

BROADCAST
UHF TV

TH 347
UHF tetrode

2.2 kW, common amplification
1.5 kW DTV/0.75 kW DVB

- Air-cooling
- High gain
- Excellent linearity
- High stability



THALES



TH 347

The TH 347 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 18363 cavity is custom-designed to ensure that the TH 347 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)	5.8 V / 32	A
Amplification factor	7	
Transconductance (I _a = 1.5 A, V _{g2} = 400 V)	40	mA/V
Height	135	mm
Diameter	110	mm
Weight	2.3	kg approx.
TH 18363/TH 18363 D cavities:		
• dimensions	644 x 268 x 200	mm
• weight	20	kg approx.
Anode, electrode terminal and ceramic seal cooling		forced air
TH 18363/TH 18363 D cavity cooling		forced air

(1) For power supply design only. Thales Electron Devices defines the operating voltage according to each particular operating conditions. These values are maintained to within ± 2%.

Maximum ratings

Anode voltage	5	kV
Anode current	2	A
Anode dissipation	4.5	kW
Control-grid dissipation	5	W
Screen-grid dissipation	25	W

Typical operation

	Analog service			Digital service	
	Common Amplification (2)	Vision only (3)	Vision only (3)	DTV (8VSB)	DVB (OFDM)
Peak-of-sync output power	1.1	2.2	2.5		kW
RMS output power				1.5	0.75
- 1 dB bandwidth	10	10	10	10	10
Intermodulation products	- 54	- 46			
Gain	15.5	15	15	15	15
Anode voltage	4	4.5	4.5	5	5
Screen-grid voltage	400	400	400	600	600
Anode current with signal	0.8	1.15	1	1.1	0.75
Anode current at zero signal	0.5	0.5	0.5	0.5	0.5
Heater voltage	5.8	5.8	5.8	6	6
Shoulders level (4)				40	34 / 31

(2) With the TH 18363 cavity. (3) With the TH 18363 D cavity. (4) Without correction for non linear distortion.

This document cannot be considered to be a contractual specification. The information given herein may be modified without notice due to product improvement or further development. Consult Thales Electron Devices before making use of this information for equipment design.



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