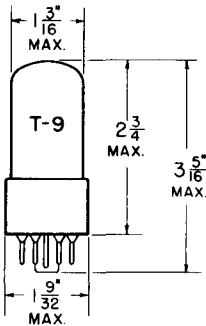


TUNG-SOL

BEAM PENTODE



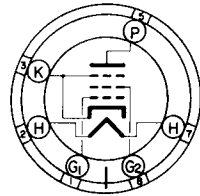
GLASS BULB

COATED UNIPOTENTIAL CATHODE

 HEATER
 25 VOLTS 300 MA.

AC OR DC

ANY MOUNTING POSITION


 BOTTOM VIEW
 INTERMEDIATE SHELL
 6 PIN OCTAL
 6CK

THE 25AV5GT IS A BEAM POWER AMPLIFIER INTENDED PRIMARILY FOR OPERATION WITH RELATIVELY LOW SUPPLY VOLTAGE AS A HORIZONTAL DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS. IT IS DESIGNED TO WITHSTAND HIGH-SURGE PLATE VOLTAGES FOR RELATIVELY SHORT PERIODS OF TIME. IT CAN BE USED WITH DIRECT OR WITH TRANSFORMER HORIZONTAL-YOKE DRIVE.

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD M8-210

HORIZONTAL DEFLECTION AMPLIFIER

HEATER VOLTAGE	25	VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE	180	VOLTS
MAXIMUM PLATE SUPPLY VOLTAGE	550	VOLTS
MAXIMUM PEAK POSITIVE PULSE PLATE VOLTAGE ^A ^B	5 500	VOLTS
MAXIMUM GRID #2 VOLTAGE	200	VOLTS
MAXIMUM GRID #1 VOLTAGE	-100	VOLTS
MAXIMUM PEAK NEGATIVE PULSE GRID #1 VOLTAGE ^A	-400	VOLTS
MAXIMUM PLATE DISSIPATION	11	WATTS
MAXIMUM GRID #2 DISSIPATION	2.5	WATTS
MAXIMUM PLATE CURRENT	100	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE ^C	1	MEGOHM

^A THE DUTY CYCLE OF THE VOLTAGE PULSE MUST NOT EXCEED 15% OF ONE SCANNING CYCLE AND THE DURATION OF THE PULSE MUST BE LIMITED TO 10 MICROSECONDS.

^B VALUE GIVEN IS TO BE CONSIDERED AS THE ABSOLUTE VOLTAGE BEYOND WHICH THE SERVICEABILITY OF THE TUBE MAY BE IMPAIRED.

^C THE USE OF A CATHODE RESISTOR OR OTHER SUITABLE PROTECTIVE DEVICE IS NECESSARY TO PROTECT THE TUBE IN EVENT OF LOSS OF EXCITATION AND CONSEQUENT LOSS OF DEVELOPED BIAS.

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE OR ADDITION.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

HEATER VOLTAGE	25	VOLTS
HEATER CURRENT	300	MA.
PLATE VOLTAGE	250	VOLTS
GRID #2 VOLTAGE	150	VOLTS
GRID #1 VOLTAGE	-22.5	VOLTS
TRANSCONDUCTANCE	5 800	μMHOS
PLATE CURRENT	55	MA.
GRID #2 CURRENT	2.1	MA.
GRID #2 TO GRID #1 AMPLIFICATION FACTOR ^D	4.5	

