TH 328 TRIODE

The TH 328 is a forced air cooled, ceramic metal, high gain triode of planar structure. It is specially designed for highly linear amplifier operating up to 1000 MHz without grid current in T.V. translators handling both sound and vision signals in the same channel with a crossmodulation level better than 52 dB.

The anode can dissipate 750 W.

GENERAL CHARACTERISTICS

Electrical

Type of cathode	oxide coated	
Heating	indirect	
Heater voltage (1)	5.5 ± 2 %	V
Heater current, approximate	5.4	A
Minimum preheating time	3	mn
Interelectrode capacitances (2) :		
- grid-anode	7.7 to 8.7	pF
- grid-cathode (cold)	18 to 20	pF
- cathode-anode (cold) max.	0.07	pF
Amplification factor, approximate	180	
Transconductance (I_a = 400 mA)	85	mA/V

Mechanical

Mounting position	any	
Anode cooling	forced air	
Minimum airflow	see curves page 3	
Corresponding air pressure drop	see curves page 3	
Maximum inlet air temperature	45	°C
Maximum outlet air temperature	100	°C
Maximum temperature of electrode terminals (3)	250	°C
Net weight, approximate	950	g
Dimensions	see drawing	

OPERATING CONDITIONS

Maximum ratings

Anode D.C. voltage	2. 2	kV
Grid D.C. voltage	−100	V
Peak cathode current	2. 5	A
Anode D.C. current	0. 6	A
Anode dissipation power	750	W
Frequency	1 000	MHz

CLASS A - LINEAR AMPLIFIER FOR TELEVISION TRANSLATOR
HANDLING BOTH SOUND AND VISION SIGNALS
C.C.I.R. STANDARD

Typical operating

Operating frequency	780	MHz
Anode D.C. voltage	1. 8	kV
Anode D.C. current	0. 4	A
Gain	20	dB
Peak video power	100	W
Crossmodulation level (3 tones test)	> 52	dB*

* *Under Video level.*

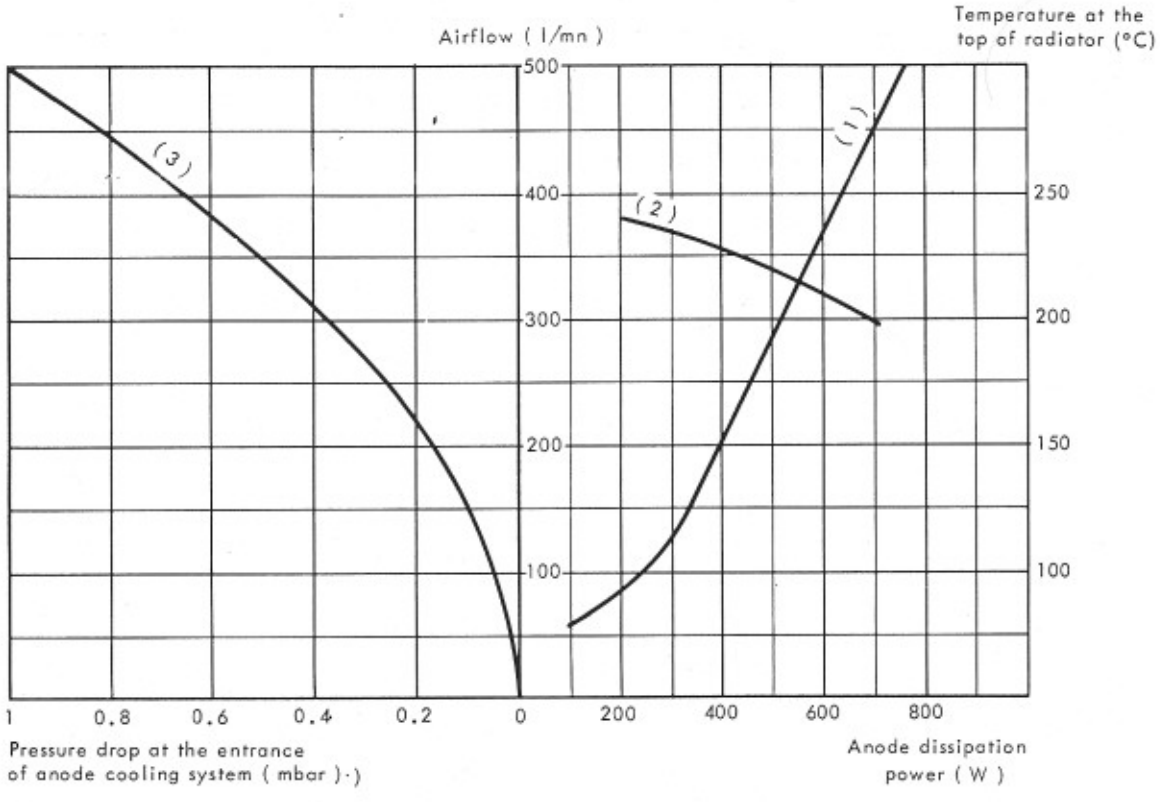
NOTES

1 - In high frequency operation, the cathode is subjected to considerable back bombardment which raises its temperature. After the circuit has been adjusted for proper tube operation, the heater voltage must be reduced to prevent overheating of the cathode with resulting short life. Please ask for information for any special application.

