Electronic TUBE

KEN-RAD

6AQ7-GT

Description and Rating

DUPLEX-DIODE TRIODE

GENERAL DESCRIPTION

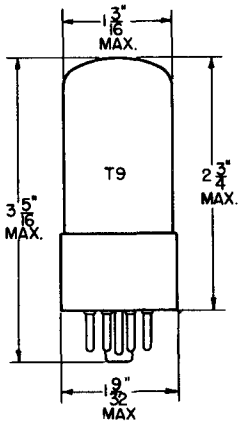
Principal Application: The 6AQ7-GT is a duplex-diode high-mu triode in which separate cathodes are provided for the diode and triode sections. The tube is designed for service as a combined FM detector and audio amplifier in circuits which require the separated cathodes.

Cathodes:	Coated Unipotential
Heater Voltage (A-C or D-C)	6.3 Volts
Heater Current	0.3 Ampere
Envelope:	T-9, Glass
Base:	B8-6, Intermediate Shell Octal 8-Pin
	or B8-46, Short Intermediate Shell Octal 8-Pin
Mounting Position:	Any

Direct Interelectrode Capacitances:

Grid to Triode Plate #	3.0	μμf
Triode Input #	2.8	μμf
Triode Output #	3.2	μμf
Grid to Diode Cathode (Max) #	0.25	μμf
Diode 1 Plate to Diode Cathode *	2.2	μμf
Diode 2 Plate to Diode Cathode *	2.4	μμf
Diode 1 Plate to Diode 2 Plate *	0.5	μμf

PHYSICAL DIMENSIONS

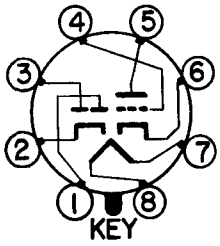


RTMA 9-11 or 9-41

TERMINAL CONNECTIONS

Pin 1 - Diode Number 2 Plate
Pin 2 - Diode Cathode
Pin 3 - Diode Number 1 Plate
Pin 4 - Triode Grid
Pin 5 - Triode Plate
Pin 6 - Triode Cathode
Pin 7 - Heater
Pin 8 - Heater

BASING DIAGRAM



RTMA 8CK
BOTTOM VIEW

MAXIMUM RATINGS

DESIGN CENTER VALUES:

Plate Voltage	250	Volts
Positive D-C Grid Voltage	0	Volts
Plate Dissipation	1.0	Watt
Heater-Cathode Voltage	90	Volts
Diode Current for Continuous Operation (Each Diode)	0.9	Milliampere

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A_1 AMPLIFIER

Plate Voltage	100	250	Volts
Grid Voltage	-1	-2	Volts
Amplification Factor	79	70	
Plate Resistance (Approx)	64000	44000	Ohms
Transconductance	1250	1600	Micromhos
Plate Current	1.1	2.3	Milliamperes

Average Diode Current: (Each Diode)
Measured with 10 Volts D-C Applied . . . . . 4.0 . . . . . Milliamperes

 # With external shield #308 connected to triode cathode

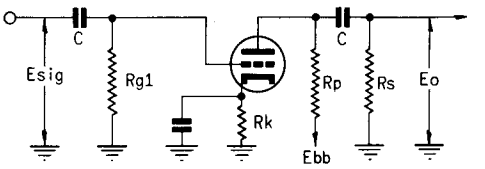
** With external shield #308 connected to diode cathode*

GENERAL ELECTRIC

Supersedes ET-T273 dated 4-46

CLASS A RESISTANCE-COUPLED AMPLIFIER

Rp Meg	Rg1 Meg	Rs Meg	Ebb = 90 Volts Rk	Gain	Eo	Ebb = 180 Volts Rk	Gain	Eo	Ebb = 300 Volts Rk	Gain	Eo
0.10	*	0.10	4300	21	6.0	2200	27	20	1800	30	36
0.10	*	0.24	4700	25	7.5	2400	32	26	2200	34	49
0.24	*	0.24	7100	28	8.5	4300	36	26	3600	38	47
0.24	*	0.51	7800	32	11	4700	40	30	3900	42	56
0.51	*	0.51	11500	33	10	7500	42	28	6200	45	51
0.51	*	1.0	12500	38	12	8200	45	35	6800	48	60
0.24	10	0.24	0	32	5.0	0	40	19	0	43	38
0.24	10	0.51	0	36	7.0	0	45	25	0	49	48
0.51	10	0.51	0	37	6.5	0	47	23	0	50	43
0.51	10	1.0	0	40	9.5	0	49	28	0	53	53

