

**TUNG-SOL**

**PENTODE POWER AMPLIFIER**

COATED UNIPOTENTIAL CATHODE

HEATERS

**6F6, 6F6GT/G, 42** - 6.3 V., 0.7 AMPERE  
**2A5** - 2.5 V., 1.75 AMPERES

TYPES 6F6, 6F6GT/G, 2A5 AND 42 ARE PENTODE AMPLIFIERS DESIGNED FOR APPLICATION IN POWER OUTPUT STAGES OF RECEIVERS. WITH THE EXCEPTION OF HEATER RATINGS, THEIR ELECTRICAL CHARACTERISTICS ARE IDENTICAL.

**MAXIMUM RATINGS**

	PENTODE CONNECTION	TRIODE CONNECTION	
MAXIMUM PLATE VOLTAGE	375	350	VOLTS
MAXIMUM SCREEN VOLTAGE	285	-	VOLTS
MAXIMUM PLATE DISSIPATION	11	-	WATTS
MAXIMUM SCREEN DISSIPATION	3.75	-	WATTS
MAXIMUM TOTAL PLATE AND SCREEN DISSIPATION	-	10	WATTS

**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**

CLASS A<sub>1</sub> AMPLIFIER - SINGLE TUBE <sup>C</sup>

	PENTODE CONNECTION	TRIODE CONNECTION	
PLATE VOLTAGE	250	285	VOLTS
SCREEN VOLTAGE	250	285	-
CONTROL GRID VOLTAGE <sup>A</sup>	-16.5	-20	-20
PEAK AF SIGNAL VOLTAGE	16.5	20	20
ZERO-SIGNAL PLATE CURRENT	34	38	31
ZERO-SIGNAL SCREEN CURRENT	6.5	7	-
MAXIMUM-SIGNAL PLATE CURRENT	36	40	34
MAXIMUM-SIGNAL SCREEN CURRENT	10.5	13	-
PLATE RESISTANCE (APPROX.)	80000	78000	2600
TRANSCONDUCTANCE	2500	2550	2600
AMPLIFICATION FACTOR	-	-	6.8
LOAD RESISTANCE	7000	7000	4000
TOTAL HARMONIC DISTORTION	8	9	6.5
POWER OUTPUT	3.2	4.8	0.85

**PUSH-PULL AMPLIFIER - TWO TUBES <sup>F</sup>**

CLASS A<sub>1</sub> AMPLIFIER <sup>C</sup> CLASS AB<sub>2</sub> AMPLIFIER <sup>D</sup>

	PENTODE CONNECTION	PENTODE CONNECTION	TRIODE CONNECTION	
PLATE VOLTAGE	315	375	350	VOLTS
SCREEN VOLTAGE	285	250	-	VOLTS
CONTROL GRID VOLTAGE	-24 <sup>A</sup>	-26	-38	VOLTS
PEAK AF SIGNAL VOLTAGE (GRID TO GRID)	48	82	123	VOLTS
ZERO-SIGNAL PLATE CURRENT	62	34	48	MA.
ZERO-SIGNAL SCREEN CURRENT	12	5	-	MA.
MAXIMUM-SIGNAL PLATE CURRENT	80	82	92	MA.
MAXIMUM-SIGNAL SCREEN CURRENT	19.5	19.5	-	MA.
EFFECTIVE LOAD RESISTANCE (PLATE TO PLATE)	10000	10000	6000	OHMS
TOTAL HARMONIC DISTORTION	4	3.5	2	PER CENT
POWER OUTPUT	11	18.5	13	WATTS

( CONTINUED NEXT PAGE )

