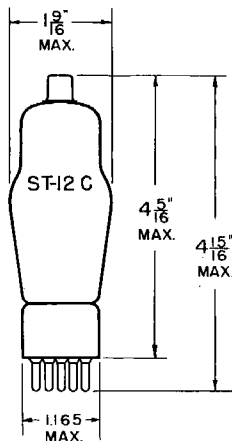


## TUNG-SOL

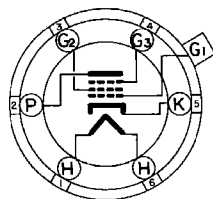
## PENTODE



GLASS BULB  
SMALL CAP

COATED UNIPOTENTIAL CATHODE

HEATER  
2.5 VOLTS 1.0 AMP.  
AC OR DC  
ANY MOUNTING POSITION



BOTTOM VIEW  
SMALL SHELL  
6 PIN BASE  
6F

THE 57 IS A TRIPLE GRID GENERAL PURPOSE DETECTOR AMPLIFIER.

## DIRECT INTERELECTRODE CAPACITANCES

## PENTODE CONNECTION:

GRID #1 TO PLATE (MAX.)<sup>A</sup>  
INPUT<sup>B</sup>  
OUTPUT<sup>B</sup>

0.007  $\mu$ f  
5.0  $\mu$ f  
6.5  $\mu$ f

TRIODE CONNECTION:<sup>BC</sup>

GRID #1 TO PLATE  
GRID #1 TO CATHODE  
PLATE TO CATHODE

2.0  $\mu$ f  
3.0  $\mu$ f  
10.5  $\mu$ f

<sup>A</sup> EXTERNAL SHIELD CONNECTED TO CATHODE.

<sup>B</sup> WITHOUT EXTERNAL SHIELD.

<sup>C</sup> GRIDS #2&3 CONNECTED TO PLATE.

## RATINGS

INTERPRETED ACCORDING TO RMA STANDARD MB-210

CLASS A<sub>1</sub> AMPLIFIER - DESIGN CENTER VALUES

	PENTODE CONNECTION	TRIODE CONNECTION <sup>D</sup>	
HEATER VOLTAGE	2.5	2.5	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE	90	90	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	90	90	VOLTS
MAXIMUM PLATE VOLTAGE	300	250	VOLTS
MAXIMUM PLATE DISSIPATION	0.75	1.75	WATTS
MAXIMUM GRID #2 VOLTAGE	125	---	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	300	---	VOLTS
MAXIMUM GRID #2 DISSIPATION	0.1	---	WATT
MAXIMUM POSITIVE GRID #1 VOLTAGE	---	0	VOLTS
MAXIMUM GRID #1 CIRCUIT RESISTANCE	1.0	1.0	MEG OHMS

<sup>D</sup> GRIDS #2&3 CONNECTED TO PLATE.

CONTINUED ON FOLLOWING PAGE

\* INDICATES AN ADDITION.

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

## PENTODE CONNECTION

HEATER VOLTAGE	2.5	2.5	VOLTS
HEATER CURRENT	1.0	1.0	AMP.
PLATE VOLTAGE	100	250	VOLTS
GRID #3 VOLTAGE	CONNECTED TO CATHODE AT SOCKET		
GRID #2 VOLTAGE	100	100	VOLTS
GRID #1 VOLTAGE	-3	-3	VOLTS
PLATE RESISTANCE (APPROX.)	1.0	1.0	MEGOHM
TRANSCONDUCTANCE	1 185	1 225	μMHOS
GRID #1 BIAS (APPROX.) FOR CATHODE CURRENT CUT-OFF	-7	-7	VOLTS
PLATE CURRENT	2.0	2.0	MA.
GRID #2 CURRENT	0.5	0.5	MA.

## TRIODE CONNECTION

HEATER VOLTAGE	2.5	2.5	VOLTS
HEATER CURRENT	1.0	1.0	AMP.
PLATE VOLTAGE	180	250	VOLTS
GRID #1 VOLTAGE	-5.3	-8	VOLTS
AMPLIFICATION FACTOR	20	20	
PLATE RESISTANCE (APPROX.)	11 000	10 500	OHMS
TRANSCONDUCTANCE	1 800	1 900	μMHOS
PLATE CURRENT	5.3	6.5	MA.

<sup>E</sup>GRIDS #2&3 CONNECTED TO PLATE.

## BIAS DETECTOR

HEATER VOLTAGE	2.5	2.5	2.5	2.5	VOLTS
HEATER CURRENT	1.0	1.0	1.0	1.0	AMP.
PLATE SUPPLY VOLTAGE <sup>F</sup>	100	100	250	250	VOLTS
GRID #3 VOLTAGE	CONNECTED TO CATHODE AT SOCKET				
GRID #2 VOLTAGE	12	30	50	100	VOLTS
RF GRID #1 VOLTAGE (RMS)	1.05	1.6	1.18	1.37	VOLTS
CATHODE BIAS RESISTOR	18 000	10 000	3 000	10 000	OHMS
ZERO-SIGNAL CATHODE CURRENT	0.063	0.183	0.65	0.43	MA.
PLATE RESISTANCE	1.0	0.25	0.25	0.5	MEGOHM
BLOCKING CAPACITOR	0.01	0.01	0.3	0.3	μf
GRID RESISTOR (FOR FOLLOWING TUBE)	1.0	0.5	0.25	0.25	MEGOHM

<sup>F</sup>VOLTAGE AT PLATE WILL BE "PLATE-SUPPLY" VOLTAGE MINUS VOLTAGE DROP IN PLATE RESISTOR CAUSED BY PLATE CURRENT.

\*INDICATES AN ADDITION.

