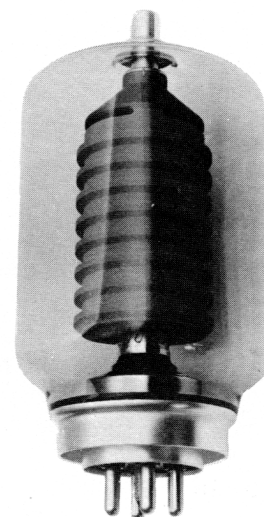


TH 4T4100 TETRODE

The TH 4T 4100 is a tetrode cooled by natural or forced air used as an oscillator, AF or RF amplifier operating up to 30 MHz at full load.

Its high thermal inertia anode can dissipate up to 2 kW.



GENERAL CHARACTERISTICS

Electrical

Type of cathode	thoriated tungsten	
Heating	direct	
Filament voltage	12.6 ± 5 %	V
Filament current, approx.	35	A
Interelectrode capacitances, approx. :		
- input	60	pF
- output	14	pF
- control grid-anode	0.6	pF
Amplification factor g1 - g2, avg.	8	
Transconductance (Ia = 800 mA)	16	mA/V

Mechanical

Base	special	
Operating position	vertical, anode connector up or down	
Anode cooling	radiation cooled	
Glass bulb maximum temperature	250	°C
Electrode terminals maximum temperature	175	°C
Glass bulb cooling depending on average anode dissipation :		
- below 1000 W	natural convection (1)	
- above 1000 W	forced air : 4 m ³ /mn	
Net weight	2.2	kg
Dimensions	see drawing	

- (1) Provision should be made so as to permit a free circulation of the air by natural draught around the bulb which must be very clean.



Accessories

Socket	TH 16035 B
Anode connector (2)	TH 13309

OPERATING CONDITIONS

R.F. POWER AMPLIFIER - TELEGRAPHY CLASS C

Maximum ratings

DC anode voltage	6.0	kV
DC grid g2 voltage	1.2	kV
DC grid g1 voltage	- 500	V
Peak cathode current	13	A
DC anode current	1.5	A
Power input	7.0	kW
Anode dissipation	2.0	kW
Grid g2 dissipation	300	W
Grid g1 dissipation	100	W
Frequency at full load	30	MHz

Typical operations

DC anode voltage	4	5	5	6	kV
DC grid g2 voltage	600	600	1000	1000	V
DC grid g1 voltage	- 150	- 200	- 250	- 250	V
Grid g1 peak RF voltage	320	370	380	380	V
DC anode current	1.1	1.1	1.1	1.16	A
DC grid g2 current, approx.	130	120	100	100	mA
DC grid g1 current, approx.	70	70	30	30	mA
Power input	4.4	5.5	5.5	7	kW
Anode dissipation	1.4	1.5	1.5	2	kW
Power output, approx. (3)	3	4	4	5	kW

(2) The anode connection must not be stretched.

(3) Without taking circuit losses into account.



