

HIGH FREQUENCY TWIN TRIODE TYPE 6BK7-B

The 6BK7-B is a 9-pin miniature twin triode designed for use as the low-noise VHF amplifier in cascode TV tuners. These types have high gain and high cascode transconductance.

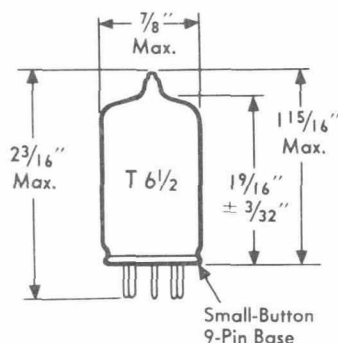
The 6BK7-B has been designed for use in receivers which employ series connected heaters, especially in television receivers having the picture-tube heater in series with other heaters. When it is employed in this type of circuit with other tubes similarly designed having the same heater current rating, heater voltage surges across individual tubes are minimized inasmuch as heater warm-up characteristic is controlled.

ELECTRICAL:

Cathode.....	Coated Unipotential Heater:		
Voltage (ac or dc)	6.3	Volts	
Current	0.45	Ampere	
Warm-Up Time (Approx.)▲	11	Seconds	
Direct Interelectrode Capacitances: (Unshielded)			
	Unit 1	Unit 2	
Grid to Plate	1.8	1.8	$\mu\mu\text{f}$
Plate to Cathode	0.22	0.22	max. $\mu\mu\text{f}$
Heater to Cathode	2.8	3	$\mu\mu\text{f}$
Input	3	3	$\mu\mu\text{f}$
Output	1	0.9	$\mu\mu\text{f}$
Grounded Grid Operation:			
Input	6	6	$\mu\mu\text{f}$
Output	2.4	2.4	$\mu\mu\text{f}$
Plate of Unit 1 to Plate of Unit 2	0.075		$\mu\mu\text{f}$
Grid of Unit 2 to Grid of Unit 1	0.004		$\mu\mu\text{f}$

MECHANICAL:

Bulb	T-6½
Base	Miniature 9-Pin (JEDEC E9-1)
Outline	6-2
Basing	9AJ
Mounting Position	Any



MAXIMUM RATINGS:

Design-Center Values

Plate Voltage	300	max.	Volts
Grid Voltage (Negative Bias Value)	50	max.	Volts
Plate Dissipation	2.7	max.	Watts
Peak Heater-Cathode Voltage:			
Heater Positive with Respect to Cathode■	200	max.	Volts
Heater Negative with Respect to Cathode⊕	200	max.	Volts

CLASS A AMPLIFIER:

Characteristics: (per unit)

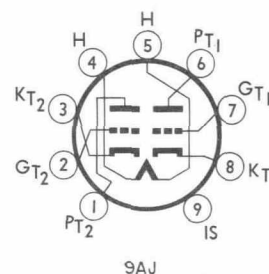
Plate Voltage	150	Volts
Cathode Bias Resistor	56	Ohms
Amplification Factor	43	
Plate Resistance	4600	Ohms
Transconductance	9300	μmhos
Plate Current	18	Ma.
Grid Cutoff Voltage□	-11	Volts