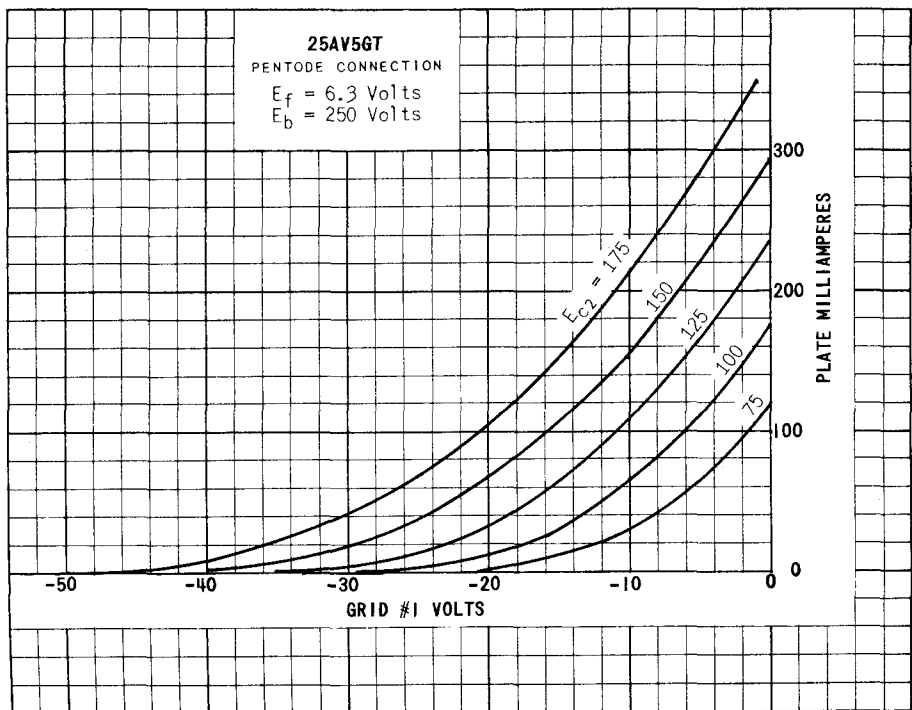
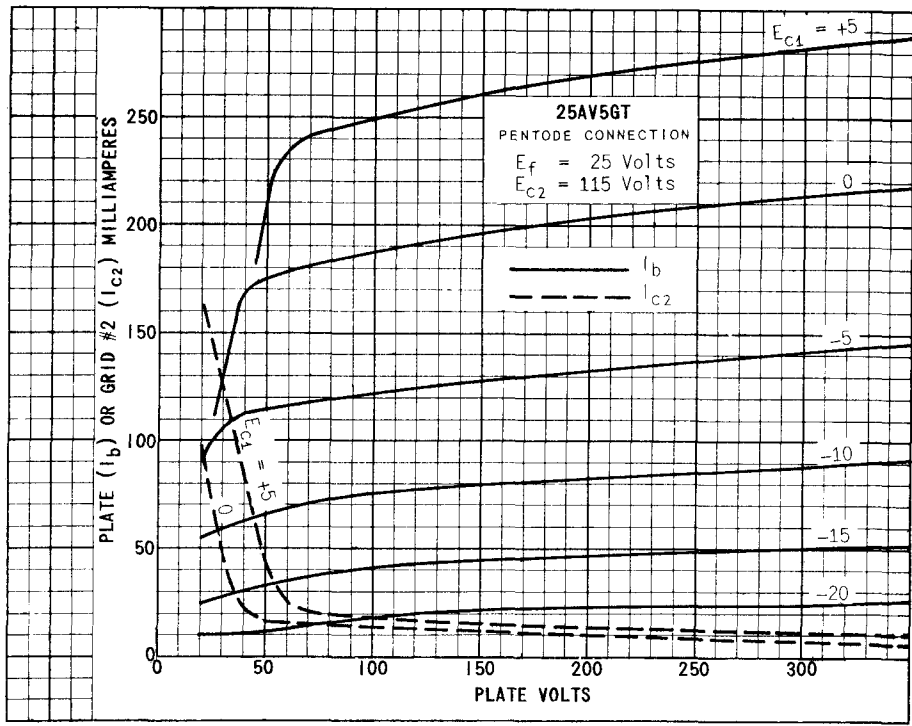
^D TRIODE CONNECTION (SCREEN TIED TO PLATE) WITH $E_b = E_{c2} = 150$ VOLTS AND $E_{c1} = -22.5$ VOLTS.

