

# 1N6469 ~ 1N6476

# UNIDIRECTIONAL TRANSIENT SUPPRESSOR

**V<sub>BR</sub> : 5.6 - 54 Volts**

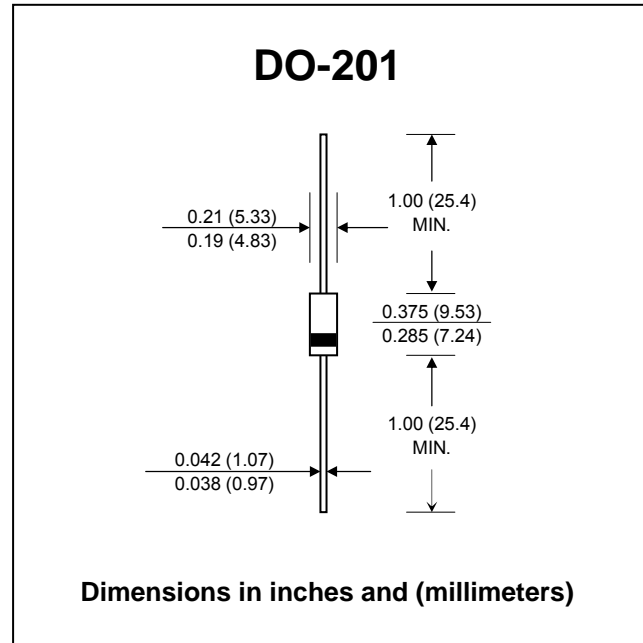
**P<sub>PK</sub> : 1500 Watts**

### FEATURES :

- \* Glass passivated junction chip
- \* Unidirectional transient voltage suppressor
- \* Excellent clamping capability
- \* Low zener impedance
- \* Fast response time : typically less than 1.0 ps from 0 volt to V<sub>BR</sub>(min.)
- \* **Pb / RoHS Free**

### MECHANICAL DATA

- \* Case : DO-201Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.93 grams



### MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation at Ta = 25 °C, @10/1000 μs	P <sub>PP</sub>	Minimum 1500	W
Steady State Power Dissipation at Ta = 25 °C	P <sub>D</sub>	3.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	130	A
Thermal Resistance at 3/8" lead length	R <sub>θJL</sub>	50	°C/W
Forward Voltage at I <sub>F</sub> = 4 A	V <sub>F</sub>	1.5	V
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 175	°C

### ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Type Number	Breakdown Voltage @ I <sub>t</sub>		Working Peak Reverse Voltage V <sub>RWM</sub>	Maximum Reverse Leakage @ V <sub>RWM</sub> I <sub>R</sub>	Maximum Peak Pulse current (I <sub>PP</sub> )		Maximum Clamping Voltage @ I <sub>RSM</sub> V <sub>RSM</sub>	Maximum Temperature Co-efficient of V <sub>BR</sub> (% / °C)
	V <sub>BR</sub> (V)	I <sub>t</sub>			@ 8/20 μs	@ 10/1000 μs		
	Min.	(mA)	(V)	(μA)	(A)	(A)	(V)	(% / °C)
1N6469	5.6	50	5	1500	945	167	9.0	0.04
1N6470	6.5	50	6	1000	775	137	11.0	0.06
1N6471	13.6	10	12	20	374	66	22.6	0.085
1N6472	16.4	10	15	10	322	57	26.5	0.085
1N6473	27.0	5	24	5	207	36.5	41.4	0.096
1N6474	33.0	1	30.5	5	181	32	47.5	0.098
1N6475	43.7	1	40.3	5	135	24	63.5	0.101
1N6476	54.0	1	51.6	5	107	19	78.5	0.103

## RATING AND CHARACTERISTIC CURVES ( 1N6469 ~ 1N6476)

FIG.1 - PULSE DERATING CURVE

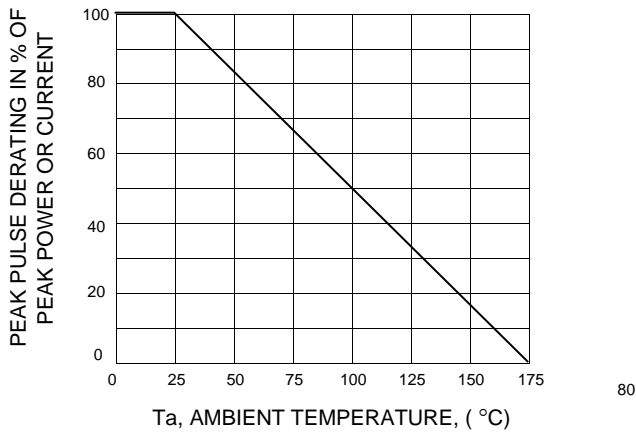


FIG.2 - PULSE WAVE FORM FOR EXPONENTIAL SURGE FOR 10/1000  $\mu$ s

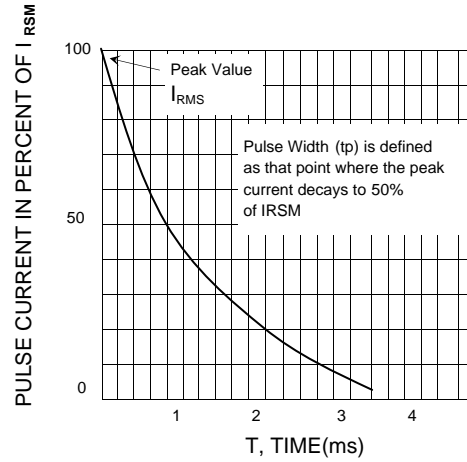


FIG.3 - 8/20  $\mu$ s CURRENT IMPULSE WAVEFORM

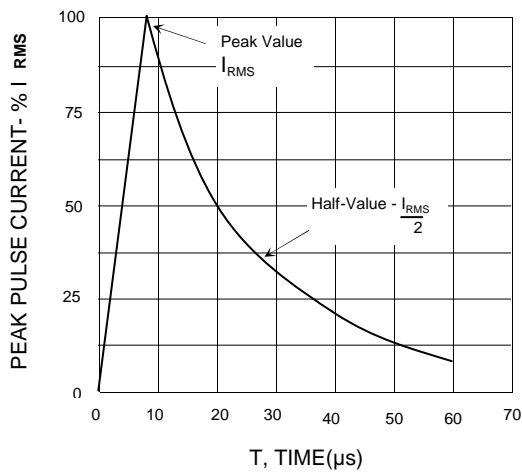


FIG.4 - PULSE RATING CURVE

