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TRIAD METAL SHIELDED RADIO TUBES

SERIES MG

TECHNICAL BULLETIN MG-3

TRIAD MANUFACTURING CO., INC. - PAWTUCKET, R.I. - U.S.A.

The Triad MG tubes employ a new developed glass envelope, for maintaining the vacuum and an external close fitting metal shell for complete shielding and protection of the glass unit. By this method the vast experience accumulated in several decades of lamp and radio tube manufacturing is not upset and consequently the Triad series MG will have the same long and serviceable life that has characterized properly made glass sealed tubes in the past. These facts cannot be overlook so readily, in view of the widespread use and acceptance of the glass tubes. Combining this knowledge with the new principle of metal tube design, a most permanent and useful series of radio tubes has been developed.

Certain highly publicized so-called metal tubes now available, consist of a series of glass to metal seals in addition to several metal to metal welds. By this construction, the overall height of certain tubes is reduced but it is the contention of the Triad Engineers that the series MG described herein offers the same technical advantages, a greater sales appeal, and less inherent risk to the manufacturer adopting these types.

As a further advantage Triad manufactures a complete series of MG tubes for auto-radio circuits as well as AC-DC requirements. Also available are the Triad Ballast Resistor Units.

The rating and basing arrangements of the MG series will be found elsewhere in this bulletin. A brief description of the MG types may be of help in becoming familiar with the new type numbers.

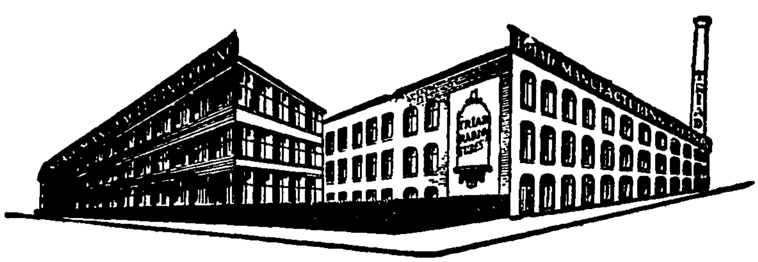
6A8 This tube is essentially the same as the type 6A7, except for the additional pin tied to the external metal shell.

6B6 A duplex diode triode that has electrical characteristics similar to the well known type 75

6C5 The 6C5 is a triode detector-amplifier very similar in characteristics to the familiar 6C6 when the latter is connected as a triode.

6D5 The 6D5 is a power amplifier triode. Its characteristics are quite similar to the type 42 when the latter is connected as a triode.

6F5 This high-mu triode is pratically the same, so far as electrical characteristics are concerned, as the triode section of the familiar type 75. The grid connection is brought out thru the top cap.



6F6 The metal type 6F6 is electrically similar in all respects to the type 42 when employed as a pentode power amplifier.

6H6 This double diode is designed to provide for AVC and diode detection. It is similar in every respect to the double diode section found on multi purpose glass tubes except that both cathodes are brought out separately.

6J7 This hi-mu pentode detector amplifier is similar electrically to the type 77.

6K6 Auto-radio pentode power amplifier having electrical characteristics identical to the type 41.

6K7 The 6K7 is a triple grid variable mu amplifier similar to the well known type 78.

6Q7 The 6Q7 is an improved duplex diode-triode which operates at slightly higher bias than the glass type 75 or 6B6 MG. Contact potential has been reduced resulting in a higher degree of uniformity.

43 MG This type has characteristics identical to the 43 and provides a power output tube to complete the AC-DC line.

5Z4 The 5Z4 is a cathode type, full wave rectifier having low voltage drop for general use. It has approximately half the voltage drop of the corresponding glass type 80. Heater and cathode are tied together internally.

6Z6 This new full wave rectifier has electrical characteristics similar to the type 84/6Z4. Both cathodes, however, are brought out to separate base pins.

25Z5 MG This special type is provided to fill the need of a rectifier for AC-DC sets and is similar electrically to the type 25Z5.

AUTOMOBILE RADIOS Available for auto-radio use is the new 6Z6 MG full wave rectifier similar to the type 84. For power output there is the new 6K6 which is similar to the type 41, and for diode detection and A.V.C. there is the new 6Q7. Several types are available for conversion and i.f. amplification.

