

# Beijing Phamitech Electronics

## ITL5-1

### Power Triode

The ITL 5-1 is a RF forced air cooled power triode, designed specifically for industrial applications. This tube uses a coaxial design and metal ceramic technology.

### General Characteristics

Filament voltage	6.3	V
Filament current	65	A
Filament surge current	250	A
Amplification factor	20	
Transconductance	23	mA/V
Interelectrode capacitance		
Grid – anode	16	pF
Grid – cathode	21	pF
Cathode – anode	0.6	pF
Operating position	Vertical, anode up or down	
Weight	2.9	kg
Height, max	210	Mm
Diameter, max	123	mm
Cooling	Forced air	
Inlet temperature	≤45	°C
Cooling air flow	≥1	m <sup>3</sup> /min
Max temperature at seal	≤220	°C

### Maximum ratings

Operating frequency	150	MHz
Anode voltage		
Operating frequency ≤85MHz	7.2	kV
Operating frequency 85–150MH	6	kV
Anode current	2.5	A
Grid voltage	1000	V
Grid current, full load	0.55	A
Grid current, no load	0.75	A
Peak filament current: CW	15	A
Pulse	20	A
Anode dissipation	6	KW
Grid dissipation:	200	W
Operating frequency ≤85 MHz	200	W
Operating frequency 85-150MH	170	W

### Typical Operation

#### Class C RF Oscillator for Industrial Applications

Operating frequency	30	30	MHz
Anode voltage	6.8	5.5	KV
Grid bias voltage	-540	-450	V
Grid voltage	890	780	V
Anode current	2.5	2.3	A
Grid current	0.43	0.43	A
Anode input power	17	12.7	kW
Anode output power	12.9	9.5	kW
Anode dissipation	3.9	3	kW
Grid dissipation	142	127	W
Grid resistance	1250	1050	Ω
Feedback ratio	15	16	%
Oscillator efficiency	75.8	74.3	%