2 - Measurements are made in appropriate mounting with minimum parasitic capacitances.

3 - For maximum tube life, this temperature must not exceed 200 °C. The cooling airflow must be established before application of any electrode voltage.

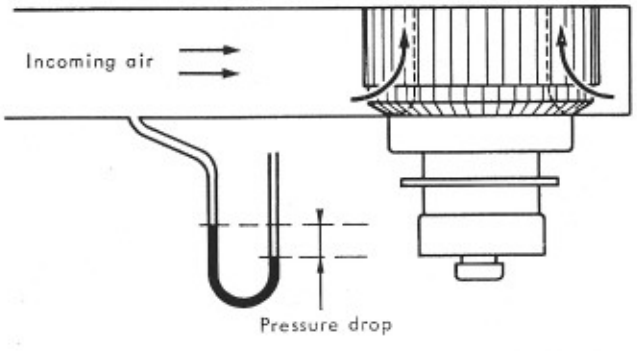
ANODE COOLING CHARACTERISTICS



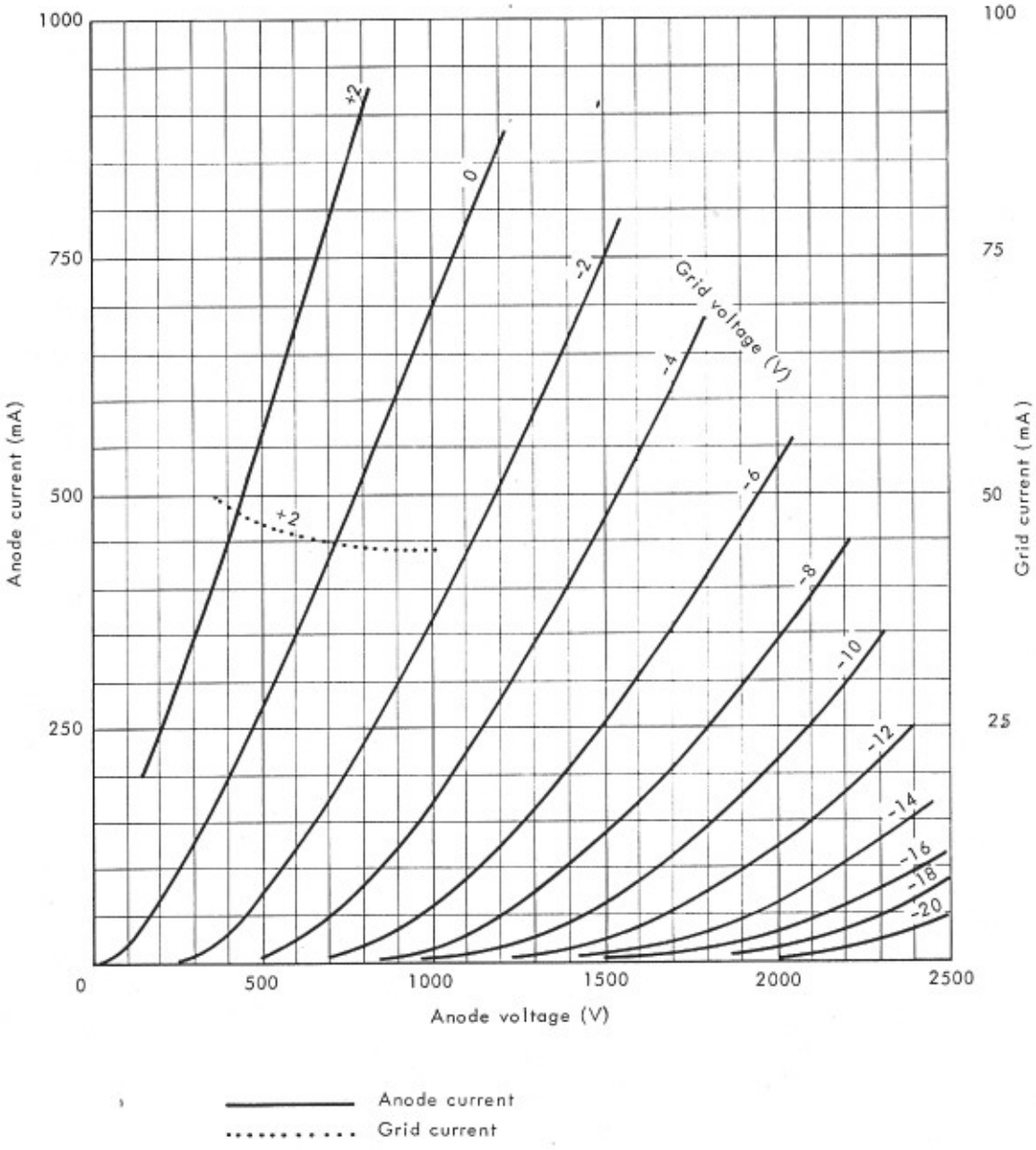
(1) Airflow versus anode dissipation power