**TUNG-SOL**

**TYPICAL OPERATING CONDITIONS FOR CATHODE BIAS**

**CLASS A<sub>1</sub> AMPLIFIER <sup>C</sup>**

**CLASS AB<sub>2</sub> AMPLIFIER <sup>D</sup>**

	SINGLE TUBE AMPLIFIER		PUSH-PULL AMPLI.		PUSH-PULL AMPLI.		
	Pentode Conn.	Triode Conn.	Pentode Conn.	Pentode Conn. <sup>F</sup>	Pentode Conn. <sup>F</sup>	Triode Conn. <sup>F</sup>	
Plate	250	285	250	315	375	350	Volts
Screen	250	285	-	285	250	-	Volts
Cathode Resistor	410	-	650	320	340 <sup>B</sup>	730 <sup>B</sup>	Ohms
Peak A-F Grid Voltage	18.5	20	20	-	-	-	Volts
Peak A-F Grid-to-Grid Voltage	-	-	-	58	94	132	Volts
Zero-Sig. Plate Cur.	34	38	31	62	54	50	Ma.
Max.-Sig. Plate Cur.	35	36	32	73	77	80	Ma.
Zero-Sig. Screen Cur.	6.5	7	-	12	A	-	Ma.
Max.-Sig. Screen Cur.	9.7	12	-	18	18	-	Ma.
Load Resistance	7000	7000	4000	-	-	-	Ohms
Effective Load Resist. (plate to plate)	-	-	-	10000	10000	10000	Ohms
Total Harmonic Dist.	8.5	9	6.5	3	5	3	%
Max.-Sig. Power Output	3.1	4.5	0.8	10.5	19	9	Watts

<sup>A</sup> THE DC RESISTANCE IN THE GRID CIRCUIT, UNDER RATED MAXIMUM CONDITIONS, SHOULD NOT EXCEED 0.5 MEGOHM FOR SELF-BIAS OPERATION AND 0.1 MEGOHM FOR FIXED-BIAS OPERATION.

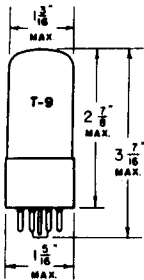
<sup>B</sup> THE VALUE GIVEN FOR THE CATHODE RESISTOR IS DETERMINED FOR A GRID BIAS OF -21 VOLTS.

<sup>C</sup> SUBSCRIPT 1 INDICATES THAT GRID CURRENT DOES NOT FLOW DURING ANY PART OF INPUT CYCLE.

<sup>D</sup> SUBSCRIPT 2 INDICATES THAT GRID CURRENT FLOWS DURING SOME PART OF INPUT CYCLE.

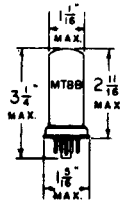
<sup>E</sup> THE VALUE GIVEN FOR THE CATHODE RESISTOR IS DETERMINED FOR A GRID BIAS OF -36.5 VOLTS.

<sup>F</sup> UNLESS OTHERWISE SPECIFIED, VALUES ARE FOR 2 TUBES.



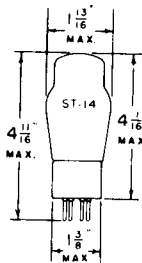
GLASS BULB

6F6GT/G



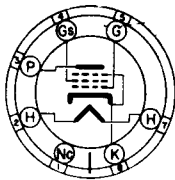
METAL SHELL

6F6

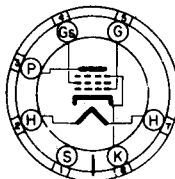


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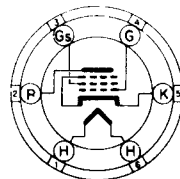
2A5 - 42



