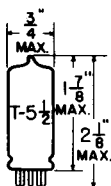


**TUNG-SOL**

**DOUBLE TRIODE**

MINIATURE TYPE

COATED FILAMENT



GLASS BULB

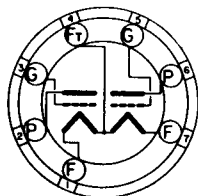
**SERIES FILAMENT**  
 E<sub>f</sub> APPLIED BETWEEN PINS 1 & 7  
 E<sub>g</sub> REFERRED TO PIN 1

2.8 VOLTS  
 110 MA.

**PARALLEL FILAMENT**  
 E<sub>f</sub> APPLIED BETWEEN PIN 4 AND PINS 1 & 7 TIED TOGETHER.  
 E<sub>g</sub> REFERRED TO PIN 4

1.4 VOLTS  
 220 MA.

DC



**BOTTOM VIEW**  
 MINIATURE BUTTON  
 7 PIN BASE

A SHUNTING RESISTOR MUST BE CONNECTED BETWEEN PINS 1 AND 4 FOR SERIES-FILAMENT OPERATION. ITS VALUE SHOULD BE SUCH THAT THE VOLTAGE ACROSS THE SHUNTED SECTION IS EQUAL TO THE VOLTAGE BETWEEN PINS 4 AND 7. AN ADDITIONAL SHUNTING RESISTOR MAY BE NECESSARY BETWEEN PINS 1 AND 7 IF OTHER TUBES USED IN SERIES-FILAMENT ARRANGEMENT CONTRIBUTE TO THE FILAMENT CURRENT OF THE 3A5.

ANY MOUNTING POSITION

THE 3A5 IS INTENDED FOR USE IN HIGH FREQUENCY APPLICATIONS. THE RELATIVELY LARGE FILAMENT EMPLOYED IN THE 3A5 ENABLES IT TO SUPPLY THE HIGH PEAK CURRENTS REQUIRED IN RF POWER APPLICATIONS. IN CLASS C SERVICE, A 3A5 WITH ITS UNITS IN PUSH-PULL WILL DELIVER A POWER OUTPUT OF APPROXIMATELY 2 WATTS AT 40 MEGACYCLES. IT MAY BE USED AT STILL HIGHER FREQUENCIES WITH REDUCED EFFICIENCY. EACH TRIODE MAY BE USED INDEPENDENTLY OF THE OTHER.

**DIRECT INTERELECTRODE CAPACITANCES**

	TRIODE UNIT 1	TRIODE UNIT 2	
GRID TO PLATE: (G TO P)	3.2	3.2	μf
INPUT: (G TO H)	0.9	0.9	μf
OUTPUT: (P TO H)	1.0	1.0	μf
PLATE TO PLATE: (P TO P)	0.32		μf

**RATINGS**

INTERPRETED ACCORDING TO RMA STANDARD MB-210

	AF AMPLIFIER	RF AMPLIFIER	
FILAMENT VOLTAGE	1.4 2.8	1.4 2.8	VOLTS
MAXIMUM PLATE VOLTAGE	135	135	VOLTS
MAXIMUM DC GRID VOLTAGE	---	-30	VOLTS
MAXIMUM PLATE CURRENT	5	---	MA.
MAXIMUM DC PLATE CURRENT (PER UNIT)	---	15	MA.
MAXIMUM DC GRID CURRENT (PER UNIT)	---	2.5	MA.
MAXIMUM PLATE DISSIPATION	0.5	---	WATT
MAXIMUM PLATE DISSIPATION (PER UNIT)	---	1.0	WATT
MAXIMUM PLATE INPUT (PER UNIT)	---	2.0	WATT

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## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

## AF AMPLIFIER

HEATER VOLTAGE	1.4	2.8	VOLTS
HEATER CURRENT	220	110	MA.
PLATE VOLTAGE		90	VOLTS
GRID VOLTAGE		-2.5	VOLTS
PLATE CURRENT		3.7	MA.
PLATE RESISTANCE		8 300	OHMS
TRANSCONDUCTANCE		1 800	UMHOS
AMPLIFICATION FACTOR		15	