HORIZONTAL DEFLECTION AMPLIFIER

	8AP4	12KP4	16KP4	
HEATER VOLTAGE	25	25	25	VOLTS
HEATER CURRENT	300	300	300	MA.
TOTAL PLATE VOLTAGE	240	370	410	VOLTS
PLATE SUPPLY VOLTAGE	150	250	250	VOLTS
BOOST VOLTAGE	90	120	160	VOLTS
GRID #2 SUPPLY VOLTAGE	150	250	—	VOLTS
GRID #2 RESISTOR	1000	10 000	—	OHMS
GRID #2 VOLTAGE	135	165	122	VOLTS
CATHODE BIAS RESISTOR	0	0	0	OHMS
GRID #1 RESISTOR	0.22	0.47	1	MEGOHM
PEAK-TO-PEAK GRID SIGNAL VOLTAGE (APPROX.)	90	90	220	VOLTS
PEAK POSITIVE PULSE PLATE VOLTAGE (APPROX.)	2.9	3.6	4.3	KV.
PLATE CURRENT	84	89	87	MA.
GRID #2 CURRENT	15	8.5	15	MA.
GRID #1 CURRENT	66	40	64	μA.
PICTURE TUBE ANODE VOLTAGE	8.7 ^E	10.8 ^F	12.8 ^F	KV.
DEFLECTION ANGLE	54	54	65	DEGREES
SWEEP WIDTH	7 3/4	11 1/2	13 1/2	INCHES

^E MEASURED WITH 75 MICROAMPERES TOTAL PICTURE TUBE DRAIN.

^F MEASURED WITH 100 MICROAMPERES TOTAL PICTURE TUBE DRAIN.



PRINTED IN U. S. A.

PLATE
2544
DEC. 1
1950

25AV5GT (6AV5GT)

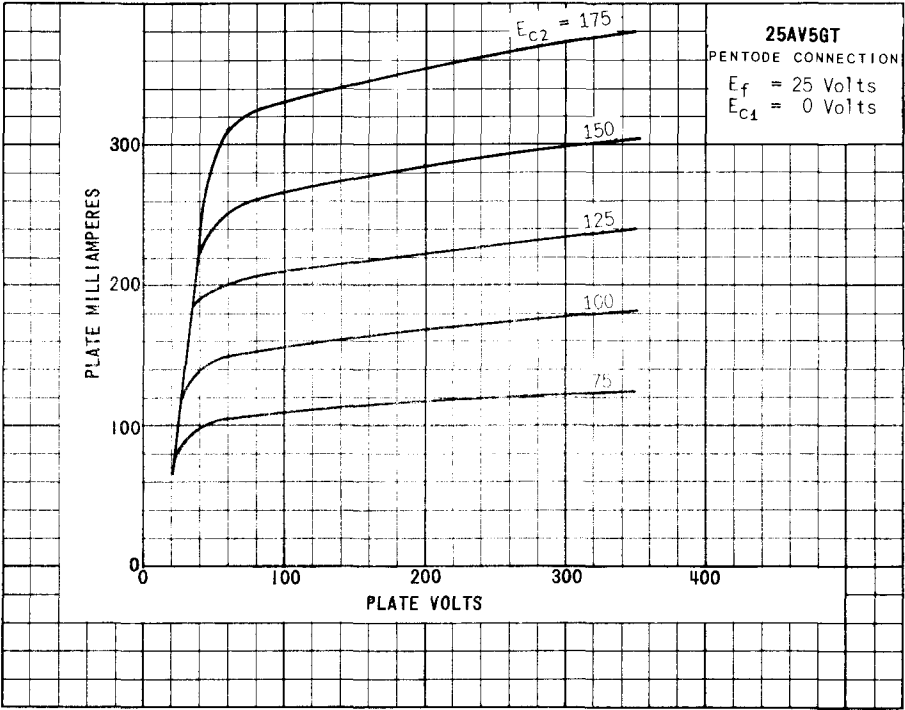
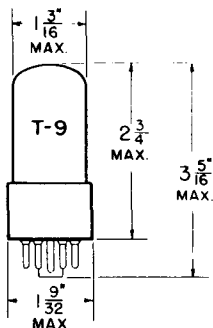


PLATE
2545
DEC. 1
1950

TUNG-SOL

BEAM PENTODE



GLASS BULB

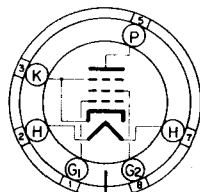
COATED UNIPOTENTIAL CATHODE

HEATER

25 VOLTS 0.3 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

INTERMEDIATE SHELL
6 PIN OCTAL

6CK

THE 25AV5GT IS A BEAM POWER AMPLIFIER INTENDED PRIMARILY FOR OPERATION WITH RELATIVELY LOW SUPPLY VOLTAGE AS A HORIZONTAL DEFLECTION AMPLIFIER IN TELEVISION RECEIVERS. IT IS DESIGNED TO WITHSTAND HIGH-SURGE PLATE VOLTAGES FOR RELATIVELY SHORT PERIODS OF TIME. IT CAN BE USED WITH DIRECT OR WITH TRANSFORMER HORIZONTAL-YOKE DRIVE.