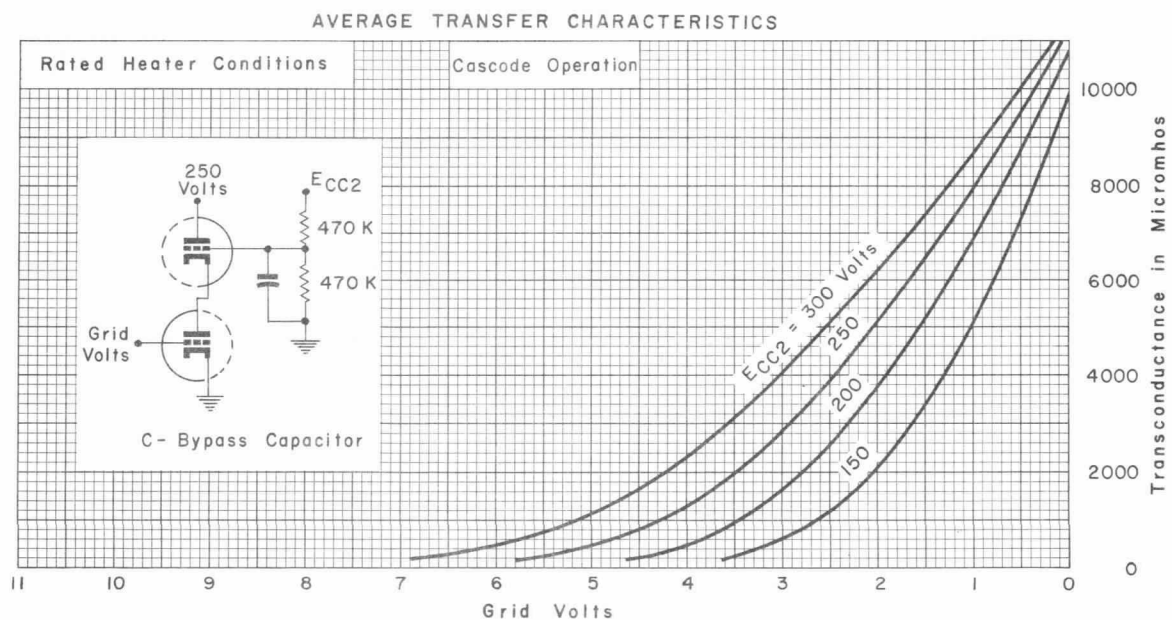
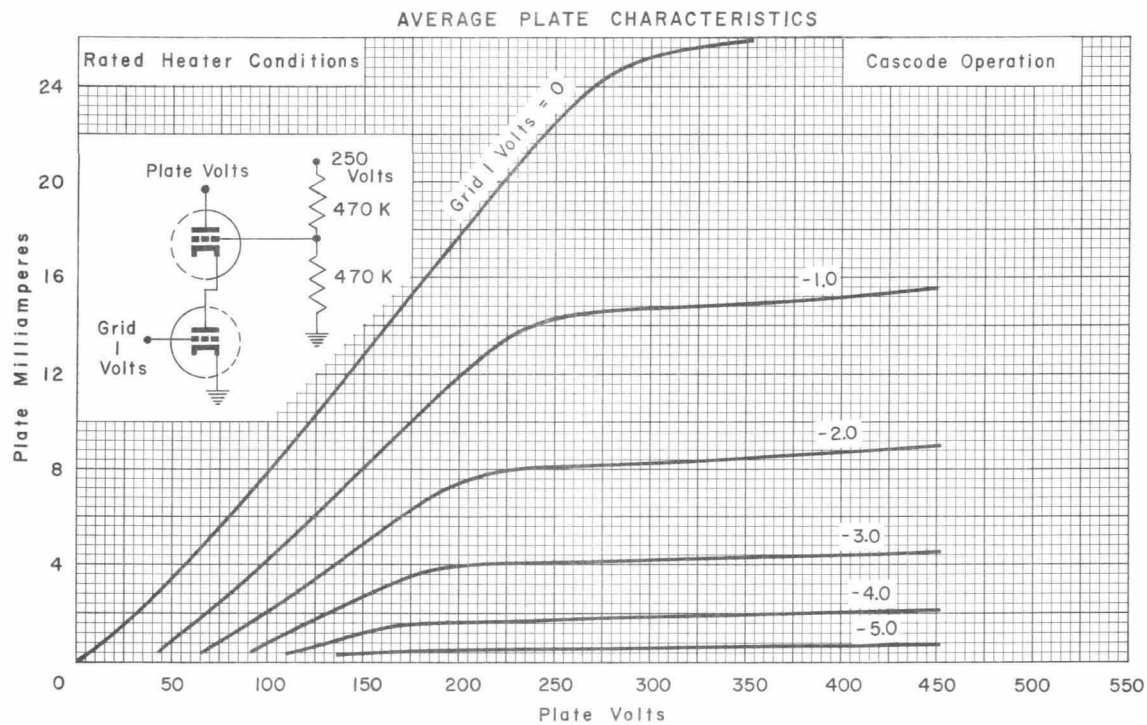
▲ Heater Warm-up Time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three times rated heater voltage divided by rated heater current.

