

Miniature type used in frequency-divider and complex-wave generator circuits of electronic musical instruments. In such circuits the tetrode unit can provide three independent output-signal voltages; the diode unit can be used as a key in a vibrato circuit. **Outlines section. 6E;** requires miniature 9-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.3	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Tetrode Unit:		
Grid No.1 to Plate No.1A	0.02 max	pF
Grid No.1 to Plate No.1B	0.02 max	pF
Grid No.1 to Plate No.2	0.06 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Internal Shield	5.5	pF
Plate No.1A to Cathode, Heater, Grid No.2, and Internal Shield	1.2	pF
Plate No.1B to Cathode, Heater, Grid No.2, and Internal Shield	1.3	pF
Plate No.2 to Cathode, Heater, Grid No.2, and Internal Shield	1.8	pF
Tetrode Grid No.1 to Diode Plate	0.024 max	pF
Tetrode Plate No.1A to Diode Plate	0.18	pF
Tetrode Plate No.1B to Diode Plate	0.024	pF
Tetrode Plate No.2 to Diode Plate	0.013	pF

Tetrode Unit as Class A₁ Amplifier

Plates No. 1A, 1B, and 2 connected together

CHARACTERISTICS

Plate Voltage	100	volts
Grid-No.2 Voltage	100	volts
Grid-No.1 Supply Voltage	0	volts
Grid-No.1 Resistor (Bypassed)	2.2	megohms
Plate Resistance (Approx.)	30000	ohms
Transconductance	3400	μmhos
Plate Current	4.2	mA
Grid-No.2 Current	1.7	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	-4	volts

Triode Connection—Plates No.1A, 1B, and 2 connected to grid No.2

Plate Voltage	100	volts
Grid-No.1 Supply Voltage	0	volts
Grid-No.1 Resistor (Bypassed)	2.2	megohms
Transconductance	4500	μmhos
Amplification Factor	45	
Plate Current	5.5	mA

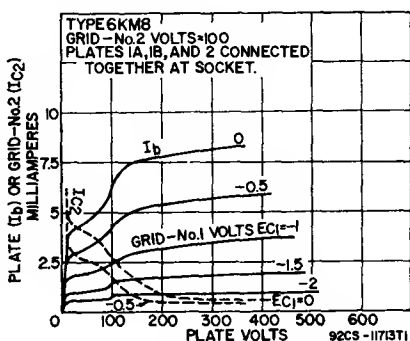
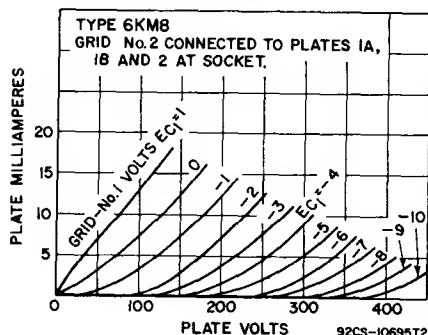
Separate-plate operation; plates not under test grounded

Plate	1A	1B	2	
Plate Voltage	100	100	100	volts
Grid-No.2 Voltage	100	100	100	volts
Grid-No.1 Supply Voltage	0	0	0	volts
Grid-No.1 Resistor (Bypassed)	2.2	2.2	2.2	megohms
Transconductance	2000	2000	1800	μmhos
Plate Resistance (Approx.)	0.1	0.1	0.12	megohm
Plate Current	2.3	2.3	2.1	mA
Grid-No.2 Current	3.8	3.8	3.3	mA

Tetrode Unit as Frequency Divider and Complex-Wave Generator

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each plate)	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	volts
Negative-bias value	50	volts
Plate Dissipation (Each plate)	1	watt



Grid-No.2 Input:

For grid-No.2 voltages up to 165 volts	0.65	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance, for grid-No.1-resistor-bias operation	2.2	megohms
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Diode Unit

MAXIMUM RATINGS (Design-Maximum Values)

Plate Current	1	mA
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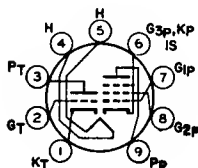
CHARACTERISTICS, Instantaneous Value

Tube Voltage Drop for plate current of 2 mA	10	volts
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**MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

**6KR8
10KR8**

Miniature type used in television receiver applications. The triode unit is used as a general-purpose amplifier; the pentode unit is used as a video amplifier. Outlines section, 6E; requires miniature 9-contact socket. Type 10KR8 is identical with type 6KR8 except for heater ratings.



9DX

Heater Voltage (ac/dc)	6KR8 6.3	10KR8 10.5	volts
Heater Current	0.75	0.45	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

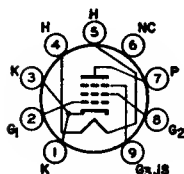
	Triode Unit	Pentode Unit	
Plate Voltage	—	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	330	volts
Grid-No.2 Voltage	—	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2	5	watts
Grid-No.2 Input:			
For voltages up to 165 volts	—	1.1	watts
For voltages between 165 and 330 volts	—	See curve page 98	

CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Supply Voltage	125	35	200
Grid-No.2 Supply Voltage	—	100	100
Grid-No.1 Voltage	—	0	—
Cathode-Bias Resistor	68	—	82
Amplification Factor	46	—	—
Plate Resistance (Approx.)	4400	—	60000
Transconductance	10400	—	20000
Plate Current	15	54	19.5
Grid-No.2 Current	—	13.5	3
Grid-No.1 Voltage (Approx.) for plate current of 10 μ A	—8	—	—
Grid-No.1 Voltage (Approx.) for plate current of 100 μ A	—	—	—6.3

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm



9PM

**SEMIREMOTE-CUTOFF
PENTODE**

**6KT6
3KT6, 4KT6**

Miniature type used as if-amplifier tube in television receivers utilizing an intermediate frequency in the order of 40 MHz. Outlines section, 6B; requires miniature 9-contact socket. Types 3KT6 and 4KT6 are identical with type 6KT6 except for heater ratings.