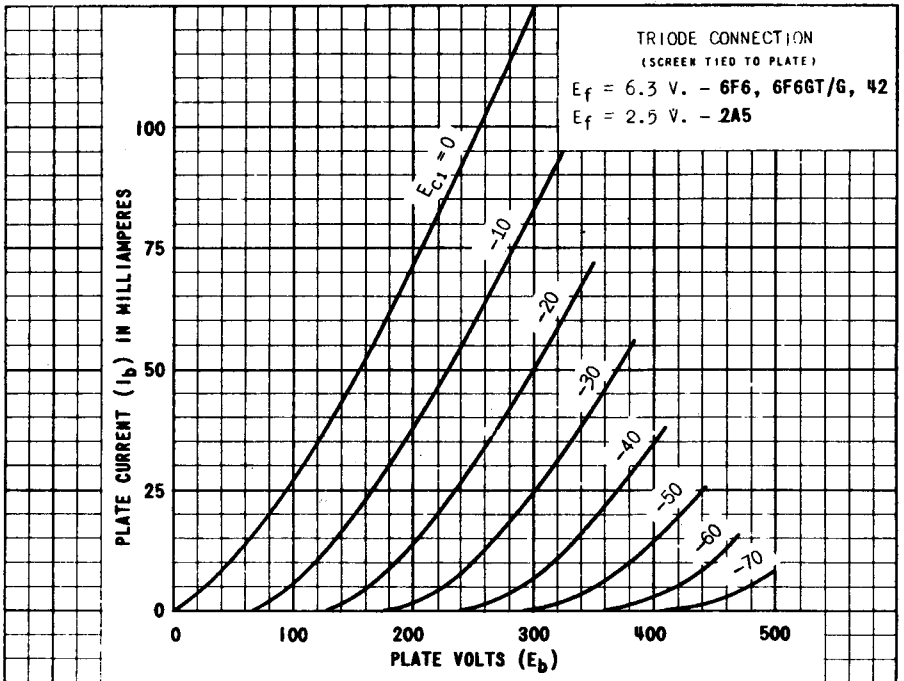
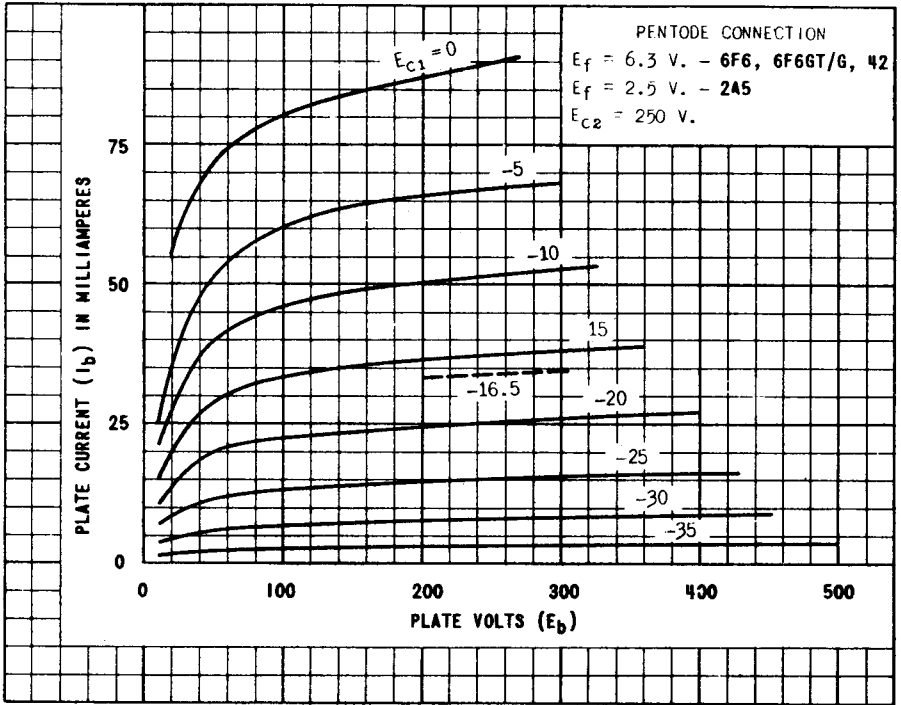
MEDIUM 7 PIN OCTAL BASE



7 PIN OCTAL BASE



MEDIUM 6 PIN BASE



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# 6F6, 6F6GT/G (2A5, 42)

