

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

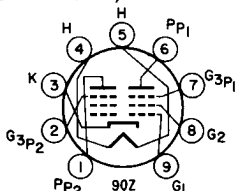


MECHANICAL CHARACTERISTICS

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 <i>General Section</i>
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

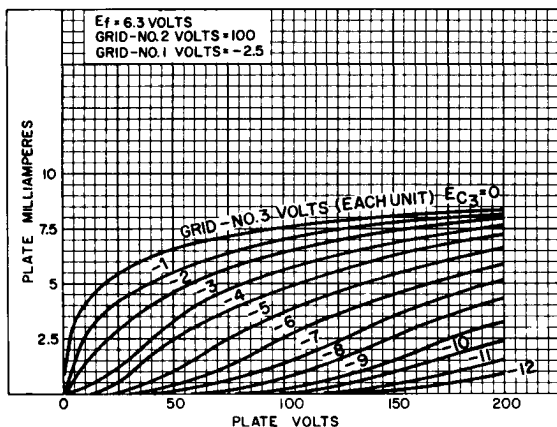
^a Units in parallel (P_{p1} connected to P_{p2} ; G_{3p1} connected to G_{3p2}).

^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

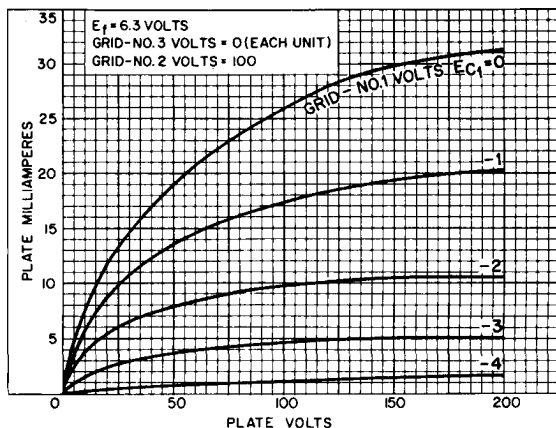
Each Unit, with Both Units Operating



92CS-13459

Typical Plate Characteristics

Each Unit, with Both Units Operating



92CS-13460

