

PL177A

Beam Pentode



The PL177A is a 75 watt radiation-cooled beam pentode incorporating a vane-type suppressor grid, to allow optimum performance with zero suppressor-grid voltage in many applications. Outstanding features of the PL177A are its capabilities for high power output at relatively low plate voltage and low distortion as a linear r-f or audio amplifier.

ELECTRICAL CHARACTERISTICS

Filament - Thoriated Tungsten

Voltage	6.0	volts
Current	3.2	amperes
Grid-Screen Amplification Factor	5	
Interelectrode Capacitances		
Grid - Plate	0.06	μfd
Input	7.5	μfd
Output	4.2	μfd
Transconductance	4500	μmhos

MECHANICAL CHARACTERISTICS

Base	7-pin Septar, EIA E7-2
Maximum Overall Dimensions	
Length	4.38 inches
Diameter	2.38 inches

MAXIMUM RATINGS - CCS (Continuous Commercial Service)

(Frequencies up to 175 Mc.)	Class AB1	Class C	
	R-F or Audio	CW or FM	
DC Plate Voltage	2000	2000	max. volts
DC Screen-Grid Voltage	600	600	max. volts
DC Suppressor-Grid Voltage	100	100	max. volts
DC Plate Current	175	150	max. ma.
Screen-Grid Input	10	10	max. watts
Plate Dissipation	75	75	max. watts

(Revised 06/01/95)



PENTA LABORATORIES

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ELECTRON TUBES FOR INDUSTRY

**PL177A****Beam Pentode****TYPICAL OPERATION - Class C C-W or FM Amplifier
Grounded-Cathode Circuit**

DC Plate Voltage	600	750	1000	1500	2000	volts
DC Screen-Grid Voltage	400	400	400	400	400	volts
DC Suppressor-Grid Voltage	0	0	0	0	0	volts
DC Control-Grid Voltage	-90	-90	-105	-115	-125	volts
DC Plate Current	150	150	150	150	150	ma.
DC Screen-Grid Current	18	17	16	14	12	ma.
DC Control-Grid Current	6	6	5	5	5	ma.
Peak R-F Grid Voltage	130	125	140	155	165	volts
Driving Power	0.75	0.75	0.70	0.75	0.80	watts
Screen-Grid Power Input	7.2	6.8	6.8	6.4	4.8	watts
Plate Power Input	90	112	150	225	300	watts
Plate Dissipation	30	38	40	45	50	watts
Useful Power Input	55	66	100	160	220	watts

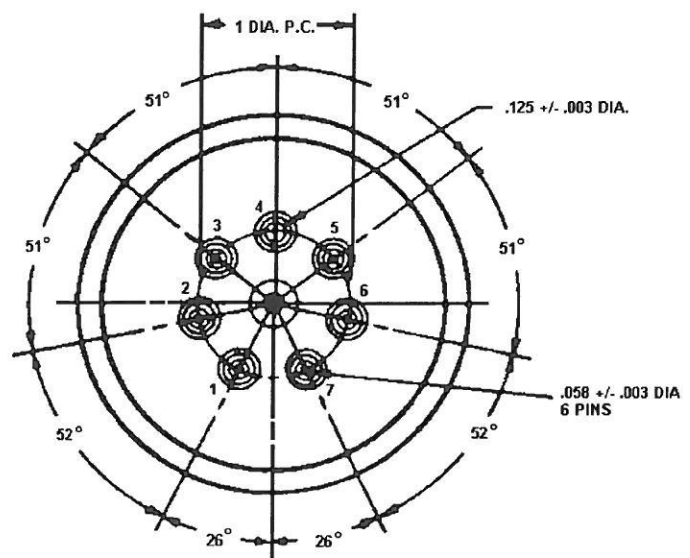
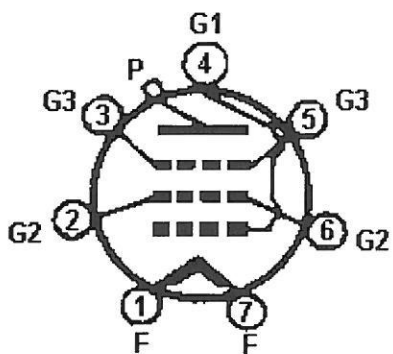
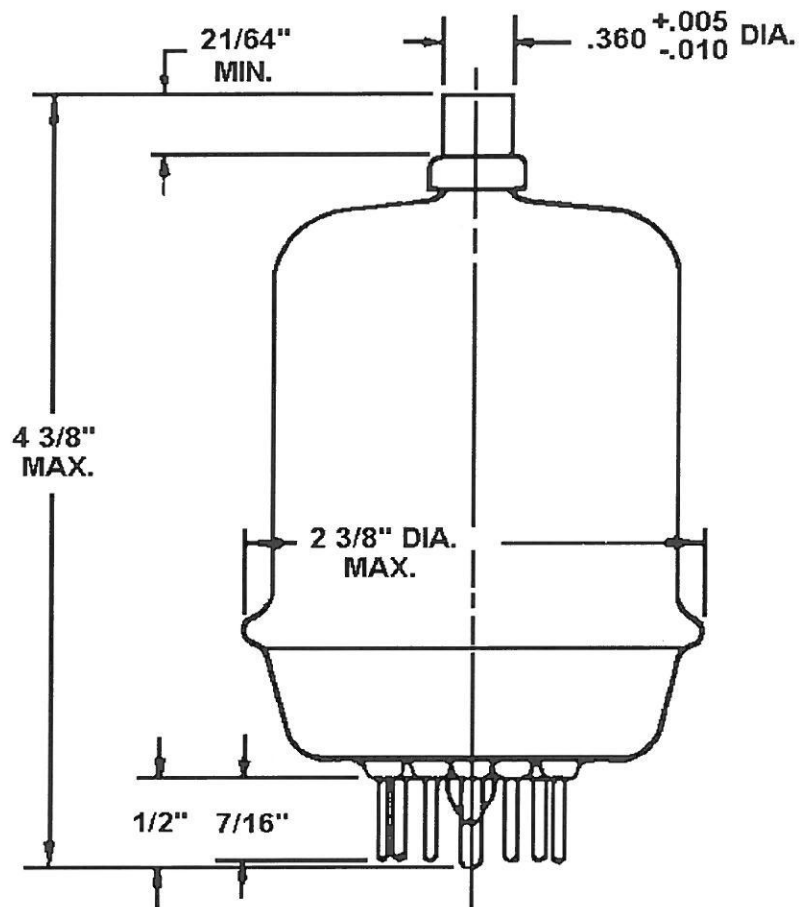
**TYPICAL OPERATION - Class AB1 Linear R-F Amplifier
Single-Sideband, Suppressed Carrier
Grounded-Cathode Circuit**

