



RF AMPLIFIER PENTODE

6028

408 A

6028/408A is particularly suitable for use as RF amplifier and broadband amplifier.

COLD CAPACITANCES (external shield connected to cathode)

	MIN	AVE	MAX	
Grid No 1 to Plate			.02	$\mu\mu\text{F}$
Input	3.4	4.0	4.6	$\mu\mu\text{F}$
Output	2.4	2.8	3.2	$\mu\mu\text{F}$

ABSOLUTE MAXIMUM RATINGS

Plate Voltage	200	volts
Grid No 2 Voltage	155	volts
Grid No 1 Voltage, positive value	+ 5	volts
Grid No 1 Voltage, negative value	— 50	volts
Cathode Current	20	ma
Plate Dissipation	1.85	watts
Grid No 2 Dissipation (see Section A)	.55	watt
Heater — Cathode Voltage	130	volts
Bulb Temperature, at hottest point	150	°C
Grid No 1 Circuit Resistance		
with fixed bias	1.0	Mohm
with cathode bias	2.0	Mohms

MECHANICAL DATA

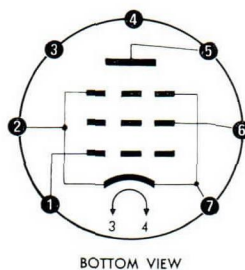
Base: Small Button Miniature 7-pin,
RETMA E7-1

Bulb: EIA T 5½

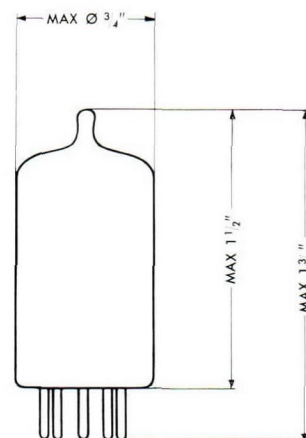
Mounting Position: Any

PIN NO. CONNECTED TO

1. Grid No 1
2. Cathode, Grid No 3,
Int. Shield
3. Heater
4. Heater
5. Plate
6. Grid No 2
7. Cathode, Grid No 3,
Int. Shield



BOTTOM VIEW



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TYPICAL OPERATION, CLASS A₁

Heater Voltage	20.0	20.0	volts
Heater Current	.05	.05	amp
Plate Supply Voltage	120	120	volts
Grid No 2 Supply Voltage	120	120	volts
Cathode Bias Resistor	200	130	ohms
Peak AF Grid No 1 Voltage	2.0	1.5	volts
Zero Signal Plate Current	7.5	9.4	ma
Max. Signal Plate Current	7.7	9.2	ma
Zero Signal Grid No 2 Current	1.9	2.4	ma
Max. Signal Grid No 2 Current	2.7	3.2	ma
Transconductance	5000	5600	μ mhos
Plate Resistance	.3	.25	Mohm
Load Resistance	15,000	15,000	ohms
Power Output	.325	.265	watt
Total Harmonic Distortion	12	5.5	%
Amplification Factor Grid No 2 to 1	24	24	
Grid No 1 Voltage for Plate Current = 10 μ a	— 6.5	— 6.5	volts
Equivalent Noise Resistance	1600	1600	ohms
Transit Time Loading at 100 Mc	40	40	μ mhos
Input Conductance at 100 Mc	125	125	μ mhos

OPERATION RANGE VALUES

Heater Voltage		20.0		volts
Plate Supply Voltage		120		volts
Grid No 2 Supply Voltage		120		volts
Cathode Bias Resistor		200		ohms
	MIN	AVE	MAX	
Heater Current	45	50	55	ma
Plate Current	5	7.5	9	ma
Grid No 2 Current	1.5	1.9	3	ma
Transconductance	3900	5000	6000	μ mhos
Transconductance, End of Life Point	3400			μ mhos
I_{hk} at $E_{hk} = \pm 100$ volts			20	μ a
Grid No 1 Current			— .1	μ a
Cutoff Plate Current at $E_{c1} = -10$ volts			200	μ a
Vibration Output		10		mv
Measured at 2.5 g and 25 cps. $E_f = 20.0$ v, $E_{bb} = 120$ v, $E_{c2} = 120$ v, $R_k = 200$ ohms, $C_k = 2000$ μ F, $r_p = 10,000$ ohms.				

AVERAGE CHARACTERISTICS

