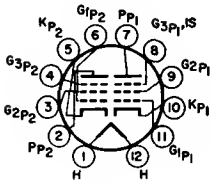


12FU

DUAL PENTODE — 8BM11

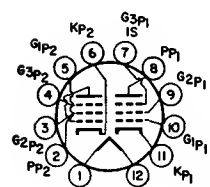
Duodecar type used as if amplifier in television receivers. Unit No.1 is a semiremote-cutoff pentode, and unit No. 2 is a sharp-cutoff pentode. Outlines section, 8B; requires duodecar 12-contact socket. Heater: volts (ac/dc), 8.4; amperes, 0.45; maximum heater-cathode volts, ±200 peak, 100 average.

Class A_1 Amplifier

	Unit No.1	Unit No.2	
MAXIMUM RATINGS (Design-Maximum Values)			
Plate Voltage	160	160	volts
Grid-No.3 (Suppressor-Grid) Voltage	0	0	volts
Grid-No.2 (Screen-Grid) Voltage	160	160	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.2	2.2	watts
Grid-No.2 Input	0.55	0.55	watt
CHARACTERISTICS			
Plate Supply Voltage	125	125	volts
Grid No.3	Connected to cathode at socket		
Grid-No.2 Voltage	125	125	volts
Cathode-Bias Resistor	56	120	ohms
Plate Resistance (Approx.)	220000	300000	ohms
Transconductance	8800	8500	μmhos
Plate Current	14	9	mA
Grid-No.2 Current	3.6	2.5	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	—	—5.5	volts
Grid-No.1 Voltage (Approx.) for transconductance of 50 μmho	—16.5	—	volts
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance, for cathode-bias operation	1	0.25	megohm

Refer to type 6BN8. **8BN8**

Refer to type 6BQ5. **8BQ5**



12DM

SEMIREMOTE-CUTOFF DUAL PENTODE — 8BQ11

11BQ11

Duodecar type used as intermediate-frequency amplifier in television receivers. Outlines section, 8B; requires duodecar 12-contact socket. Type 11BQ11 is identical with type 8BQ11 except for heater ratings.

	8BQ11	11BQ11	
Heater Voltage (ac/dc)	8.4	11.2	volts
Heater Current	0.6	0.45	ampere
Heater Warm-up Time (Average)	11	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
	Unit No.1	**Unit No.2**	
Direct Interelectrode Capacitances:			
Grid No.1 to Plate	0.022	0.024	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	10	—	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	2.8	—	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 of Unit No.1, and Internal Shield	—	11	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 of Unit No.1, and Internal Shield	—	2.8	pF

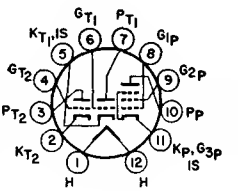
Plate of Unit No.1 to Plate of Unit No.2	0.015	pF
Grid No.1 of Unit No.1 to Plate of Unit No.2	0.002	pF
Grid No.1 of Unit No.2 to Plate of Unit No.1	0.008	pF
Grid No.1 of Unit No.1 to Grid No.1 of Unit No.2	0.002	pF

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Unit No.1	Unit No.2	
Plate Voltage	330	330	volts
Grid-No.3 (Suppressor-Grid) Voltage	0	0	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	330	volts
Grid-No.2 Voltage	See curve page 98		
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	3.1	3.1	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	0.65	0.65	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98		
CHARACTERISTICS			
Plate Supply Voltage	125	125	volts
Grid No.3	Connected to cathode at socket		
Grid-No.2 Voltage	125	125	volts
Cathode-Bias Resistor	56	56	ohms
Plate Resistance (Approx.)	0.2	0.2	megohm
Transconductance	10500	13000	μmhos
Plate Current	11	11	mA
Grid-No.2 Current	3.5	3.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	—	—3	volts
Grid-No.1 Voltage (Approx.) for transconductance of 50 μmho	—15	—	volts
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance, for cathode-bias operation	1	0.25	megohm

8BU11 MEDIUM-MU TWIN TRIODE—SHARP-CUTOFF PENTODE

Duodecar type used in television receiver applications. **Outlines** section, 8C; requires duodecar 12-contact socket. **Heater:** volts (ac/dc), 7.8; amperes, 0.6; warm-up time, 11 seconds, maximum heater-cathode volts, ±200 peak, 100 average.



12FP

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Each Pentode Unit	Each Triode Unit	
Plate Voltage	330	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	—	volts
Grid-No.2 Voltage	See curve page 98	—	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.5	1.8	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	0.55	—	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	—	
CHARACTERISTICS			
Plate Supply Voltage	125	125	volts
Grid-No.2 Voltage	125	—	volts
Grid-No.1 Voltage	—1	—	volts
Catbode-Bias Resistor	—	68	ohms
Amplification Factor	—	43	
Plate Resistance (Approx.)	200000	50000	ohms
Transconductance	7500	8600	μmhos
Plate Current	12	13.5	mA
Grid-No.2 Current	4	—	mA
Grid Voltage (Approx.) for plate current of 100 μA	—	—8	volts
Grid-No.1 Voltage (Approx.) for plate current of 30 μA	—8	—	volts
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm

8CM7 Refer to type 6CM7.