OPERATING CONDITIONS

A.F. POWER AMPLIFIER - CLASS AB

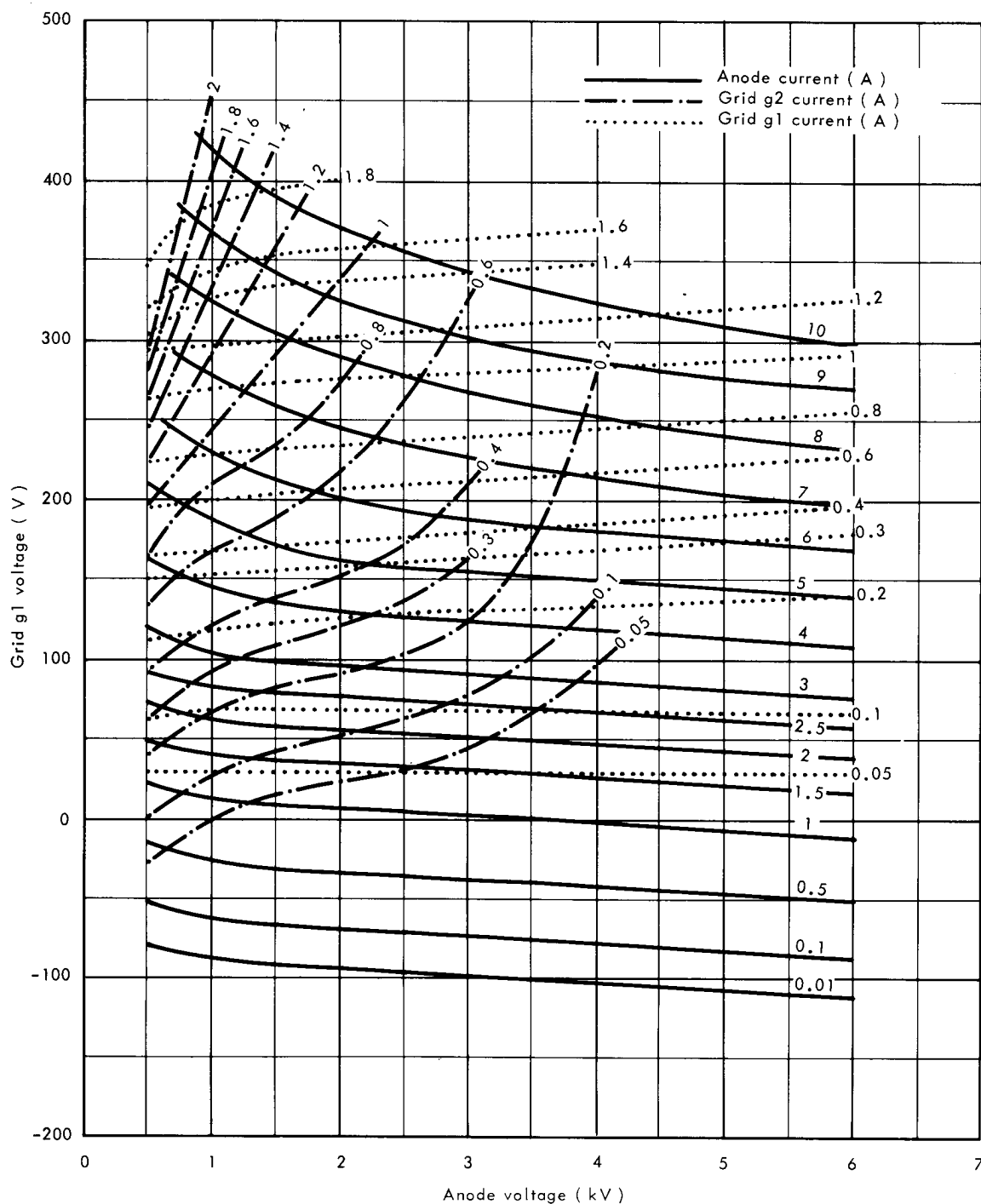
Maximum ratings (per tube)

DC anode voltage	.....	6.0	kV
DC grid g2 voltage	.....	1.2	kV
DC anode current	.....	1.5	A
Power input	.....	5.0	kW
Anode dissipation	.....	2.0	kW
Grid g2 dissipation	.....	300	W
Grid g1 dissipation	.....	100	W

Typical operations (for two tubes)

DC anode voltage	.....	5	6	kV
DC grid g2 voltage	.....	1000	1000	V
DC grid g1 voltage	.....	- 130	- 140	V
Grid to grid peak AF voltage	.....	340	380	V
DC anode current	.....	1.5	1.66	A
DC grid g2 current, approx.	.....	70	90	mA
DC grid g1 current, approx.	.....	20	30	mA
Power input	.....	7.5	10	kW
Anode dissipation (per tube)	.....	1.3	1.5	kW
Power output, approx. (4)	.....	5	7	kW
Plate to plate load resistance	.....	6500	7200	Ω