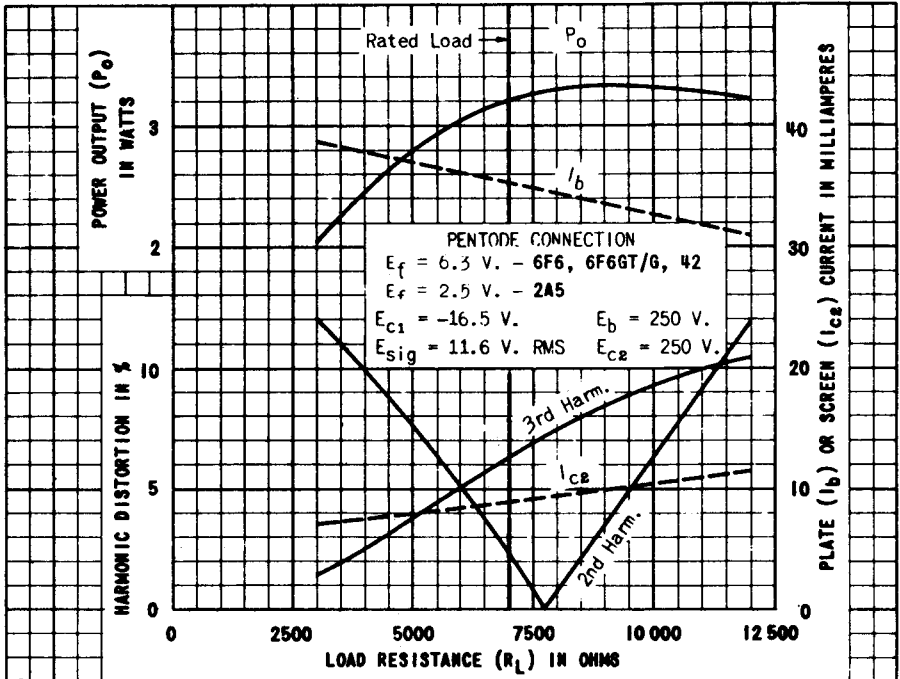
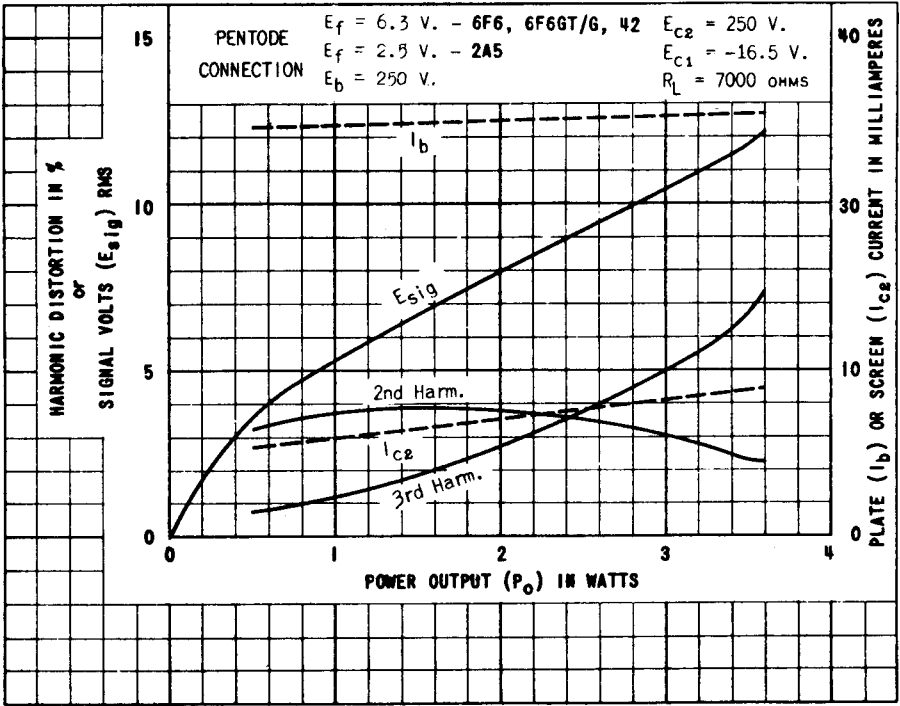


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