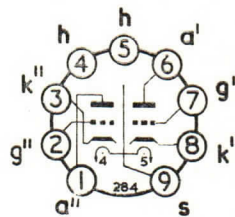


### DOUBLE TRIODE



B9A Base

### GENERAL

This valve is a double triode primarily intended for use as an R.F. amplifier and self-oscillating mixer in F.M. receivers.

Heater Voltage	$V_h$	6.3 V
Heater Current	$I_h$	0.435 A

### RATINGS

Maximum Anode Dissipation (either section)	$P_a(\max)$	2.5	W
Maximum Total Anode Dissipation	$P_a(\text{tot})\max$	4.5	W
Maximum Anode Voltage	$V_a(\max)$	300	V
Maximum Heater to Cathode Voltage (D.C.)	$V_{h-k}(\max)$	90	V
Maximum Cathode Current	$I_k(\max)$	15	mA
Maximum Grid to Cathode Resistance	$R_{g-k}(\max)$	1	M $\Omega$

### INTER-ELECTRODE CAPACITANCES

		*	‡	§	
Grid' to Cathode', Heater, Shield	$C_{g'-k',h,s}$	2.8	3.1	4.0	pF
Grid'' to Cathode'', Heater, Shield	$C_{g''-k'',h,s}$	2.8	3.2	4.0	pF
Anode' to Cathode', Heater, Shield	$C_{a'-k',h,s}$	1.2	1.6	2.5	pF
Anode' to Cathode', Heater, Shield †	$C_{a'-k',h,s}$	1.8	1.9	2.7	pF
Anode'' to Cathode'', Heater, Shield	$C_{a''-k'',h,s}$	1.15	1.6	2.4	pF
Anode'' to Cathode'', Heater, Shield †	$C_{a''-k'',h,s}$	1.8	2.0	2.7	pF
Anode' to Grid'	$C_{a'-g'}$	1.5	1.6	1.8	pF
Anode'' to Grid''	$C_{a''-g''}$	1.5	1.6	1.6	pF
Anode' to Anode''	$C_{a'-a''}$	0.028	0.032	0.033	pF
Anode' to Anode †	$C_{a'-a''}$	0.003	0.0067	0.0081	pF
Anode'' to Cathode'	$C_{a''-k'}$	0.006	0.014	0.02	pF

† Measured with can.

\* In fully shielded socket. Without can, except where stated otherwise.

‡ With holder capacitance balanced out (holder as below).

§ Total capacitance including, where applicable, Plessey B9A ceramic type holders CP180900/1 (without can) or CP180024/3 (with can).

## TYPICAL OPERATION AS R.F. AMPLIFIER

Supply Voltage	$V_b$	250	V
Anode Voltage	$V_a$	230	V
Anode Current	$I_a$	10	mA
Anode Load Resistance	$R_a$	1.8	$k\Omega$
Grid Bias Voltage	$V_g$	-2	V
Mutual Conductance	$g_m$	6	mA/V
Valve Anode Resistance ( $\delta V_a/\delta I_a$ )	$r_a$	9.7	$k\Omega$
Amplification Factor	$\mu$	58	
Input Loss at 100 Mc/s		6	$k\Omega$
Equivalent Grid Noise Resistance	$R_{eq}$	500	$\Omega$

## TYPICAL OPERATION AS SELF-OSCILLATING MIXER

Supply Voltage	$V_b$	250	V
Anode Load Resistance	$R_a$	12	$k\Omega$
Grid to Cathode Resistance	$R_{g-k}$	1	$M\Omega$
Anode Current	$I_a$	5.2	mA
Peak Heterodyne Voltage	$V_{(pk)het}$	3.3	V
Conversion Conductance	$g_c$	2.3	mA/V
Valve Anode Resistance ( $\delta V_a/\delta I_a$ )	$r_a$	22	$k\Omega$

MOUNTING POSITION—Unrestricted.