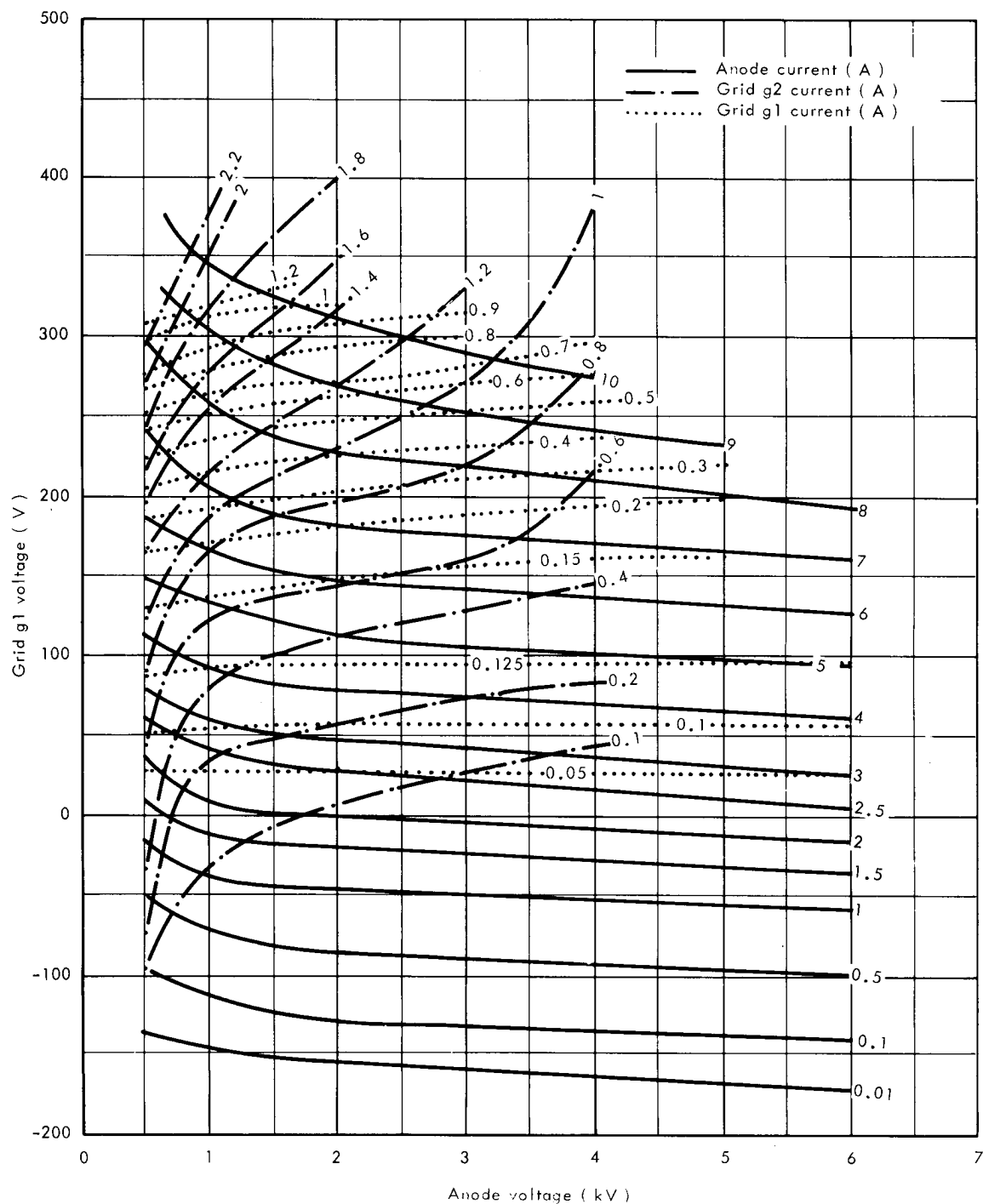
(4) Without taking circuit losses into account.