(2) Temperature measured at the top of the radiator versus anode dissipation

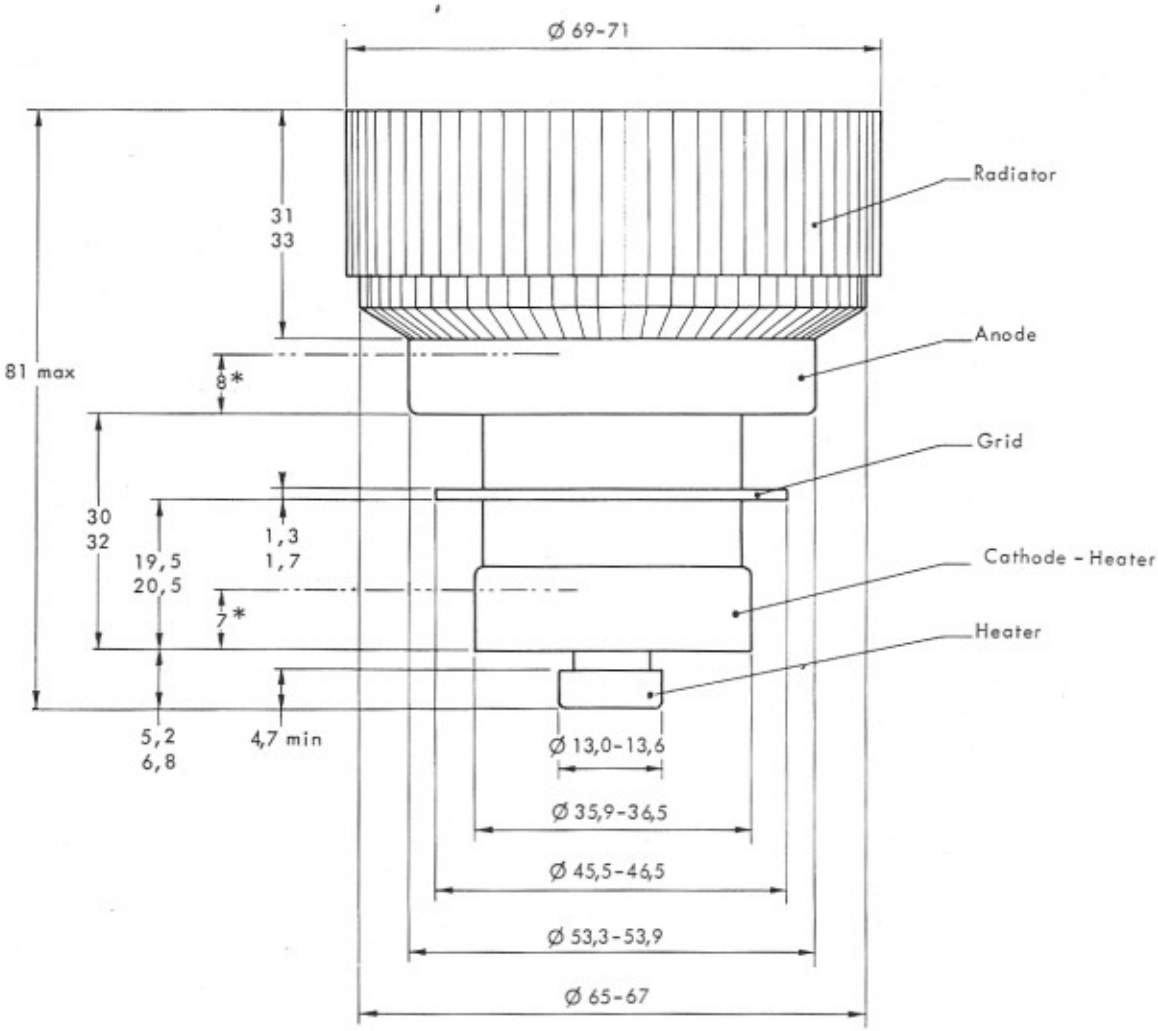
(3) Pressure drop at the entrance of anode cooling system versus airflow; the temperature of incoming air at the entrance is 25°C and the air pressure is 1 bar.



CURRENT CHARACTERISTICS



OUTLINE DRAWING



* cylindrical zone for connection

Dimensions in mm.