□ For plate current of 10 microamperes.

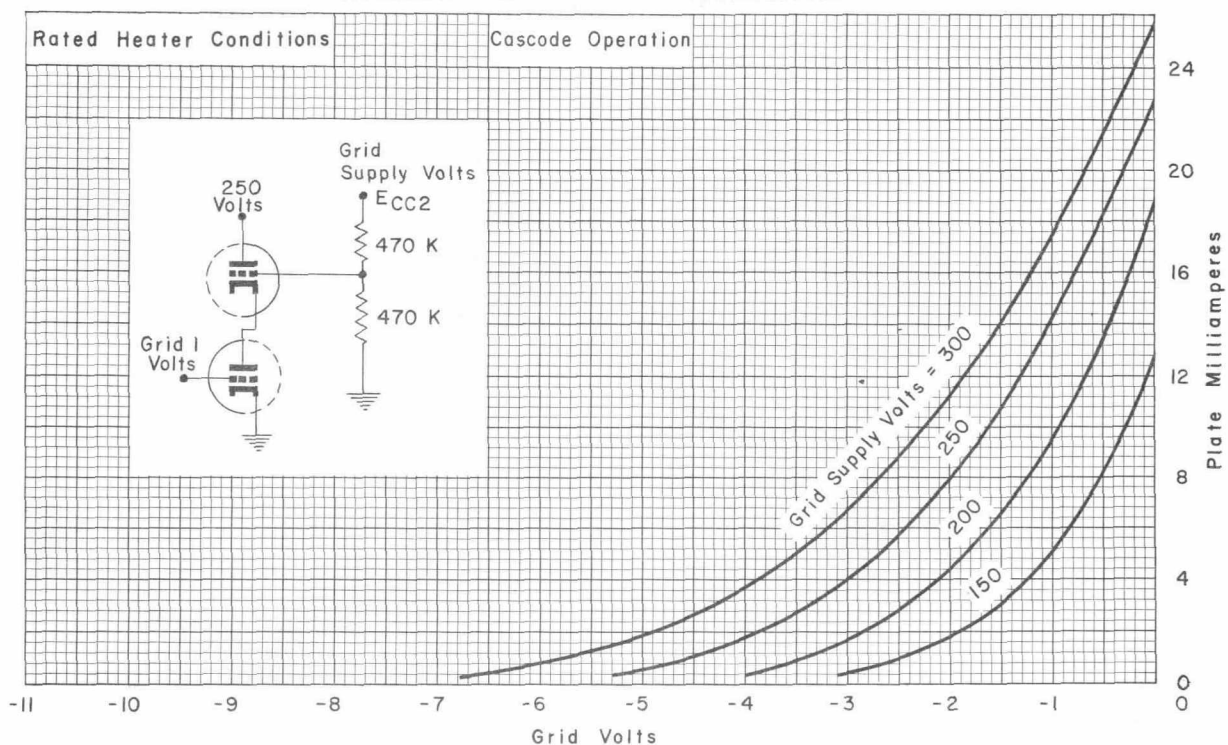
■ Under cut-off conditions in cascode type circuits with direct-coupled drive, it is permissible for this voltage to be as high as 300 volts.

⊕ The dc component must not exceed 100 volts.

