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1N6382 - 1N6389

BI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

V_{BR} : 8 - 45 Volts

P_{PK} : 1500 Watts

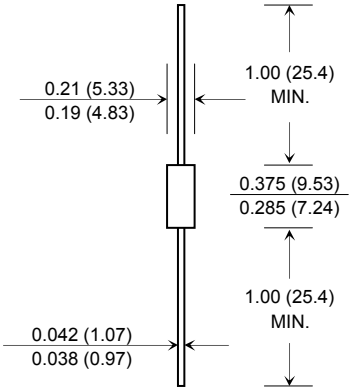
FEATURES :

* Glass passivated chip
* Peak Power 1500 Watts @ 1 ms
* Maximum Clamp Voltage @ Peak Pulse Current
* Low Leakage < 5 µA Above 10 V
* Pb / RoHS Free

MECHANICAL DATA

* Case : DO-201 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Mounting position : Any
* Weight : 0.93 grams

DO-201



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
Peak Power Dissipation at $T_L \leq 25$ °C (Note 1)	P_{PK}	1500	W
Steady State Power Dissipation at $T_L \leq 75$ °C, Lead Lengths = 3/8"	P_D	5	W
Derated above T_L = 75 °C		20	mW/°C
Thermal Resistance, Junction to Lead	$R_{\Theta JL}$	20	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 175	°C

Note :

(1) Non-repetitive current pulse per Fig. 2 and derated above Ta = 25 °C per Fig. 1

ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type No.	Min.Breakdown Voltage[2] @ I_T		Working Peak Reverse Voltage[1]	Max. Reverse Leakage Current @ V_{RWM}	Clamping Voltage[3] @ I_{PP}	Max. Reverse Peak Pulse Current	Clamping Voltage[3] @ I_{PP} = 1A	Clamping Voltage[3] @ I_{PP} = 10A	Maximum Temperature Variation of V_{BR}
	$V_{BR(Min)}$	I_T	V_{RWM}	I_R	V_C	I_{PP}	V_C	V_C	
	(V)	(mA)	(V)	(μA)	(V)	(A)	(V)	(V)	(mV/°C)
1N6382	9.4	1.0	8	25	15.0	100	11.3	11.5	8
1N6383	11.7	1.0	10	2.0	16.7	90	13.7	14.1	12
1N6384	14.1	1.0	12	2.0	21.2	70	16.1	16.5	14
1N6385	17.6	1.0	15	2.0	25.0	60	20.1	20.6	18
1N6386	21.2	1.0	18	2.0	30.0	50	24.2	25.2	21
1N6387	25.9	1.0	22	2.0	37.5	40	29.8	32.0	26
1N6388	42.4	1.0	36	2.0	65.2	23	50.6	54.3	50
1N6389	52.9	1.0	45	2.0	78.9	19	63.3	70.0	60

Notes :

(1) A transient suppressor is normally selected according to the maximum working peak reverse voltage (V_{RWM}), which should be equal to or greater than the dc or continuous peak operating voltage level.

(2) V_{BR} measured at pulse test current I_T at an ambient temperature of 25°C and minimum voltage in V_{BR} is to be controlled.

(3) Surge current waveform per Fig. 2 and derate per Fig. 1 and 4.

RATING AND CHARACTERISTIC CURVES (1N6382 - 1N6389)

FIG.1 - PULSE DERATING CURVE

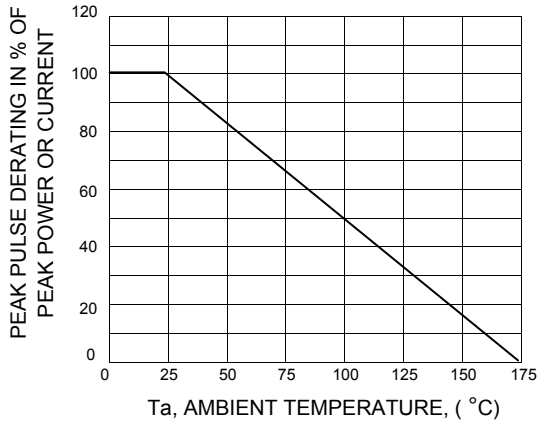


FIG.2 - PULSE WAVEFORM

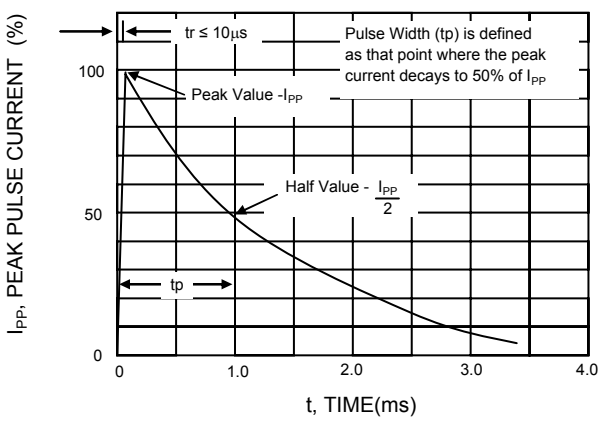


FIG.3 - STEADY STATE POWER DERATING

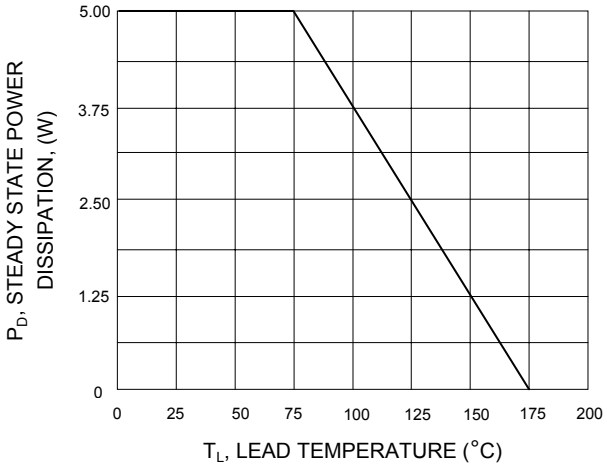


FIG.4 - PULSE RATING CURVE