

## DESCRIPTION

The 1N64xx series of transient voltage suppressors are designed to protect military and commercial electronic equipment from overvoltages caused by lightning, ESD, EFT, inductive load switching, and EMP. These devices are constructed using a p-n junction TVS diode in a hermetically sealed, voidless glass package. The hermetically sealed package provides high reliability in harsh environmental conditions. TVS diodes are further characterized by their high surge capability, low operating and clamping voltages, and a theoretically instantaneous response time. This makes them ideal for use as board level protection for sensitive semiconductor components. These devices are DESC QPL qualified to MIL-S-19500/551.

## FEATURES:

- 500 Watts Peak Pulse Power ( $t_p = 10/1000\mu s$ )
- Voidless hermetically sealed glass package
- Metallurgically bonded
- High surge capacity
- Unidirectional
- Available in **JTX**, and **JTXV** versions per MIL-S-19500/551

## MECHANICAL CHARACTERISTICS:

- Hermetically sealed glass package
- Tinned copper leads
- Marking : P/N, date code, logo, & cathode band

## APPLICATIONS:

- Aerospace & Industrial Electronics
- Board Level Protection
- Airborne Systems
- Shipboard Systems
- Ground Systems

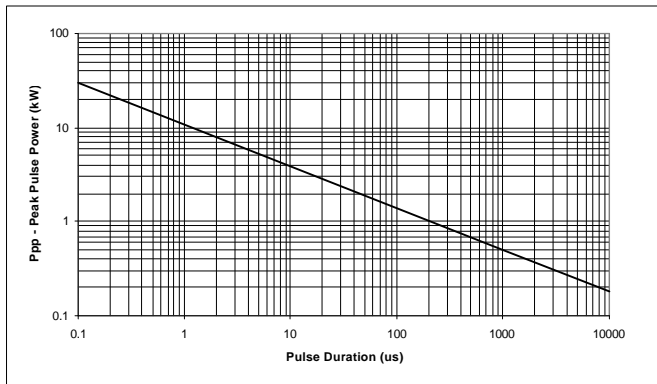
## MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Pulse Power ( $t_p = 10 \times 1000\mu s$ )	Ppk	500	Watts
Operating Temperature	Tj	-65 to +175	°C
Storage Temperature	Tstg	-65 to +175	°C
Steady-State Power Dissipation @ TL = 75°C (3/8")	PD	3	Watts

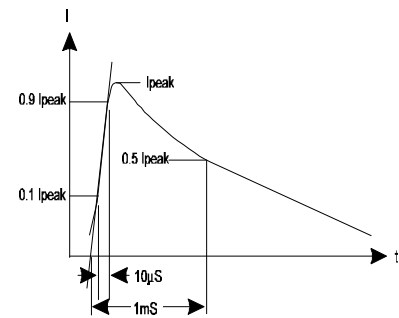
## ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise specified)

DEVICE TYPE	REVERSE STAND-OFF VOLTAGE $V_{RWM}$	REVERSE LEAKAGE CURRENT $I_R$	MINIMUM BREAKDOWN VOLTAGE $V_{BR} @ I_T$	TEST CURRENT $I_T$	MAXIMUM CLAMPING VOLTAGE $V_c @ I_{pp}$	PEAK PULSE CURRENT $I_{pp}$ $T_p = 1mS$	PEAK PULSE CURRENT $I_{pp}$ $T_p = 20\mu S$	TEMPERATURE COEFFICIENT OF $V_{BR}$ $\alpha V_z$
	(V)	( $\mu A$ )	(V)	(mA)	(V)	(A)	(A)	% /°C
1N6461	5	3000	5.6	25	9.0	56	315	0.040
1N6462	6	2500	6.5	20	11.0	46	258	0.040
1N6463	12	500	13.6	5	22.6	22	125	0.050
1N6464	15	500	16.4	5	26.5	19	107	0.060
1N6465	24	50	27.0	2	41.4	12	69	0.084
1N6466	30.5	3	33.0	1	47.5	11	63	0.093
1N6467	40.3	2	43.7	1	63.5	8	45	0.094
1N6468	51.6	2	54.0	1	78.5	6	35	0.096

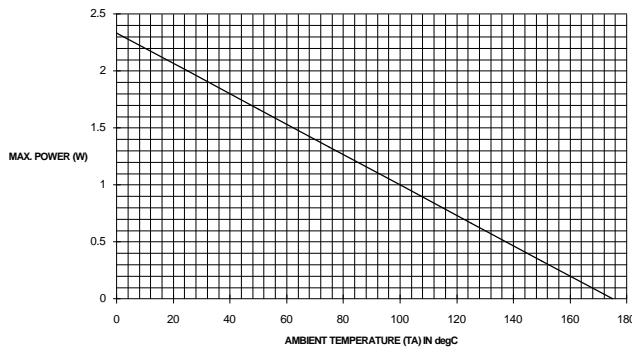
### PEAK PULSE POWER vs. PULSE TIME



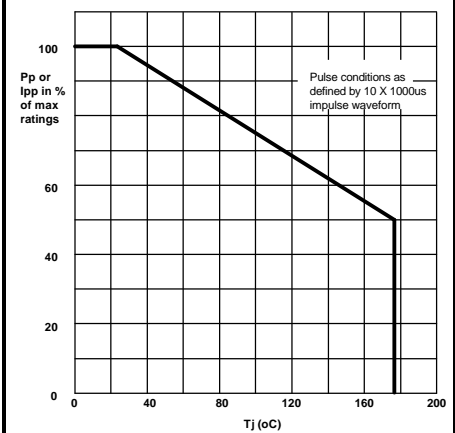
### 10x1000μs IMPULSE WAVEFORM



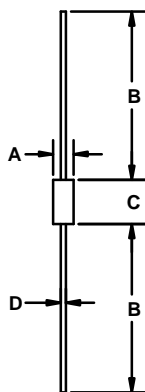
### STEADY STATE DERATING CHARACTERISTICS FOR FREE AIR MOUNTING



### PULSE DERATING CURVE



### MECHANICAL OUTLINE



DIM N	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.115	0.140	2.92	3.56	
B	0.900	1.300	22.86	33.02	
C	0.150	0.300	3.81	7.62	2
D	0.037	0.042	0.94	1.07	2

- NOTES :
- Controlling dimension is inches.
  - Includes uncontrolled area of device leads.

### SCHEMATIC