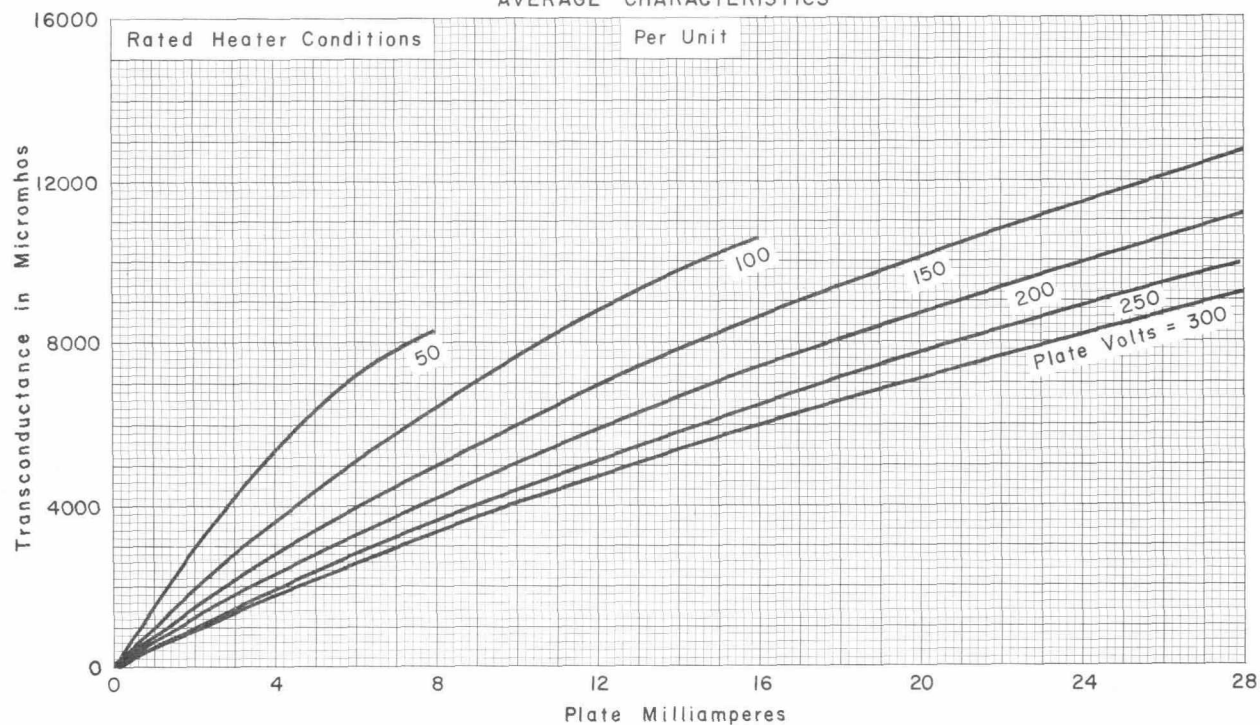


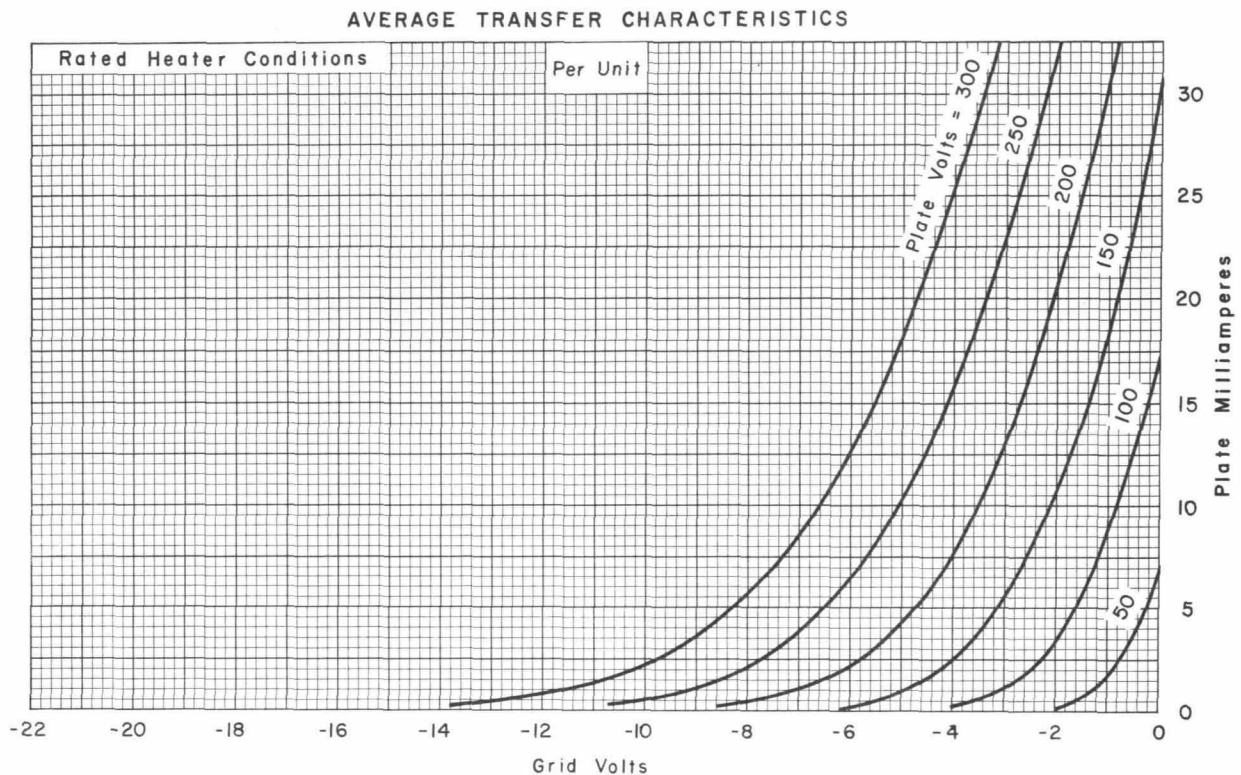
