



6.6KW Surface Mount Transient Voltage Suppressor

Features

- ISO10605(C=330 pF,R=330Ω): $\pm 30\text{kV}$ Air, $\pm 30\text{kV}$ Contact
- HBM $\geq \pm 8\text{ kV}$ & CDM $\geq \pm 2\text{ kV}$
- Rated for load dump protection (ISO 16750-2) in automotive applications
- Meets ISO 7637-2 Requirements
- Meets MSL Level 1 per J-STD-020
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Package: MINI218
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Units
10/1,000us Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$	$P_{PPM1}^{(1)}$	6600	W
10/10,000us Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$	P_{PPM2}	5200	W
Peak Surge Current (60Hz half wave)	I_{FSM}	700	A
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	0.9	$^\circ\text{C}/\text{W}$
Power Dissipation on infinite heatsink $T_C = 25^\circ\text{C}$	P_D	8	W
ISO 10605 (C=330 pF,R=330Ω) Contact	V_{ESD}	30	kV
ISO 10605 (C=330 pF,R=330Ω) Air	V_{ESD}	30	kV
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 175	$^\circ\text{C}$



Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	V _{RWM} (V)	V _{BR}			Reverse Leakage		V _{C@I_{PP}}	
		Min. (V)	Max. (V)	I _T (mA)	I _{R@V_{RWM}} (μ A)	I _{R@V_{RWM}} T _J =175 °C (μ A)		
							V	A
6600W Transient Voltage Suppressor								
SMD8S14A/CA	14	15.6	17.2	5	1	150	23.2	284
SMD8S15A/CA	15	16.7	18.5	5	1	150	24.4	270
SMD8S16A/CA	16	17.8	19.7	5	1	150	26	254
SMD8S17A/CA	17	18.9	20.9	5	1	150	27.6	239
SMD8S18A/CA	18	20	22.1	5	0.5	150	29.2	226
SMD8S20A/CA	20	22.2	24.5	5	0.5	150	32.4	204
SMD8S22A/CA	22	24.4	26.9	5	0.5	150	35.5	186
SMD8S24A/CA	24	26.7	29.5	5	0.5	150	38.9	170
SMD8S26A/CA	26	28.9	31.9	5	0.5	150	42.1	157
SMD8S28A/CA	28	31.1	34.4	5	0.5	150	45.4	145
SMD8S30A/CA	30	33.3	36.8	5	0.5	150	48.4	136
SMD8S33A/CA	33	36.7	40.6	5	0.5	150	53.3	124
SMD8S36A/CA	36	40	44.2	5	0.5	150	58.1	114
SMD8S40A/CA	40	44.4	49.1	5	0.5	150	64.5	102
SMD8S43A/CA	43	47.8	52.8	5	0.5	150	69.4	95
SMD8S48A/CA	48	53.3	58.7	5	0.5	150	80.6	82

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^{\circ}\text{C}$ per Fig.1
2. TVS is a transient protection device, it is strongly recommended not to use as a Zener.
3. Add suffix "CA" after part number to specify Bi-directional devices



