

LINEAR BEAM-POWER PENTODE TYPE WL-7371

The WL-7371 is a beam-power pentode designed for service in the linear amplifier stages of Single-Sideband-Suppressed-Carrier transmitters. The radiation cooled anode can dissipate 75 watts. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 175 megacycles.

The WL-7371 incorporates a vane-type suppressor grid which permits high-efficiency linear-radio-frequency-amplifier performance with zero suppressor-grid voltage. Its high-perveance design and high power sensitivity enable the WL-7371 to deliver high power output with low power-supply voltage and driving power requirements.

ELECTRICAL:

Cathode	Thoriated Tungsten Filament			
Filament:	Min.	Bogey	Max.	
Voltage	--	6.3	--	Volts
Current	3.0	3.2	3.6	Amperes
Grid 1 to Grid 2 Amplification Factor	5			
Direct Interelectrode Capacitances:	Min.	Bogey	Max.	
Grid 1 to Plate	--	0.06	0.1	μmf
Input	5.4	7.5	7.6	μmf
Output	3.5	4.2	4.9	μmf
Transconductance:				
Plate Volts = 500, Grid 2 Volts = 400,				
Plate Milliampères = 150			4500	μmhos

MECHANICAL:

Mounting Position	Vertical
Cooling:	
Below 160 Mc.	Unrestricted Convection
Above 160 Mc.	15 CFM Air Flow on Anode Seal
Maximum Bulb Temperature	180°C
Base	7-Pin Septor (JEDEC E7-2)
Top Cap.	Skirted Small
Net Weight	3.6 Ounces
Shipping Weight	3 Pounds

MAXIMUM RATINGS

Continuous Commercial Service

	Class AB ₁	Class C	
DC plate Voltage	2000	2000	max. Volts
DC Grid 2 Voltage	600	600	max. Volts
DC Grid 3 Voltage (Suppressor)	100	100	max. Volts
DC Plate Current	175	175	max. Ma.
Grid 2 Power Input	10	10	max. Watts
Plate Dissipation	75	75	max. Watts

CLASS AB₁ LINEAR AMPLIFIER

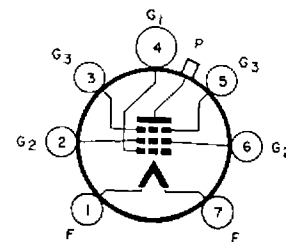
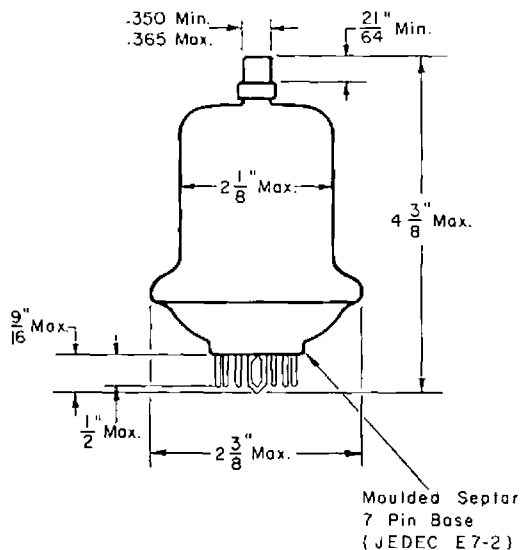
TYPICAL OPERATING CHARACTERISTICS

Single-Sideband-Suppressed-Carrier (Intermittent Modulation)*

DC Plate Voltage	1000	1500	2000	Volts
DC Grid 3 Voltage (Suppressor)	0	0	0	Volts
DC Grid 2 Voltage	600	600	600	Volts
DC Grid 1 Voltage (Control)	-100	-110	-115	Volts
Plate Current:				
Zero Signal	38	30	25	Ma.
Maximum Signal	175	175	175	Ma.
Grid 2 Current: (Screen)				
Zero Signal	0	0	0	Ma.
Maximum Signal	10	8	7	Ma.
Peak RF Grid Voltage	100	110	115	Volts
Maximum Signal Plate Power Input	175	260	350	Watts
Maximum Signal Plate Dissipation	70	110*	125*	Watts
Maximum Signal Power Output to Load	96	140	210	Watts

* Base fits Johnson No.122-101 or 122-247 or National No.HX-29 socket.

* During normal voice modulation, average plate dissipation will not exceed 75 watts.



CLASS C AMPLIFIER CW, or FM

TYPICAL OPERATING CHARACTERISTICS

For Frequencies up to 175 Mc.

DC Plate Voltage	1000	1000	1500	1500	2000	2000	Volts
DC Grid 3 Voltage (Suppressor)	0	+50	0	+50	0	+50	Volts
DC Grid 2 Voltage	400	400	400	400	600	400	Volts
DC Grid 1 Voltage (Control)	-140	-150	-160	-170	-200	-200	Volts
DC Plate Current	127	166	140	146	144	140	Ma.
DC Grid 2 Current	19	10	18	8	9	6	Ma.
DC Grid 1 Current (Control)	5	5	3	3	2.5	2.5	Ma.
Peak RF Grid 1 Voltage	190	215	218	220	238	250	Volts
Driving Power	1.2	1.2	1.0	1.0	0.5	0.5	Watts
Plate Power Input	127	166	210	219	288	280	Watts
Grid 2 Power Input	7.5	4	7.2	3.2	5.4	2.4	Watts
Plate Dissipation	47	52	60	58	69	61	Watts
Power Output	80	114	150	161	219	219	Watts

FREQUENCY OPERATING CURVE

