PENTODE
MINIATURE TYPE
COATED UNIPOTENTIAL CATHODE

HEATER
3.15 VOLTS 600±40 MA.
AC OR DC
ANY MOUNTING POSITION

THE 3B66 IS A REMOTE CUT-OFF PENTODE USING THE 7 PIN MINIATURE CONSTRUCTION. IT IS DESIGNED FOR SERVICE AS A HIGH-GAIN FREQUENCY OR INTERMEDIATE-FREQUENCY AMPLIFIER 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. WITH THE EXCEPTION OF HEATER RATINGS, ITS CHARACTERISTICS ARE IDENTICAL TO THE 6B66.

DIRECT INTERELECTRODE CAPACITANCES
WITH SHIELD^ WITHOUT SHIELD
GRID TO PLATE: G4 TO P (MAX.) 0.0035 0.0035 pf
INPUT: G4 TO (H4+G2+G3+IS) 5.5 5.5 pf
OUTPUT: P TO (H4+G2+G3+IS) 5.5 5 pf

^EXTERNAL SHIELD #316 CONNECTED TO PIN #7.

RATINGS
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

MAXIMUM PEAK HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE 200 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE 200C VOLTS
MAXIMUM PLATE VOLTAGE 330 VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE 330 VOLTS
MAXIMUM GRID #2 VOLTAGE SEE J5-C4
MAXIMUM GRID #3 VOLTAGE PIN #2 CONNECTED TO PIN #7 AT SOCKET
MAXIMUM POSITIVE DC GRID #4 VOLTAGE 0 VOLTS
MAXIMUM NEGATIVE DC GRID #5 VOLTAGE 5 VOLS
MAXIMUM PLATE DISSIPATION 3.4 WATTS
MAXIMUM GRID #2 DISSIPATION:
FOR VOLTAGES UP TO 165 VOLTS 0.7 WATT
FOR VOLTAGES BETWEEN 165 & 330 VOLTS SEE J5-C4

^THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A1 AMPLIFIER

PLATE VOLTAGE 100 250 VOLTS
GRID #3 VOLTAGE 0 0 VOLTS
GRID #2 VOLTAGE 100 100 VOLTS
CATHODE BIAS RESISTOR 68 68 OHMS
PLATE RESISTANCE (APPROX.) 0.25 1.0 MEGOHM
TRANSCONDUCTANCE 4.300 4.400 UMHMS
PLATE CURRENT 10.8 11 MA
GRID #2 CURRENT 4.4 4.2 MA
GRID #1 VOLTAGE (APPROX.) FOR Gm = 40 UMHMS -20 -20 VOLTS

^INDICATES A CHANGE.
3BA6
PENTODE CONNECTION

$E_f = 3.15$ Volts
$E_B = 250$ Volts
$E_{C3} = 0$ Volts

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$E_{C2}$

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$E_{CC2}$

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GRID VOLTS

-50 -40 -30 -20 -10 0

PLATE MILLIAMPERES

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 20.0

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$E_{CC2} = 250$ volts through 35,000 Ohms

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$E_{C1} = 125$

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$E_{C1} = 100$

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$E_{C1} = 75$

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$E_{C1} = 50$
3BA6

PENTODE CONNECTION

$E_f = 3.15$ Volts
$E_b = 250$ Volts
$E_{c3} = 0$ Volts

- $E_{c2}$
- $E_{cc2}$

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GRID VOLTS

-50 -40 -30 -20 -10 0

TRANSCONDUCTANCE ($g_m$) - MICROMOS

-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0

$E_{cc2} = 250$ Volts Through 35,000 Ohms

$E_{c3} = 125$

100

75

25