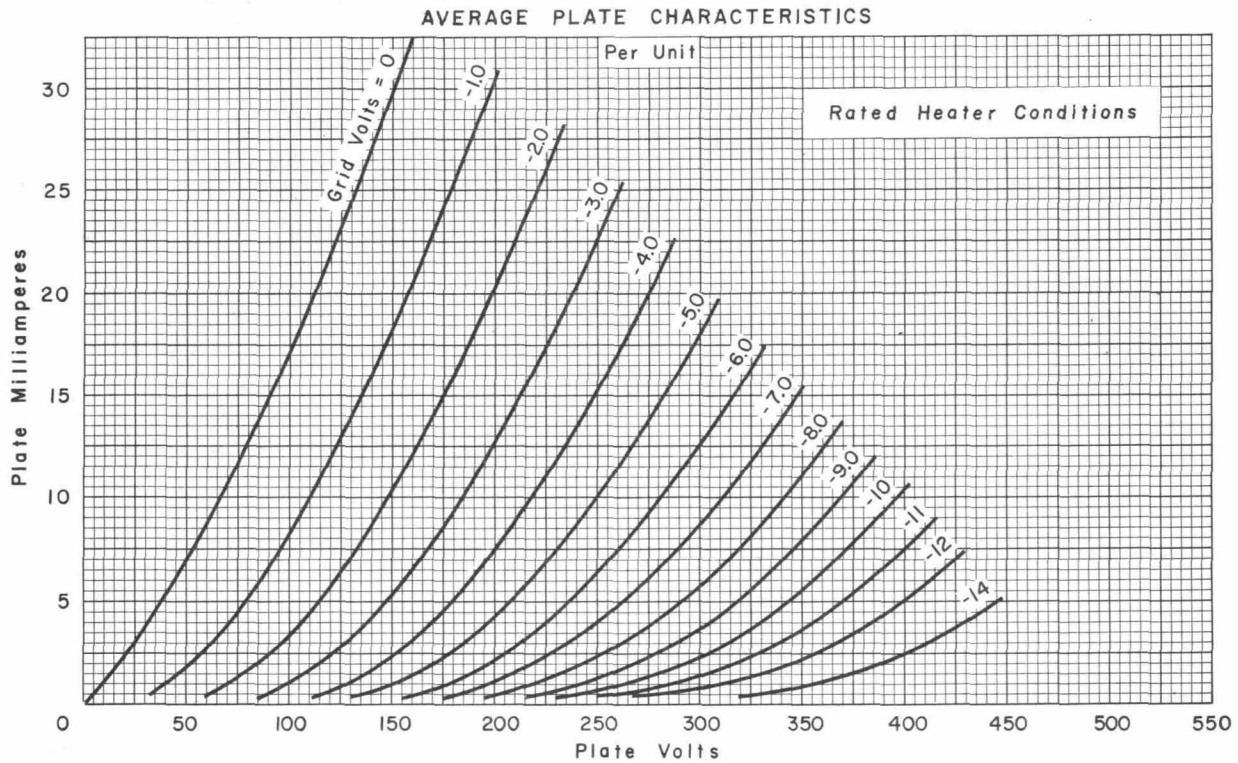


