

19T8

Description and Rating

TRIPLE-DIODE TRIODE

PRELIMINARY DATA

GENERAL DESCRIPTION

Principal Application: The 19T8 is a miniature tube containing three high-perveance diodes and a high-mu triode in the same envelope. One of the diodes has a separate cathode connection.

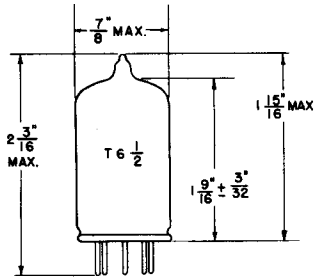
The tube is designed for use as a combined AM and FM detector and audio-frequency amplifier. Except for heater rating, the 19T8 and the 6T8 are identical.

Cathode: Coated Unipotential
 Heater Voltage (A-C or D-C) 18.9 Volts
 Heater Current 0.15 Ampere
 Envelope: T-6½ Glass
 Base: E9-1 Small Glass Button 9-Pin
 Mounting Position: Any

Direct Interelectrode Capacitances:*

Triode Grid to Plate 2.4 μf
 Triode Input 1.5 μf
 Triode Output 1.1 μf
 Grid to Each Diode Plate (Max) 0.03 μf
 Number 1 and Number 3 Diode Input (Each) 3.8 μf
 Number 2 Diode Input 2.2 μf

PHYSICAL DIMENSIONS

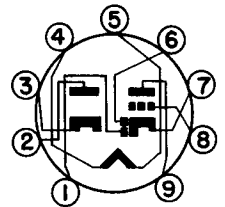


RMA 6-2

TERMINAL CONNECTIONS

- Pin 1 - Number 3 Diode Plate
- Pin 2 - Number 2 Diode Plate
- Pin 3 - Number 2 Diode Cathode and Shield
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Number 1 Diode Plate
- Pin 7 - Triode Cathode and Shield
- Pin 8 - Triode Grid
- Pin 9 - Triode Plate

BASING DIAGRAM



RMA 6E
BOTTOM VIEW

MAXIMUM RATINGS

	Design Center	Absolute	
Plate Voltage	300	330	Volts
Plate Dissipation	1.0	1.1	Watts
Diode Operation Current per Plate	5.0	5.5	Milliamperes
Peak Heater-Cathode Voltage	90	100	Volts

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A AMPLIFIER: TRIODE UNIT

Plate Voltage	100	250	Volts
Grid Bias Voltage	-1	-3.0	Volts
Plate Current	0.8	1.0	Ampere
Amplification Factor	70	70	
Transconductance	1300	1200	Micromhos

DIODE UNIT: EACH UNIT

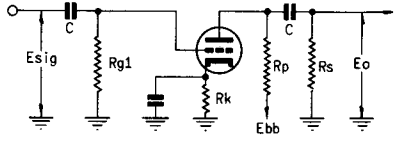
Average Diode Current with 5 Volts D-C Applied 20 Milliamperes

Note: In a ratio-detector circuit for FM, it is recommended that diodes number 2 and number 3 be used.

* Approximate values without external shield.

CLASS A RESISTANCE COUPLED AMPLIFIER:

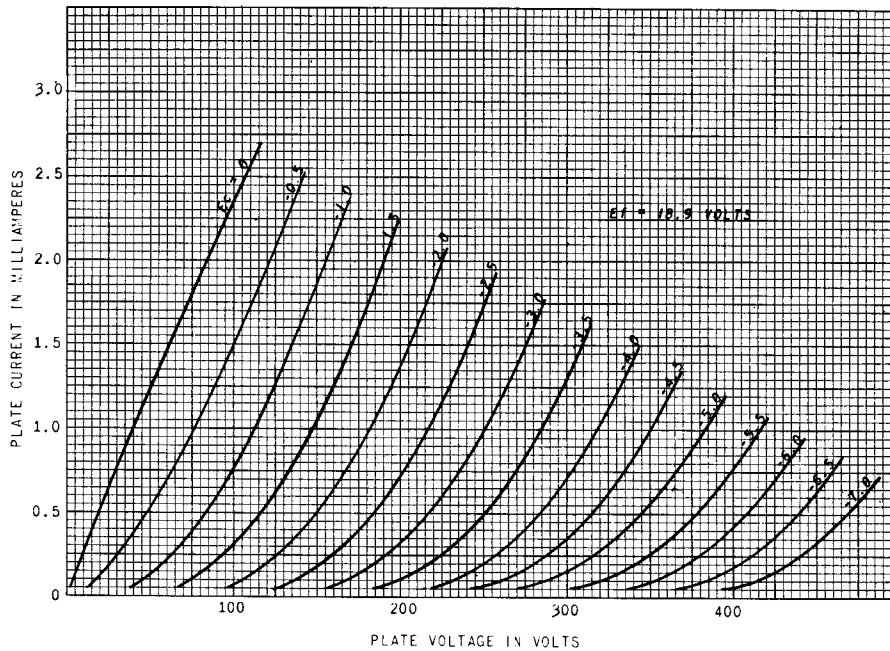
Rp Meg.	Rg1 Meg.	Rs Meg.	Ebb = 90 Volts		Ebb = 180 Volts		Ebb = 300 Volts				
			Rk	Gain Eo	Rk	Gain Eo	Rk	Gain Eo			
0.10	*	0.10	5700	21	7.0	2400	23	18	1800	33	35
0.10	*	0.24	6100	26	9.0	2700	34	23	2000	38	42
0.24	*	0.24	9100	30	10	4300	40	24	3000	44	43
0.24	*	0.51	10000	34	13	4700	45	31	3300	49	52
0.51	*	0.51	15000	37	14	7500	47	28	5600	51	50
0.51	*	1.0	16000	40	16	8200	50	35	6200	55	60
0.24	10	0.24	---	31	5.0	---	44	13	---	48	40
0.24	10	0.51	---	37	7.0	---	49	25	---	52	52
0.51	10	0.51	---	39	7.5	---	51	22	---	54	44
0.51	10	1.0	---	42	10	---	54	28	---	58	56



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



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