	
PLATE RESISTANCE	14700	13200	12500	11400	OHMS
TRANSCONDUCTANCE	1700	1900	2000	2200	μMHOS
PLATE CURRENT	2.5	3.5	4.5	6.3	MA.
LOAD RESISTANCE	-	-	20000	-	OHMS
U.P.O. (5% SECOND HAR.)	-	-	135	-	MW

TYPICAL CONDITIONS FOR RESISTANCE COUPLED A-F VOLTAGE AMPLIFIER

HEATER VOLTAGE	6.3	VOLTS
PLATE-SUPPLY VOLTAGE ^C	180	VOLTS
GRID VOLTAGE ^A	-3.5	VOLTS
LOAD RESISTANCE	250000	OHMS
PLATE CURRENT	0.42	MA.
VOLTAGE OUTPUT (5% SECOND HAR.)	45 (RMS)	VOLTS
VOLTAGE AMPLIFICATION (APPROX.)	20	

R-F POWER AMPLIFIER & OSCILLATOR - CLASS C

PLATE MODULATED OR C.W.

MAXIMUM PLATE VOLTAGE	180	VOLTS
MAXIMUM PLATE CURRENT	8	MA.
MAXIMUM GRID CURRENT	2	MA.

TYPICAL OPERATION

HEATER VOLTAGE	6.3	VOLTS
PLATE VOLTAGE	180	VOLTS
GRID VOLTAGE (APPROX.)	-3.5	VOLTS
PLATE CURRENT	7	MA.
GRID CURRENT (APPROX.)	1.5	MA.
POWER OUTPUT ^D (APPROX.)	0.5	WATT

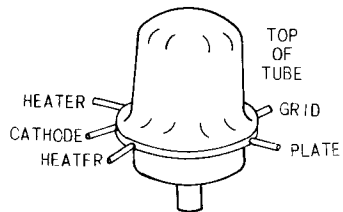
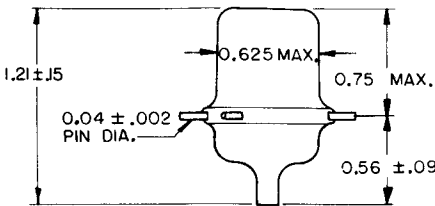
TUNG-SOL

DETECTOR

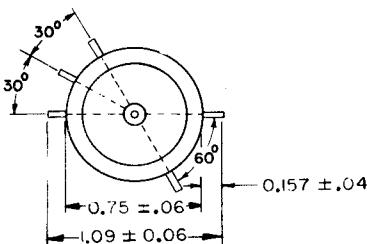
TYPICAL OPERATION

	BIASED	GRID LEAK	
HEATER VOLTAGE	6.3	6.3	VOLTS
PLATE-SUPPLY VOLT ^C	180	45	VOLTS
GRID VOLTAGE (APPROX.)	-7	GRID RETURN TO CATHODE	VOLTS
LOAD RESISTANCE	0.25	-	MEGOHM
PLATE CURRENT	ADJUSTED TO 0.2 MA. APPROX. WITH NO INPUT SIGNAL		- MA.
SELF-BIAS RESISTOR (APPROX.)	50000	-	OHMS
GRID LEAK	-	1 to 5	MEGOHMS
GRID CONDENSER	-	0.00025	μf

- ^A THE D-C RESISTANCE IN THE GRID CIRCUIT SHOULD NOT EXCEED 1.0 MEGOHM.
- ^B IN CIRCUITS WHERE THE CATHODE IS NOT DIRECTLY CONNECTED TO THE HEATER, THE POTENTIAL DIFFERENCE BETWEEN HEATER AND CATHODE SHOULD BE KEPT AS LOW AS POSSIBLE. IF THE USE OF A LARGE RESISTOR BETWEEN HEATER AND CATHODE IS NECESSARY BECAUSE OF CIRCUIT CONSIDERATIONS, IT IS ESSENTIAL THAT THIS RESISTOR BE BY-PASSED BY A SUITABLE FILTER NETWORK OR OBJECTIONABLE HUM MAY DEVELOP.
- ^C THIS IS A PLATE-SUPPLY VOLTAGE VALUE. THE VOLTAGE EFFECTIVE AT THE PLATE WILL BE THE PLATE-SUPPLY VOLTAGE MINUS THE VOLTAGE DROP (IN THE LOAD RESISTOR) CAUSED BY THE PLATE CURRENT.
- ^D AT 5 METERS. ONLY MODERATE REDUCTION IN THIS VALUE WILL BE FOUND FOR WAVELENGTHS AS LOW AS 1 METER. BELOW 1 METER, THE POWER OUTPUT DECREASES AS THE WAVELENGTH IS DECREASED.
- ^E SHOULD NOT DEVIATE MORE THAN ± 10% FROM RATED VALUE.



PIN CONNECTIONS



ALL LINEAR DIMENSIONS ARE SPECIFIED IN INCHES

PLATE
1354-1
OCT. 25
1943