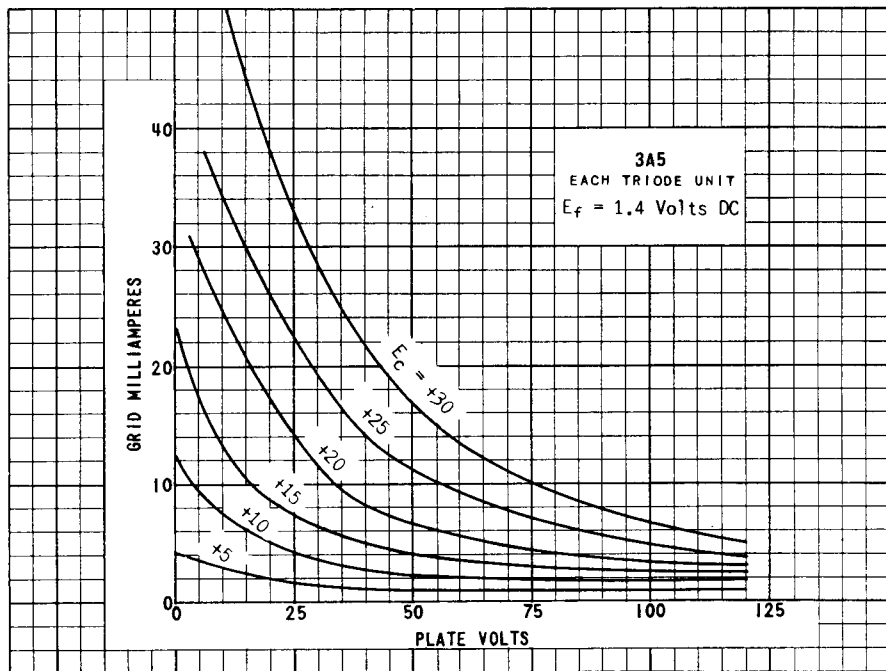
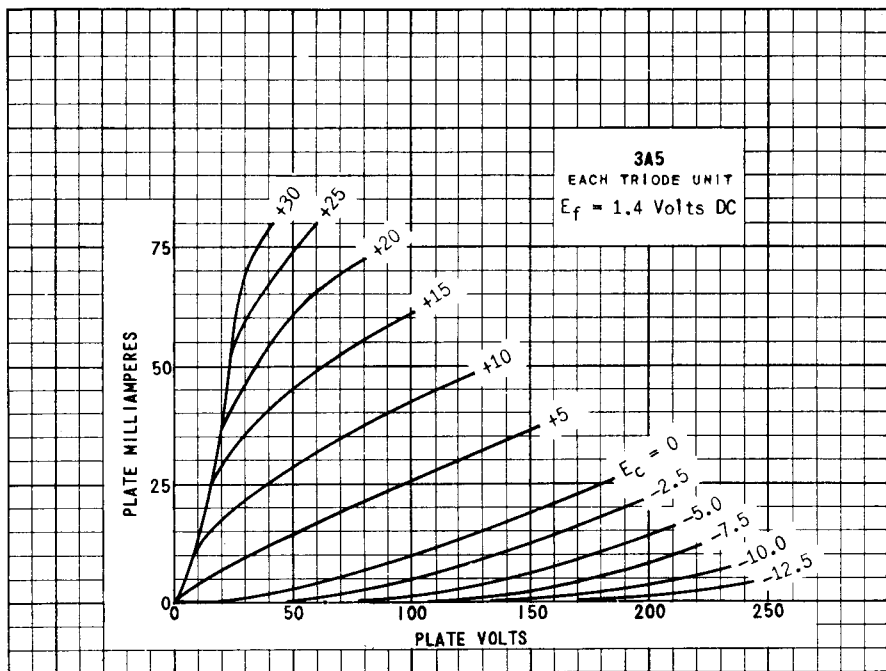
## RF POWER AMPLIFIER AND OSCILLATOR-CLASS "C" TELEGRAPHY

AT 40 MC WITH BOTH UNITS IN PUSH-PULL

(KEY-DOWN CONDITIONS PER TUBE WITHOUT MODULATION)

FILAMENT VOLTAGE	1.4	2.8	VOLTS
FILAMENT CURRENT	220	110	MA.
DC PLATE VOLTAGE		135	VOLTS
DC GRID VOLTAGE:			
FROM A FIXED SUPPLY OF		-20	VOLTS
FROM A GRID RESISTOR OF		4 000	OHMS
FROM A CATHODE RESISTOR OF		570	OHMS
PEAK RF GRID-TO-GRID VOLTAGE		90	VOLTS
DC PLATE CURRENT		30	MA.
DC GRID CURRENT (APPROX.)		5	MA.
DRIVING POWER (APPROX.)		0.2	WATT
POWER OUTPUT (APPROX.)		2	WATTS

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