Typical Characteristic Curves

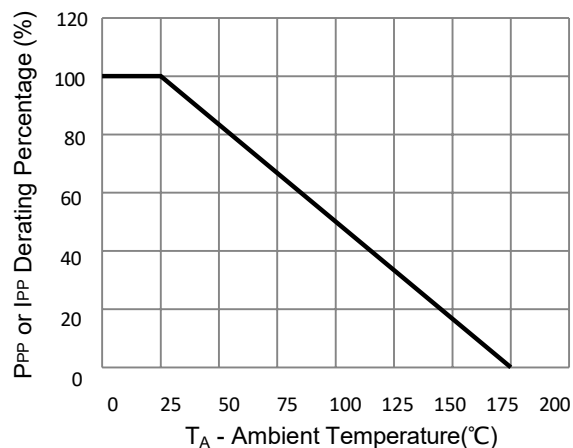


Fig.1 Pulse Power Rating Curve

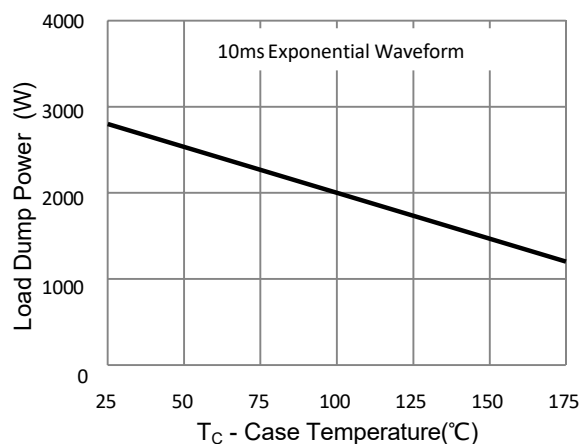


Fig.2 Load Dump Power Characteristics

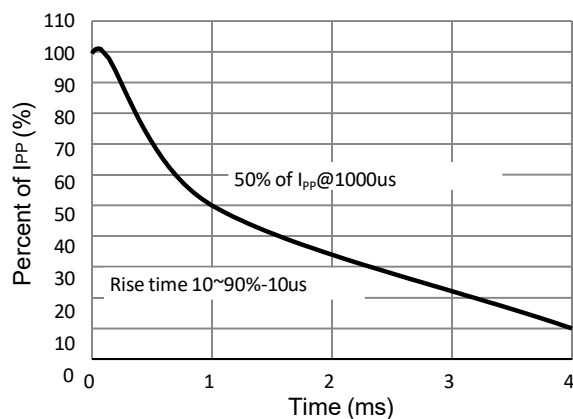


Fig.3 Pulse Waveform

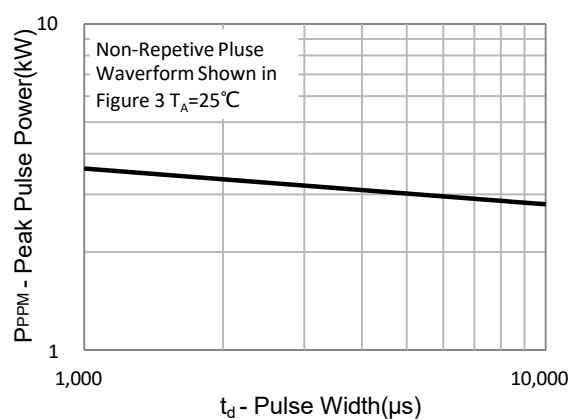


Fig.4 Peak Pulse Power Rating Curve

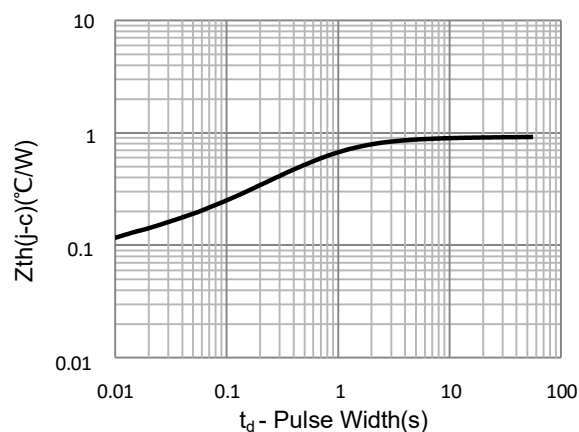


Fig.5 Typical Transient Thermal Impedance

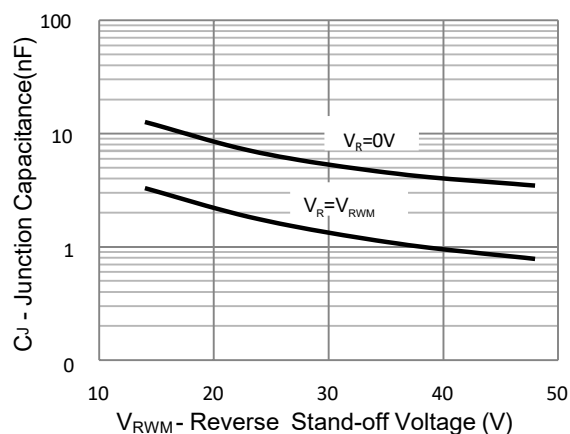


Fig.6 Typical Capacitance



Typical Characteristic Curves

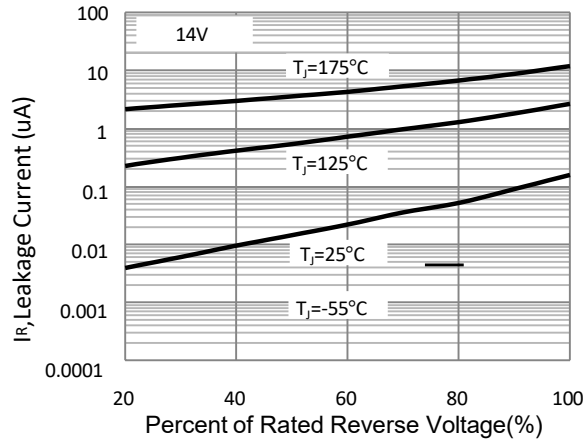


Fig.7 Typical Reverse Characteristics

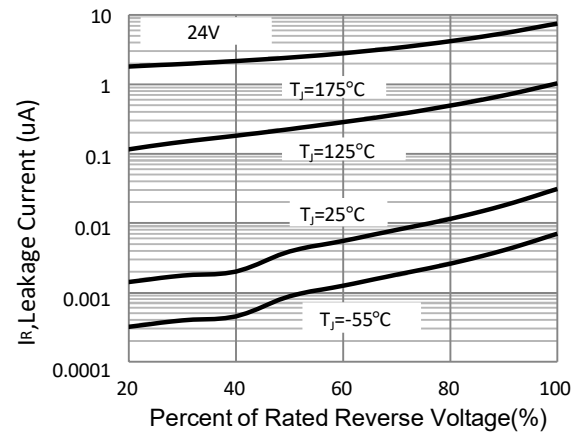


