

**10.5 kW, common amplification
6 kW DTV - 4 kW DVB**

- Excellent linearity
- High stability due to Pyrobloc® grids
- Anode dissipation up to 25 kW, thanks to Hypervapotron™ cooling





TH 582

The TH 582 is a coaxial ceramic-metal tetrode, designed for analog and digital transmissions in RF amplifiers operating at frequencies up to 1,000 MHz.

Featuring excellent linearity, this high-gain tetrode is the perfect solution for digital modulation applications. The TH 18582 cavity is custom-designed to ensure that the TH 582 tetrode offers top performance in any transmitter.

Over 15 years of operating experience, encompassing several hundred sockets installed by various manufacturers worldwide, have proven the long-life durability of these tetrodes.

This product is designed, developed and manufactured at an ISO 9001 registered production site.

General characteristics

Heater supply (1)	4.2 V / 146	A
Amplification factor	8	
Transconductance ($I_a = 2$ A, $V_{g_2} = 300$ V)	80	mA/V
Dimensions:		
• height	166	mm
• diameter	128	mm
• weight	4.1	kg approx.
TH 18582 cavity:		
• dimensions	1 092 x 322 x 285	mm
• weight	70	kg approx.

Cooling

Anode cooling	hypervapotron
Screen-grid terminal cooling	water
Electrode terminal and ceramic seal cooling	forced air
TH 18582 cavity	hypervapotron and forced air

(1) For power supply design only. Thales Electron Devices defines the operating voltage according to each particular operating conditions. This values must be observed to within $\pm 2\%$.

Maximum ratings

Anode voltage	7.5	kV
Anode current	5.5	A
Anode dissipation	25	kW
Control-grid dissipation	50	W
Screen-grid dissipation	120	W

Typical operation (with the matched cavity TH 18582)

	Analog service		Digital service		
	Common amplification	Vision only	DTV 8VSB	DVB OFDM	
Peak-of-sync output power	10.5	22	-	-	KW
RMS output power (1)	-	-	6	4	KW
-1 dB bandwidth	12.5	12.5	12.5	12.5	MHz
Intermodulation products	- 48				dB
Gain	15	15.1	14.5	14.5	dB typ.
Anode voltage	5.5	7.3	7	7	kV
Screen-grid voltage	600	800	800	800	V
Anode current with signal	3.45	4.3	3.4	2.3	A
Anode current at zero signal	1.5	1.6	1.6	1.6	A
Heater voltage	3.9	3.9	4	4	V
Shoulders level (2)	-	-	39	35	dB

(1) Real measurement.

(2) Without correction for non linear distortion.

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For further information, please contact:

THALES ELECTRON DEVICES

2 bis, rue Latécoère - 78941 Vélizy Cedex - France
Tel: + 33 1 30 70 35 00 - Fax: + 33 1 30 70 35 35
www.thalesgroup.com/electrondevices