A.C.-D.C. RADIO Types 25Z5 MG and 43 MG used in conjunction with the standard line of MG tubes makes a complete compliment for AC-DC receivers.

BALLAST RESISTOR UNITS For those desiring to reduce cost and improve the factor of safety in AC-DC receivers a fully shielded ballast resistor unit is available with provisions for any combination of pilot taps and any overall voltage drop requirements. Complete bulletin and prices available upon request.

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SERIES MG

PHYSICAL CHARACTERISTICS

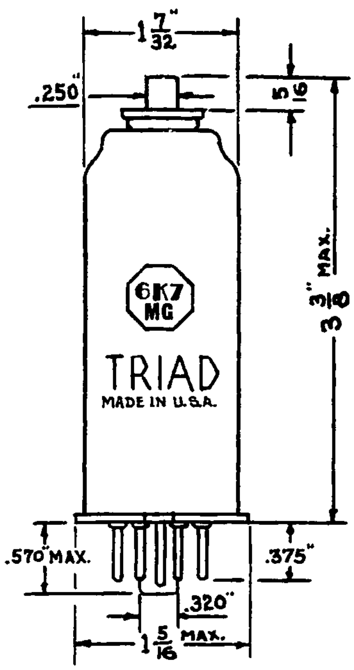


Fig. 1

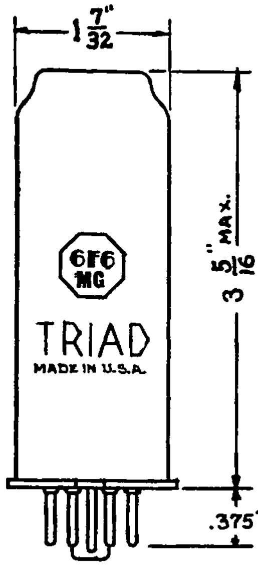


Fig. 2

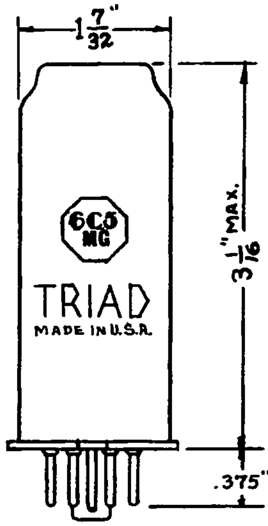


Fig. 3

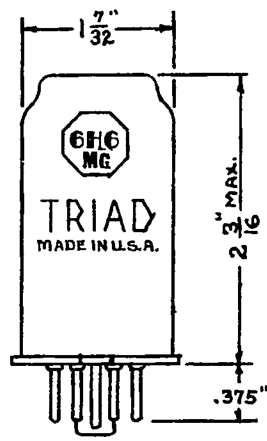
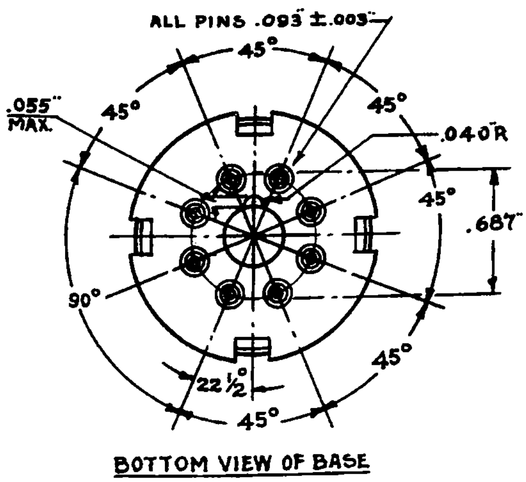


Fig. 4

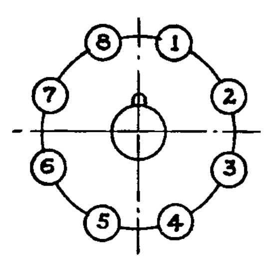
PIN POSITION AND NUMBERS

Type	1	2	3	4	5	6	7	8	Cap
6A8-MG	S	H	P	G_3&G_5	G_1	G_2	H	K	G_4
6B6-MG	S	H	P	D_1	D_2		H	K	G_1
6C5-MG	S	H	P		G_1		H	K	
6D5-MG	S	H	P		G_1		H	K	
6F5-MG	S	H		P			H	K	G_1
6F6-MG	S	H	P	G_2	G_1		H	K	
6H6-MG	S	H	P_2	K_2	P_1		H	K_1	
6J7-MG	S	H	P	G_2	G_3		H	K	G_1
6K6-MG	S	H	P	G_2	G_1		H	K	
6K7-MG	S	H	P	G_2	G_3		H	K	G_1
6Q7-MG	S	H	P	D_1	D_2		H	K	G_1
43-MG	S	H	P	G_2	G_1		H	K	
5Z4-MG	S	H		P_1		P_2		HK	
6Z6-MG	S	H	P_2	K_2	P_1		H	K_1	
25Z5-MG	S	H	P_2	K_2	P_1		H	K_1	



