



12R5

12R5

BEAM POWER TUBE

7-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage.	12.6	ac or dc volts
Current.	0.6	amp
Warm-up time (Average)	11	sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):⁰

Grid No.1 to plate	0.55	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3, grid No.2, and heater	13	$\mu\mu\text{f}$
Plate to cathode & grid No.3, grid No.2, and heater	9	$\mu\mu\text{f}$

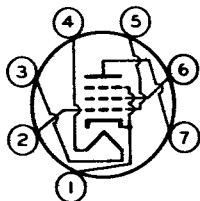
Characteristics, Class A₁ Amplifier:

Plate Voltage.	45	110	volts
Grid-No.2 (Screen-Grid) Voltage.	110	110	volts
Grid-No.1 (Control-Grid) Voltage	0	-8.5	volts
Plate Resistance (Approx.)	-	13000	ohms
Transconductance	-	7000	μmhos
Plate Current.	120*	40	ma
Grid-No.2 Current.	17*	3.3	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5	-	-22	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" $\pm$ 3/32"
Diameter	0.650" to 0.750"
Dimensional Outline.	See General Section
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7CV

Pin 1 - Cathode,
Grid No.3
Pin 2 - Grid No.1
Pin 3 - Heater



Pin 4 - Heater
Pin 5 - Grid No.1
Pin 6 - Grid No.2
Pin 7 - Plate

⁰,*: See next page.



12R5

BEAM POWER TUBE

VERTICAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:*For operation in a 525-line, 30-frame system[□]*

DC PLATE VOLTAGE.	150 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum)*	1500 [■] max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	150 max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL- GRID) VOLTAGE	150 max.	volts
CATHODE CURRENT:		
Peak	155 max.	ma
DC	45 max.	ma
GRID-No.2 INPUT	1 max.	watt
PLATE DISSIPATION	4.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	300 max.	volts
Heater positive with respect to cathode	200 [▲] max.	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For cathode-bias operation 2.2 max. megohms

○ Without external shield.

* This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

□ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

■ Under no circumstances should this absolute value be exceeded.

▲ The dc component must not exceed 100 volts.