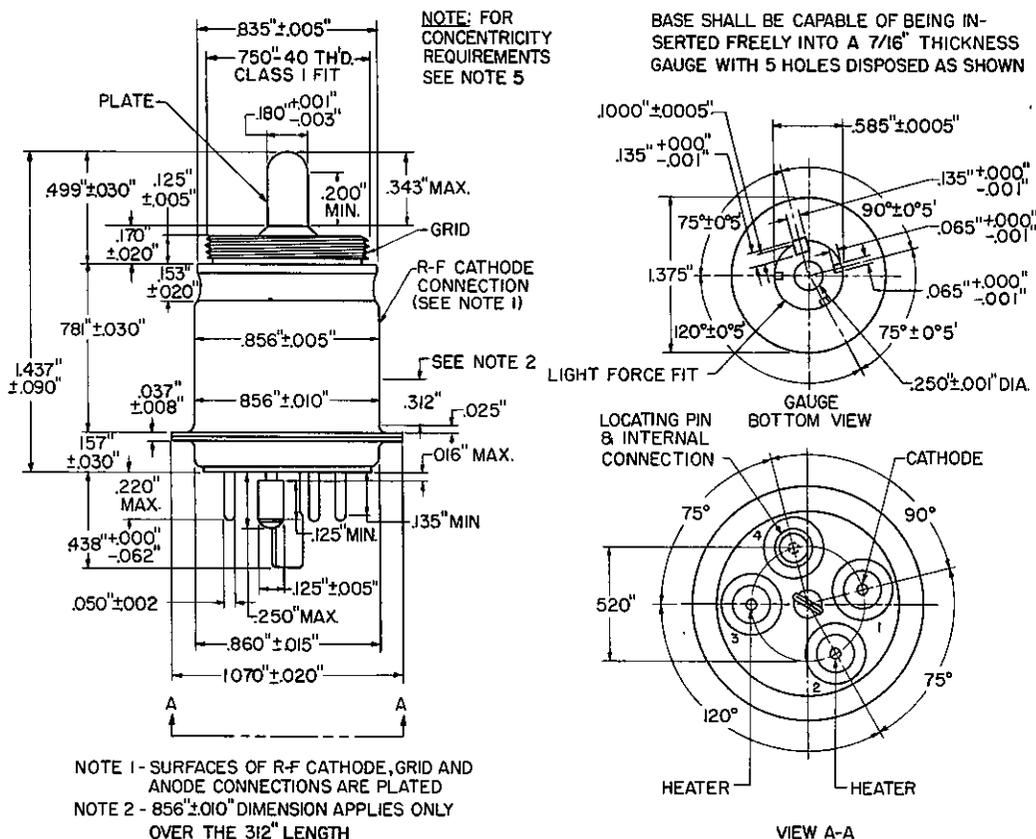


ADVANCE ELECTRON TUBE DATA SHEET  
 WESTERN ELECTRIC 416B\* ELECTRON TUBE



DESCRIPTION

The 6280/416B\* is a planar type triode designed for use as an amplifier or frequency multiplier at frequencies in the order of 4000 megacycles.

CHARACTERISTICS

Heater Voltage . . . . .	6.3 volts
Plate Voltage . . . . .	200 volts
Frequency . . . . .	4000 megacycles
Gain (50 milliwatts output) . . . . .	9 decibels
Bandwidth (3 db down) . . . . .	100 megacycles

GENERAL CHARACTERISTICSELECTRICAL DATA

	<u>Min.</u>	<u>Bogey</u>	<u>Max.</u>
Heater Voltage(3) . . . . .	---	6.3	--- volts
Heater Current . . . . .	---	1.18	--- amperes
Amplification Factor . . . . .	---	200	---
Transconductance ( $I_b = 30 \text{ ma}$ ) . . . . .	---	50000	--- micromhos
<u>Direct Interelectrode Capacitances</u>			
Grid to Plate . . . . .	1.25	1.45	1.60 uuf
Grid to Shell <sup>(4)</sup> . . . . .	8.5	11.2	17.0 uuf
Grid to Shell <sup>(4)</sup> Hot ( $E_f = 6.1 \text{ v}$ ; $E_b = 0 \text{ v}$ ) . . . . .	7.6	8.7	10.3 uuf
Plate to Shell <sup>(4)</sup> . . . . .	---	.019	.050 uuf
Cathode to Shell . . . . .	30	42.5	57 uuf

MECHANICAL DATA

Cathode . . . . .	Unipotential
Mounting Position . . . . .	Any
Weight, Approximate . . . . .	1 ounce
Socket . . . . .	(Equivalent to or) KS14134

MAXIMUM RATINGS, ABSOLUTE VALUES

Plate Voltage . . . . .	270 volts
Grid Voltage . . . . .	{ +1.5 volts
	{ -15.0 volts
Plate Current . . . . .	33 milliamperes
Grid Current . . . . .	15 milliamperes
Plate Dissipation . . . . .	7.5 watts
Plate Seal Temperature . . . . .	150° Centigrade
Grid Seal Temperature . . . . .	100° Centigrade
Heater-Cathode Voltage . . . . .	45 volts

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

Plate Voltage . . . . .	200 volts
Plate Current . . . . .	30 milliamperes
<u>Bias Circuit</u>	
Cathode Bias Resistor . . . . .	260 ohms
Grid Supply Voltage . . . . .	8 volts
Frequency . . . . .	4000 megacycles
Gain (50 Milliwatts Output) . . . . .	9 decibels
Gain (500 Milliwatts Output) . . . . .	5 decibels
Band Width (3 db Down) . . . . .	100 megacycles

Note (3): For optimum life, heater may be supplied from a source of  $10.8 \pm 0.2$  volts through a circuit resistance of 4.16 ohms.

Note (4): Cathode connected to shell through cathode to shell capacitance.

Note (5): With the .750"-40 thread screwed into a guage having a thread with a .750"-40 class 1 fit, the .856", 1.070" and .180" diameters must fit in cylinders concentric with the .750"-40 thread and having diameters of .895" x .720" long; 1.135" x .157" long; and .210" x .375" long. Allowances for these tolerances must be made in any circuit design.