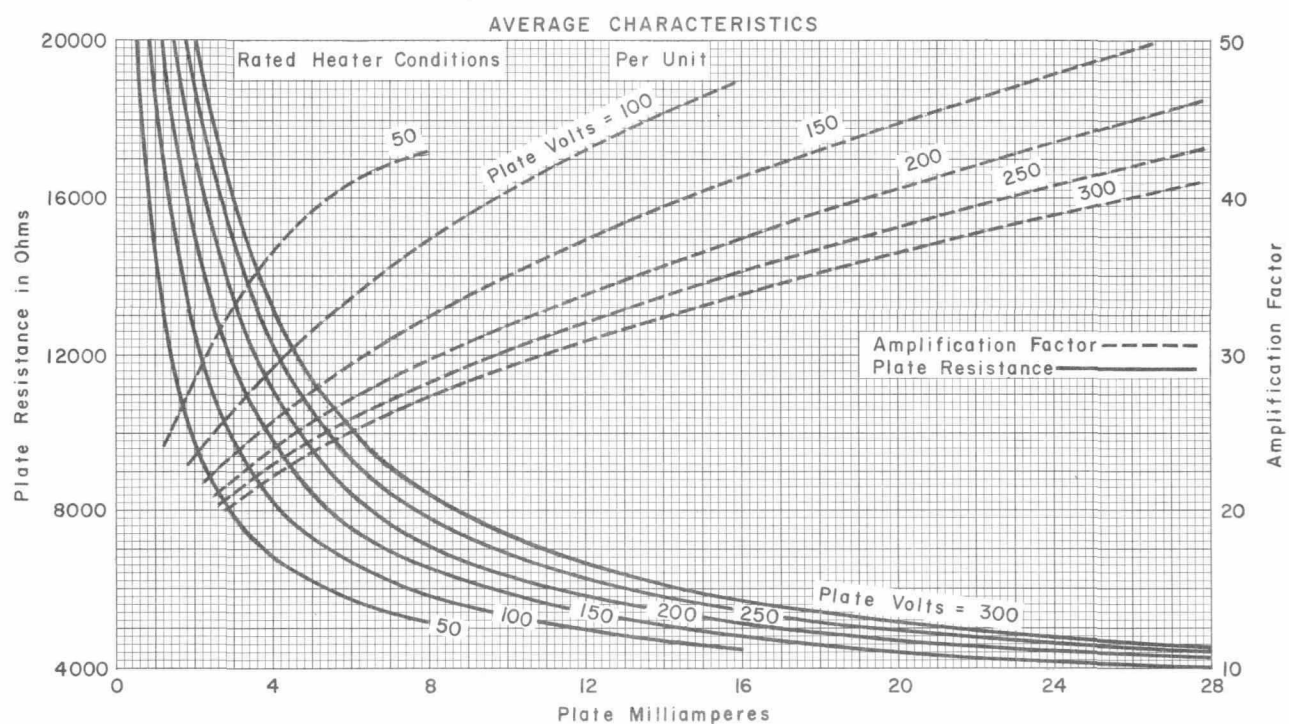
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS







CE-A1597

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