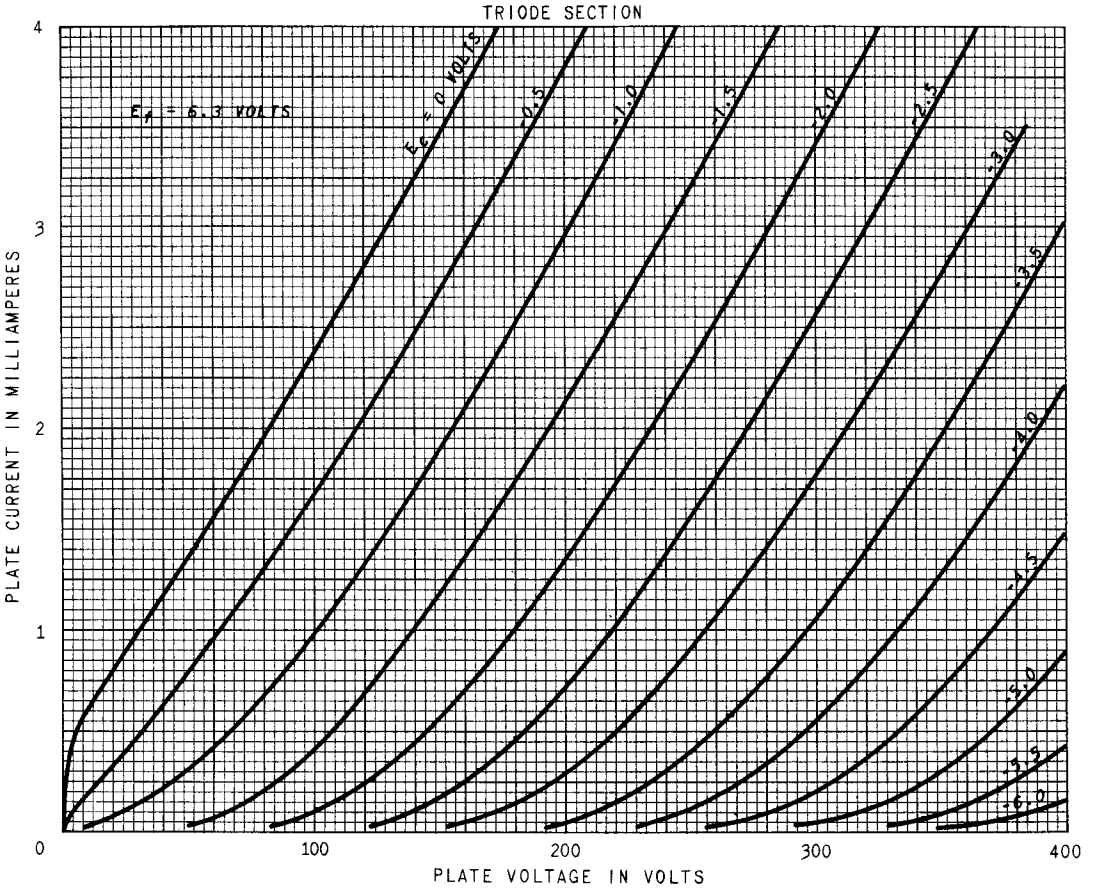


Note: Coupling capacitors (C) should be selected to give desired frequency response. Rk should be adequately by-passed.

Notes: 1. Eo is maximum rms voltage output for five percent (5%) total harmonic distortion. 2. Gain measured at 2.0 volts rms output. 3. For zero-bias data generator impedance is negligible. *Value of Rg1 is non-critical.

AVERAGE PLATE CHARACTERISTICS

TRIODE SECTION



Tube Divisions, Electronics Department

GENERAL ELECTRIC

Schenectady, N. Y.