

# SVETLANA TECHNICAL DATA

## GMI-42B Shielded-Grid Pulse Triode



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he Svetlana™ GMI-42B is a metal-ceramic shielded-grid triode intended for use as a shunt regulator or pulse modulator in high-voltage systems. It features anode operating voltage of 33 kV and a plate dissipation of 500 watts using forced-air cooling. The GMI-42B has a shielding electrode connected internally to the cathode via short, low-impedance straps. This design permits operation with low grid current, and results in favorably low grid-anode capacitance. The presence of the ground-potential shield adjacent to the anode protects the cathode and the grid from damage due to transient arcs.

Features: --extremely rugged  
--plate currents up to 33 amps (duty cycle 0.2%)

### Characteristics

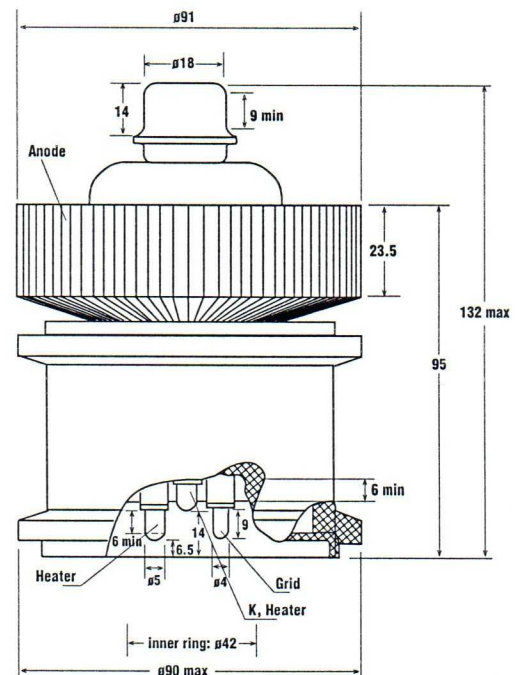
#### Electrical

Cathode	Oxide-coated, unipotential	
Voltage (AC or DC)	26.0 (± 2.5)	V
Current	3400(± 250)	mA
Heating time	3	min
Heater-cathode voltage, peak	±100	V
Amplification factor (nominal)	<10	
Transconductance (nominal)	400	uS
Interelectrode capacitances (typical), with cathode grounded:		
Input	<130	pF
Output	<25	pF
Feedback	<2	pF

#### Mechanical

Basing diagram	see below	
Socket	customer-fabricated	
Anode cap	approx. 11/16in (18 mm) diameter	
Anode connector	Svetlana AC-5 (modified)	
Operating position	Any	
Cooling	Forced-air (see diagram)	
Nominal dimensions:		
Height from base to anode top	95 mm (3 3/4 in)	
Diameter of anode cooler	91 mm (3 9/16 in)	
Outside diameter of base	90 mm (3 17/32 in)	
Diameter of cathode and heater pins	5 mm (3/16 in)	
Length of cathode and heater pins	9 mm (3/8 in)	
Diameter of grid pin	4 mm (5/32 in)	
Length of grid pin	9 mm (3/8 in)	
Overall height	132 mm (5 3/16 in.)	
Net weight	1.2 kg	

### Svetlana Outline drawing



#### Headquarters:

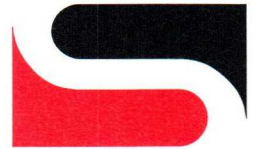
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# Svetlana GMI-42B Shielded-Grid Pulse Triode



**Svetlana**  
ELECTRON DEVICES

## Maximum ratings

Anode voltage	33	kV
Anode dissipation	500	W
Cathode current, pulse (max duration 50 $\mu$ S at max current)	33	A
Grid voltage, negative	-600	V
Grid voltage, positive (in pulse)	1400	V
Maximum grid dissipation	25	W
Seal temperature	250	$^{\circ}$ C

## Typical operation as a switch:

Anode voltage	2.5	kV
Grid voltage, negative	-200	V
Grid voltage when switched on, positive	1350	V
Pulse duration	10	$\mu$ S
Duty factor	0.002	
Anode current when switched on	30	A
Grid current when switched on	<4.5	A