DIRECT INTERELECTRODE CAPACITANCES

GRID #1 TO PLATE: (G_1 TO P)

0.7 μf

INPUT: G_1 TO ($H+K+G_2+G_3$)

14 μf

OUTPUT: P TO ($H+K+G_2+G_3$)

7.0 μf

RATINGS

INTERPRETED ACCORDING TO RMA STANDARD M8-210

HORIZONTAL DEFLECTION AMPLIFIER^A

HEATER VOLTAGE	6.3	VOLTS
MAXIMUM HEATER CATHODE VOLTAGE:		
HEATER NEGATIVE WITH RESPECT TO CATHODE:		
TOTAL DC AND PEAK		
HEATER POSITIVE WITH RESPECT TO CATHODE:		
DC		
TOTAL DC AND PEAK		
MAXIMUM DC PLATE SUPPLY VOLTAGE (BOOST + POWER SUPPLY)	550	VOLTS
MAXIMUM PEAK POSITIVE PLATE VOLTAGE (ABSOLUTE MAXIMUM)	5 500	VOLTS
MAXIMUM PEAK NEGATIVE PLATE VOLTAGE	1 250	VOLTS
MAXIMUM PLATE DISSIPATION ^B	11	WATTS
MAXIMUM PEAK NEGATIVE GRID #1 VOLTAGE	300	VOLTS
MAXIMUM DC GRID #2 VOLTAGE	175	VOLTS
MAXIMUM GRID #2 DISSIPATION	2.5	WATTS
MAXIMUM AVERAGE CATHODE CURRENT	110	MA.
MAXIMUM PEAK CATHODE CURRENT	400	MA.
MAXIMUM GRID #1 CIRCUIT RESISTANCE	0.47	MEGOHM
MAXIMUM BULB TEMPERATURE (AT HOTTEST POINT)	210°	CENTIGRADE

^A FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN "STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCASTING STATIONS; FEDERAL COMMUNICATIONS COMMISSION". THE DUTY CYCLE OF THE VOLTAGE PULSE NOT TO EXCEED 15 PERCENT OF A SCANNING CYCLE.

^B IN STAGES OPERATING WITH GRID-LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE OR ADDITION.

TUNG-SOL

CONTINUED FROM PRECEDING PAGE

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A₁ AMPLIFIER

HEATER VOLTAGE	6.3	VOLTS	
HEATER CURRENT	1.2	AMP.	
PENTODE OPERATION: ^C			
PLATE CURRENT	55	MA.	
GRID #2 CURRENT	2.1	MA.	
TRANSCONDUCTANCE	5 500	μMHOS	←
PLATE RESISTANCE	20 000	OHMS	←
ZERO-BIAS: ^D			
PLATE CURRENT	225	MA.	←
GRID #2 CURRENT	25	MA.	←
CUT-OFF: ^E			
GRID #1 VOLTAGE (APPROX.)	-46	VOLTS	←
TRIODE AMPLIFICATION FACTOR ^F	4.3		←

^C WITH $E_b = 250$ VOLTS, $E_{c2} = 150$ VOLTS AND $E_{c1} = -22.5$ VOLTS.^D WITH $E_b = 60$ VOLTS AND $E_{c2} = 150$ VOLTS (INSTANTANEOUS VALUES).^E FOR $I_b = 1$ MA. WITH $E_b = 250$ VOLTS AND $E_{c2} = 150$ VOLTS.^F WITH $E_b = E_{c2} = 150$ VOLTS AND $E_{c1} = -22.5$ VOLTS.

→ INDICATES A CHANGE OR ADDITION.