BOTTOM VIEW OF BASE

PIN NUMBER ARRANGEMENT



BOTTOM VIEW OF BASE

TRIAD METAL SHIELDED RADIO TUBES

SERIES - MG

ELECTRICAL CHARACTERISTICS

Amplifier Types																
Type	Use	Cathode		Maximum Voltage Rating				Current Rating			Dynamic Characteristics			Ouput Characteristics		Drawing
		Type	Supply	Fil.	Grid	Plate	Screen Grid	Fil.	Screen (m.a.)	Plate (m.a.)	Mu	Rp	Gm	Load Resistor	U.P.O. Watts	
6A8-MG	Pentagrid Converter	Htr.	A.C. or D.C.	6.3	-3	250*	100	0.3	2.2	3.5		360,000				Fig. 1
6B6-MG	Duplex Diode-Triode	Htr.	A.C. or D.C.	6.3	-2	250		0.3		0.8	100	91,000	1100			Fig. 1
6C5-MG	Detector Amplifier Triode	Htr.	A.C. or D.C.	6.3	-8	250		0.3		8.0	20	10,000	2000			Fig. 3
6D5-MG	Power Amplifier Triode	Htr.	A.C. or D.C.	6.3	-40	275		0.7		31.0	4.7	2,250	2100	7200	1.4	Fig. 2
6F5-MG	Hi-Mu Triode Amplifier	Htr.	A.C. or D.C.	6.3	-2	250		0.3		0.9	100	66,000	1500			Fig. 1
6F6-MG	Power Amplifier Pentode	Htr.	A.C. or D.C.	6.3	-16.5	250	250	0.7	6.5	34.0	220	100,000	2200	7000	3.0	Fig. 2
6H6-MG	Twin Diode	Htr.	A.C. or D.C.	6.3		100⊤		0.3		2.0⊤						Fig. 4
6J7-MG	Triple-Grid Detector Amp.	Htr.	A.C. or D.C.	6.3	-3	250	125	0.3	0.5	2.0	1500+	1,500,000+	1225			Fig. 1
6K6-MG	Power Amplifier Pentode	Htr.	A.C. or D.C.	6.3	-18	250	250	0.4	5.5	32.0	150	68,000	2200	7600	3.4	Fig. 3
6K7-MG	Tri-Grid Super Control Amp.	Htr.	A.C. or D.C.	6.3	-3	250	125	0.3	1.7	7.0	1160	800,000	1450			Fig. 1
6Q7-MG	Duplex Diode-Triode	Htr.	A.C. or D.C.	6.3	-3	250		0.3		1.1	70		1200			Fig. 1
43-MG	Power Amplifier Pentode	Htr.	A.C. or D.C.	25.0	-20	135	135	0.3	7.0	34.0	80	35,000	2300	4000	2.0	Fig. 2

*Anode Grid Voltage - 250 Maximum. Oscillator Grid Resistor 50,000. Anode Grid (#2) Current 4.0 m.a.
⊤A-C Voltage per Plate (R.M.S.). Maximum D.C. Current

Rectifier Types										
Type	Use	Cathode		Maximum Voltage Rating			Current Rating			Drawing
		Type	Supply	Fil.	Volts per Plate	Peak Inverse	Fil.	D.C. Output	Peak Cur.	
5Z4-MG	Full Wave High Vacuum	Htr.	A.C.	5.0	400	1100	2.0	125 m.a.		Fig. 2
6Z6-MG	Full Wave Rectifier	Htr.	A.C. or D.C.	6.3	350	1000	0.5	50 m.a.		Fig. 3
25Z5-MG	Rectifier Doubler	Htr.	A.C. or D.C.	25.0	125		0.3	100 m.a.		Fig. 3