

Medium-Mu Triode— 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 (Each unit):

Heater negative with respect to cathode	200	max. volts
Heater positive with respect to cathode	200 ^a	max. volts

Direct Interelectrode Capacitances (Approx.):^b

Triode Unit:

G _T to P _T	3.6	pf
Input: G _T to (K _T , H)	2.2	pf
Output: P _T to (K _T , H)	0.7	pf

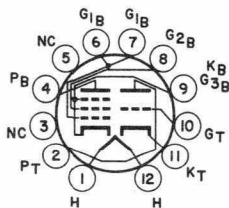
Beam Power Unit:

G _{1B} to P _B	0.34	pf
Input: G _{1B} to (K _B +G _{3B} , G _{2B} , H)	11.0	pf
Output: P _B to (K _B +G _{3B} , G _{2B} , H)	7.0	pf

Mechanical:

Operating Position	Any
Types of Cathodes	Coated Unipotential
Maximum Overall Length	2.375"
Seated Length	1.750" to 2.000"
Diameter	1.062" to 1.188"
Dimensional Outline	See General Section
Bulb	T9
Base	Small-Button Duodecar 12-Pin (JEDEC No. E12-70)
Basing Designation for BOTTOM VIEW	12DZ

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



Characteristics, Class A₁ Amplifier:

	Triode Unit	Beam Power Tube	
Plate Voltage	150	45 120	volts
Grid-No.2 Voltage	—	110 110	volts
Grid-No.1 Voltage	-5	0 -8	volts
Amplification Factor	20	— —	



	Triode Unit	Beam Power Tube	
Plate Resistance (Approx.)	8500	- 1700	ohms
Transconductance.	2350	- 1400	μ hos
Plate Current	5.5	122 46	ma
Grid-No.2 Current	-	16.5 3.5	ma
Grid-No.1 Voltage (Approx.) for plate $\mu a=10$	-11	- -	volts
100.	-	- -25	volts

VERTICAL-DEFLECTION OSCILLATOR

Triode Unit

Maximum Ratings, Design-Maximum Values:

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

DC Plate Voltage.	250 max.	volts
Peak Negative Pulse-Grid Voltage.	400 max.	volts
Cathode Current:		
Peak.	70 max.	ma
Average	20 max.	ma
Plate Dissipation	1 max.	watt

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation.	1 max.	megohm
For cathode-bias operation.	2.2 max.	megohms

VERTICAL-DEFLECTION AMPLIFIER

Beam Power Unit

Maximum Ratings, Design-Maximum Values:

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

DC Plate Voltage.	250 max.	volts
Peak Positive-Pulse Plate Voltage	2000 max.	volts
Grid No.2 Voltage	200 max.	volts
Cathode Current:		
Peak.	245 max.	ma
Average	70 max.	ma
Plate Dissipation ^d	7 max.	watts
Grid-No.2 Input	1.8 max.	watts

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation.	1 max.	megohm
For cathode-bias operation.	2.2 max.	megohms

^a The dc component must not exceed 100 volts.

^b without external shield.

^c 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.

^d In stages operating with grid-leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in the absence of excitation.