DC Plate Voltage	100	1500	2000	volts
DC Screen-Grid Voltage	600	600	600	volts
DC Suppressor-Grid Voltage	0	0	0	volts
DC Control-Grid Voltage	-98	-110	-115	volts
Zero-Signal DC Plate Current	40	30	25	ma.
Zero-Signal DC Screen Current	0	0	0	ma.
Maximum-Signal DC Plate Current	175	175	175	ma.
Maximum-Signal DC Screen Current	10	8	7	ma.
Maximum-Signal Peak R-F Grid Voltage	96	108	112	volts
Maximum-Signal Plate Power Input	175	262	350	watts
Maximum-Signal Plate Dissipation	70	110	125	watts
Maximum-Signal Useful Power Output	96	140	210	watts



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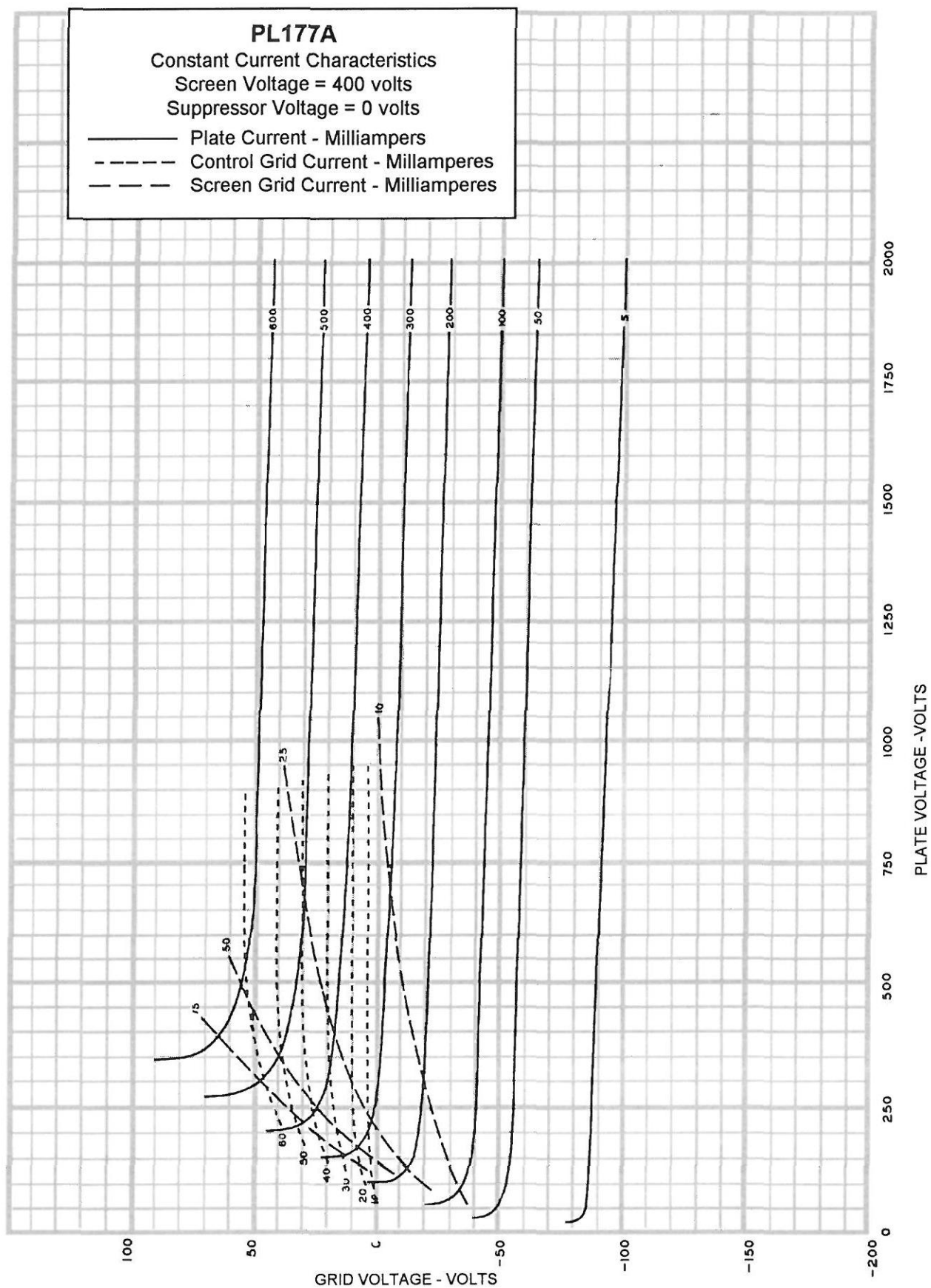
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