

EITEL-McCULLOUGH INC.

San Bruno, Calif.

EIMAC 150T GENERAL PURPOSE TRIODE

The EIMAC 150T is a medium mu, three element vacuum tube designed for high efficiency and output as an oscillator or amplifier at audio and radio frequencies up to 75 megacycles. The 150T may be used, at reduced output, up to 300 megacycles. The grid and plate are cylindrical and made of degassed Tantalum. The 5 volt 10 ampere thoriated Tungsten filament is extremely rugged and is designed for long life. Momentary overloads will not release gas from any of the tube elements and there is no "Getter" inside the envelope to give off gas when heated. The plate lead is brought out the top of the glass envelope and the grid lead comes out the side, which reduces interelectrode capacities and increases the interelectrode insulation. The relatively low plate resistance coupled with the amplification factor of approximately 13, results in high transconductance, which reduces the amount of grid driving power necessary to obtain maximum power output with high plate efficiency. All EIMAC tubes are extensively exhausted during manufacture and the exclusive design and construction ensures the maintainance of the exceptionally high vacuum throughout the life of the tube.

FILAMENT VOLTAGE			5 volts
FILAMENT CURRENT			10 amperes
FILAMENT HEATING POWER			50 watts
RATED PLATE DISSIPATION			150 watts
AMPLIFICATION FACTOR (average)			13
NORMAL MAXIMUM PLATE CURRENT			200 MA
NORMAL MAXIMUM GRID CURRENT			50 MA
PEAK FILAMENT EMISSION			5.2 amperes
PLATE-GRID CAPACITANCE			3.5 uufds
GRID-FILAMENT CAPACITANCE			3.0 uufds
PLATE-FILAMENT CAPACITANCE			.5 uufds
ENVELOPE			Nonex
BASE		Std.	50 watt
OVERALL HEIGHT			10 inches
MAXIMUM DIAMETER			3 3/4 inches
PLATE VOLTAGE	1000	2000	3000
ZERO BIAS PLATE RESISTANCE	2750	1900	1250
ZERO BIAS TRANSCONDUCTANCE	5800	7300	12300
NOMINAL POWER OUTPUT (class C 75% eff.)	150	300	450

OPERATING CONDITIONS

CLASS C RADIO FREQUENCY POWER AMPLIFIER	(C.W. TELEGRAPHY)		
PLATE VOLTAGE	1000	2000	3000
PLATE CURRENT	200	200	200
GRID CURRENT (DC)	25	25	25
GRID BIAS VOLTAGE	-200	-400	-600
POWER OUTPUT (75% eff.)	150	300	450
GRID DRIVING POWER (approximate)	7.5	15	22.5

EIMAC 150T TRIODE
(continued)

CLASS C RADIO FREQUENCY POWER AMPLIFIER		(TELEPHONY)		
PLATE VOLTAGE		1000	2000	3000
PLATE CURRENT		200	200	200
GRID CURRENT (DC)		35	35	35
GRID BIAS VOLTAGE		-220	-440	-660
NORMAL CARRIER OUTPUT (75% eff.)		150	300	450
PEAK POWER OUTPUT (100% modulation)		600	1200	1800
GRID DRIVING POWER (approximate)		12.5	25	37.50

CLASS B AUDIO FREQUENCY POWER AMPLIFIER OR MODULATOR				
PLATE VOLTAGE		1000	2000	3000
GRID BIAS VOLTAGE		-75	-165	-265
STATIC PLATE CURRENT (per tube)		12	12	12
MAX. SIGNAL PLATE CURRENT (per tube)		200	200	200
LOAD RESISTANCE (Plate to plate)		7000	12000	20000
NOMINAL POWER OUTPUT (two tubes)		250	500	750

CLASS B LINEAR RADIO FREQUENCY POWER AMPLIFIER		(TELEPHONY)		
PLATE VOLTAGE		1000	2000	3000
GRID BIAS (Good voltage regulation required)		-79	-170	-270
PLATE CURRENT		200	115	75
NORMAL PLATE EFFICIENCY (unmodulated)		30%	33%	33%
NOMINAL POWER OUTPUT (Carrier)		60	75	75
PEAK POWER OUTPUT (100% modulation)		240	300	300
PLATE LOSS (unmodulated)		140	150	150

CLASS BC GRID BIAS MODULATION		(TELEPHONY)		
PLATE VOLTAGE		1000	2000	3000
PLATE CURRENT		200	115	78
FIXED BIAS (Good voltage regulation required)		-75	-165	-265
CATHODE BIAS VOLTAGE		-212	-250	-415
NORMAL PLATE EFFICIENCY (unmodulated)		30%	33%	36%
NOMINAL CARRIER POWER (unmodulated)		60	75	85
PEAK POWER OUTPUT (100% modulation)		240	300	340
PLATE LOSS (unmodulated)		140	150	150

The operating range of the filament is between 5.0 and 5.2 volts and care should be taken to see that the filament is never operated below 5 volts. The guarantee is invalid unless a suitable filament voltmeter accurately indicates the voltage across the socket terminals at all times.

"COMPARE AND REFLECT"