

Beam Power Tube

DUODECAR TYPE

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	1.200	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode.	200 max.	volts
Heater positive with respect to cathode.	200 ^a max.	volts

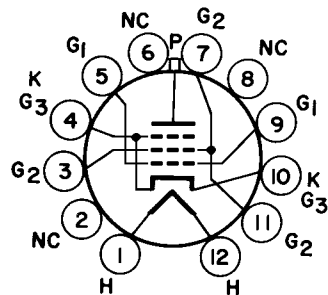
Direct Interelectrode Capacitances (Approx):^b

G1 to P	0.6	pf
Input: G1 to (K+G3,G2,H)	16	pf
Output: P to (K+G3,G2,H)	7.0	pf

Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	3.625"
Seated Length	2.000" to 2.250"
Diameter	1.437" to 1.563"
Dimensional Outline	See <i>General Section</i>
Bulb	T12
Cap.	Skirted Miniature (JEDEC No.C1-3)
Base	Large-Button Duodecar 12-Pin (JEDEC No.E12-74)
Basing Designation for BOTTOM VIEW	12DR

- Pin 1-Heater
- Pin 2-No Internal Connection
- Pin 3-Grid No.2
- Pin 4-Cathode, Grid No.3
- Pin 5-Grid No.1
- Pin 6-Same as Pin 2
- Pin 7-Grid No.2
- Pin 8-Same as Pin 2
- Pin 9-Grid No.1
- Pin 10-Same as Pin 4
- Pin 11-Grid No.2
- Pin 12-Heater
- Cap-Plate



Characteristics, Class A₁ Amplifier:

			Triode		
			Connec-	tion ^c	
Plate Voltage	5000	60	250	150	volts
Grid-No.2 Voltage	150	150	150	150	volts
Grid-No.1 Voltage	-	0	-22.5	-22.5	volts
Amplification Factor	-	-	-	4.4	
Plate Resistance (Approx.)	-	-	18000	-	ohms
Transconductance	-	-	7300	-	μmhos
Plate Current	-	345 ^d	65	-	ma
Grid-No.2 Current	-	27 ^d	1.8	-	ma
Grid-No.1 Voltage (Approx.) for plate ma.= 1	-100	-	-42	-	volts



HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system^e

DC Plate-Supply Voltage.	770 max.	volts
Peak Positive-Pulse Plate Voltage ^f	6500 max.	volts
Peak Negative-Pulse Plate Voltage.	1500 max.	volts
DC Grid-No.2 (Screen-Grid) Voltage	220 max.	volts
DC Grid-No.1 (Control-Grid) Voltage.	-55 max.	volts
Peak Negative-Pulse Grid-No.1 Voltage.	330 max.	volts
Cathode Current:		
Peak	550 max.	ma
Average.	175 max.	ma
Grid-No.2 Input.	3.5 max.	watts
Plate Dissipation ^g	17.5 max.	watts
Bulb Temperature (At hottest point on bulb surface.	220 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:	
For grid-resistor-bias operation	1 max. megohm

- ^a The dc component must not exceed 100 volts.
- ^b Without external shield.
- ^c With grid No.2 connected to plate.
- ^d 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.
- ^e As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- ^f This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- ^g An adequate bias resistor or other means is required to protect the tube in the absence of excitation.