Fig.8 Typical Reverse Characteristics

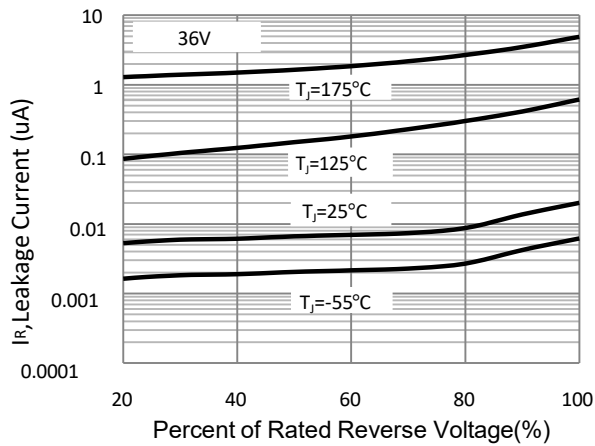


Fig.9 Typical Reverse Characteristics

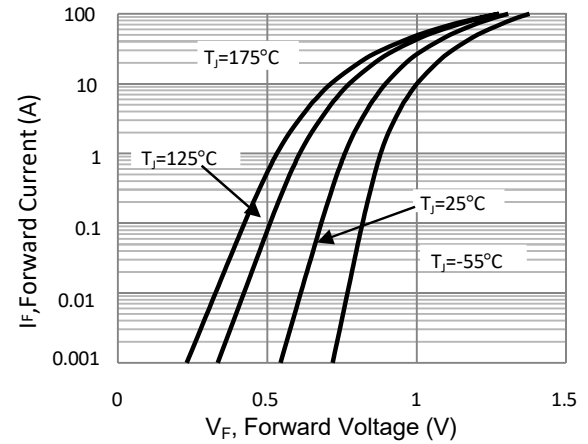


Fig.10 Typical Forward



MINI218 Dimensions

Dim	Inches		Millimeters	
	Min	Max	Min	Max
A	0.094	0.110	2.40	2.80
B	0.323	0.346	8.20	8.80
C	0.228	0.244	5.80	6.20
D	0.311	0.335	7.90	8.50
E	0.448	0.488	11.39	12.39
F	0.138	0.150	3.51	3.81
G	0.055	0.094	1.40	2.40
H	0.000	0.016	0.00	0.40

Cathode Band
(for uni-directional products only)

(A)

(B)

(C)

(D)

(E)

(F)

(G)

(H)

Soldering footprint

(8.9)
(8.3)

(1.69)
(1.09)

(2.2)
(1.6)

(2.9)
(2.3)

(12.19)
(11.59)

Dimensions in inches and
(millimeters)