

Twin Dual-Control Pentodes

9-PIN MINIATURE TYPE

COMMON-CATHODE, GRID No.1 & GRID No.2

DARK HEATER

*For Combined Color Demodulator and Matrix
Amplifier Applications in Color TV Receivers
Having High-Level Demodulation Systems*

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage, AC or DC	E_f	6.3	V
Heater Current	I_f	760	mA
Direct Interelectrode Capacitances			
Without external shield			
G3 to P (each unit, with other unit connected to ground)	C_{g3-p}	2.7	pF
G1 to (K, Pp2, Pp1, G3p2, G3p1, G2, H).	C_{g1-all}	15.5	pF
G3p1 to (K, Pp2, Pp1, G3p2, G2, G1, H) }	C_{g3-all}	6.0	pF
G3p2 to (K, Pp2, Pp1, G3p1, G2, G1, H) }			
Pp1 to (K, Pp2, G3p2, G3p1, G2, G1, H) }	C_{p-all}	3.7	pF
Pp2 to (K, Pp1, G3p2, G3p1, G2, G1, H) }			
G3p1 to G3p2	C_{g3-g3}	0.10	pF

For the following characteristics, with both units operating,
see Conditions

Plate Resistance	r_p	50000	Ω
Approx., each unit			
Grid-No.1-to-Plate Transconductance	$g_m(g1p)$	5800	μmhos
Each unit			
Grid-No.3-to-Plate Transconductance	$g_m(g3p)$	350	μmhos
Each unit			
DC Plate Current	I_b	7.6	mA
Each unit			
DC Grid-No.2 Current ^a	I_{c2}	14.5	mA
Cutoff DC Grid-No.1 Voltage			
Approx., each unit			
For $I_b = 100 \mu\text{A}$	$E_{c1(co)}$	-6.3	V
Cutoff DC Grid-No.3 Voltage ^b			
Approx., each unit			
For $I_b = 100 \mu\text{A}$	$E_{c3(co)}$	-16.5	V

Conditions

Heater Voltage	E_f	6.3	V
DC Plate Voltage	E_b	100	V
Each unit			
DC Grid-No.3 (Control-Grid) Voltage	E_{c3}	0	V
Each unit			
DC Grid-No.2 (Screen-Grid) Voltage	E_{c2}	100	V
DC Grid-No.1 (Control-Grid) Voltage	E_{c1}	-2.5	V

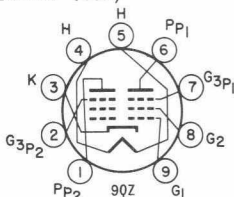


MECHANICAL CHARACTERISTICS

Operating Position. Any
 Type of Cathode Coated Unipotential
 Maximum Overall Length. 3-1/16 in
 Maximum Seated Length 3-13/16 in
 Length, Base Seat to Bulb Top 2-7/16 $\pm$ 3/32 in
 Excluding tip
 Diameter. 0.750 to 0.875 in
 Envelope. JEDEC T6-1/2
 Dimensional Outline (JEDEC 6-4) See *General Section*
 Base. Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

Pin 1 - Plate of Unit No. 2
 Pin 2 - Grid No. 3 of Unit No. 2
 Pin 3 - Cathode
 Pin 4 - Heater
 Pin 5 - Heater
 Pin 6 - Plate of Unit No. 1
 Pin 7 - Grid No. 3 of Unit No. 1
 Pin 8 - Grid No. 2
 Pin 9 - Grid No. 1



DESIGN MAXIMUM RATINGS

DC Plate Voltage (Each unit).	E_b	300	V
DC Grid-No. 2 Voltage.	E_{c2}	150	V
Heater-Cathode Voltage			
Peak.	e_{hkm}	$\begin{cases} +200 \\ -300 \end{cases}$	$\begin{matrix} V \\ V \end{matrix}$
Average ^c	$E_{hk(av)}$	100	V
Heater Voltage, AC or DC.	E_f	5.7 to 6.9	V
Grid-No. 2 Input	P_{g2}	2	W
Plate Dissipation (Each unit)	P_b	2	W

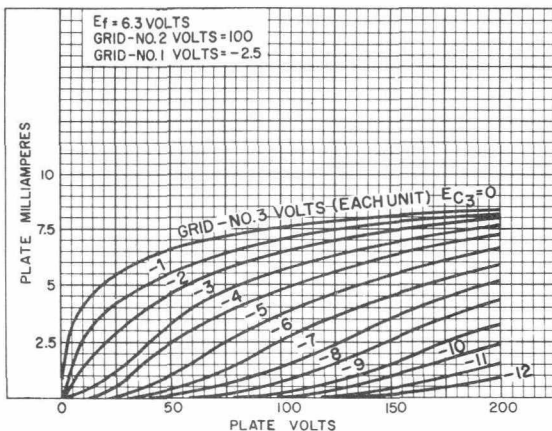
^a Units in parallel (PP_1 connected to PP_2 ; $G3P_1$ connected to $G3P_2$).

^b For this test, $E_{c1} = -3$ V so that the Grid-No. 2 Input rating will not be exceeded.

^c Measured with a dc meter.

Typical Plate Characteristics

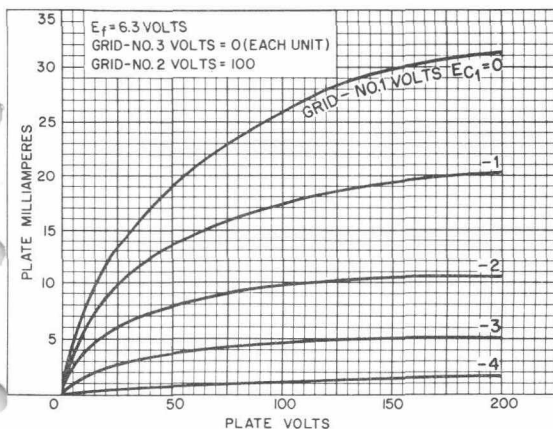
Each Unit, with Both Units Operating



92CS-13459

Typical Plate Characteristics

Each Unit, with Both Units Operating



92CS-13460



