

ITK15-2 Power Triode

ITK15-2 is water cooled, metal/ceramic coaxial power triode, with thoriated-tungsten filament, intended for use in industrial heating, as well as pulse oscillator. Max frequency: 120MHZ, max plate dissipation: 20KW.

General Characteristics

Filament voltage	7.2	V
Filament current	180	A
Filament surge current	500	A
Interelectrode capacitance		
Grid-Anode	25	pF
Grid-Cathode	60	pF
Anode -Cathode	1.4	pF
Amplification factor	25	
Transconductance ($V_a=10Kv, I_a=4A$)	60	mA/V
Operating position	Vertical, anode up or down	
Cooling	Water	
Cooling water flow, min	≥ 29	L/m
Max outlet water temperature	60	°C
Temperature at seal, max	220	°C
Net weight	3.8	kg

Maximum ratings

Operating frequency	120	MHz
Anode voltage		
Below 30MHz	13	kV
30~60MHz	11	kV
60~90MHz	9	kV
90~120MHz	7	kV
Anode current	8	A
Grid voltage	-1500	V
Grid current (full load)	1.6	A
Grid current (no load)	3.0	A
Peak cathode current, CW	40	A
Peak cathode current, pulse	49	A
Anode dissipation power	17	kW
Grid dissipation		
Below 30MHz	600	W
30~60MHz	520	W
60~90MHz	160	W
90~120MHz	400	W

Typical operation

Class C Radio Frequency Oscillator for Industrial applications (30MHZ)

Anode voltage	12	10	kV
Anode current	6.8	7.1	A
Grid bias voltage	-700	-610	V
Grid voltage	1060	1000	V
Grid current, on load	0.70	0.87	A
Grid dissipation	220	305	W
Grid resistance	1000	700	Ω
Anode dissipation	18	16	kW
Anode Input power	81.5	71	kW
Anode Output power	63	54	kW
Feedback ratio	9.8	11	%
Oscillator efficiency	77	76.5	%



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