**THOMSON-CSF**
GROUPEMENT TUBES ELECTRONIQUES**CONSTANT CURRENT CHARACTERISTICS** $V_{g2} = 600 \text{ V}$ 



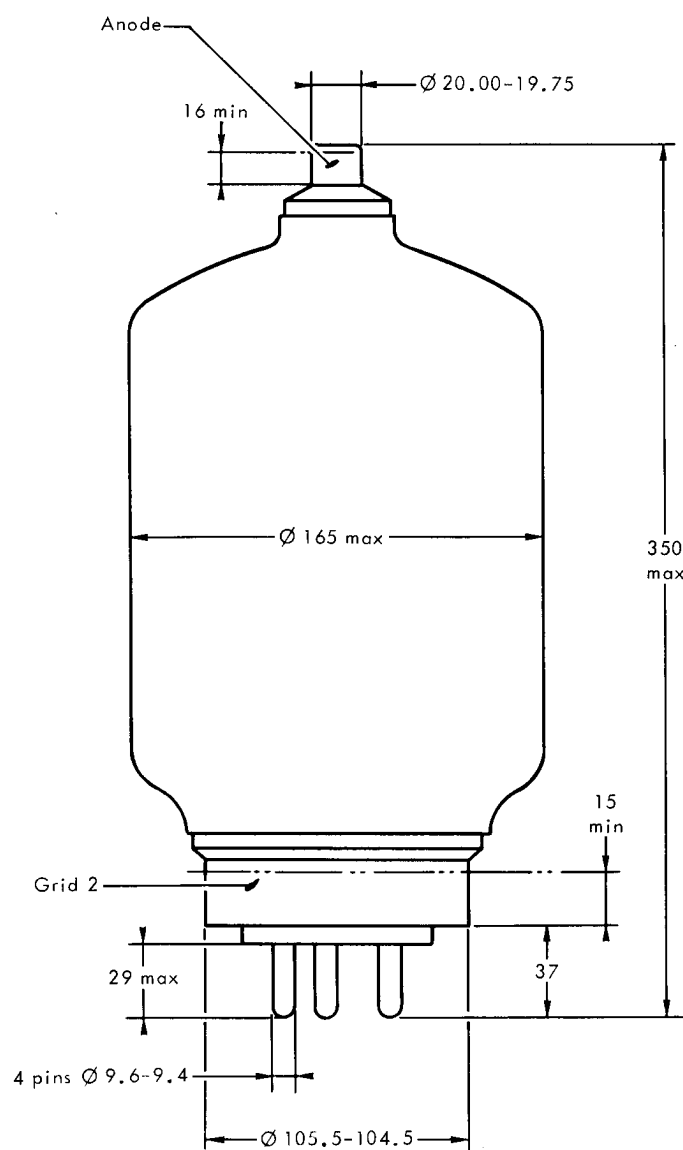
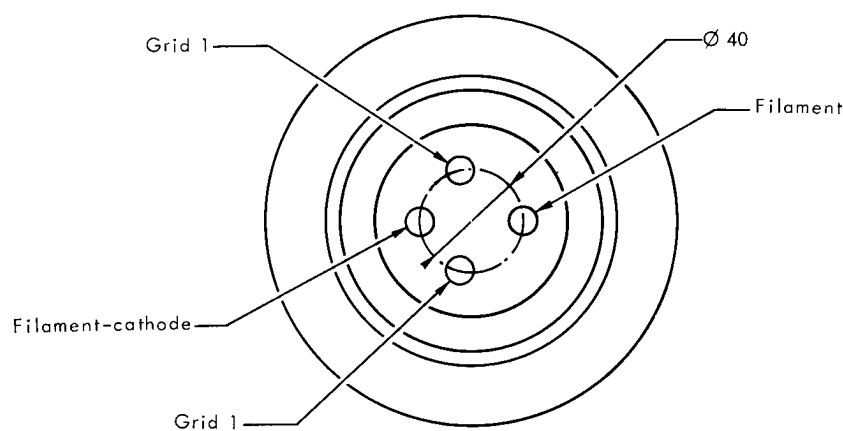
CONSTANT CURRENT CHARACTERISTICS

$V_{g2} = 1000 \text{ V}$





OUTLINE DRAWING



Dimensions in mm.

