

Features

ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
HBM $\geq \pm 8$ kV & CDM $\geq \pm 2$ kV
Meets ISO 7637-2 Requirements
Meets MSL Level 1 per J-STD-020
Lead free in compliance with EU RoHS 2.0
Green molding compound as per EC 61249 standard

Mechanical Data

Case: Molded plastic, DO-218

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

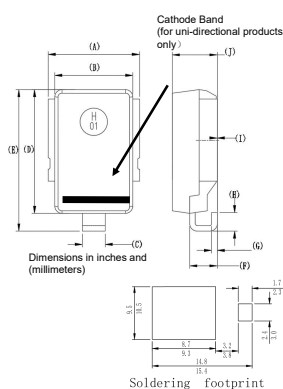
Approx. Weight: 0.099 ounces, 2.821 grams
Only suitable for P-type chip

VOLTAGE RANGE

14 to 48 Volts

6600 Watts Peak Power

DO-218AB



Dim	Inches		Millimeters	
	Min	Max	Min	Max
A	0.374	0.413	9.50	10.50
B	0.327	0.343	8.30	8.70
C	0.094	0.118	2.40	3.00
D	0.524	0.539	13.30	13.70
E	0.591	0.630	15.00	16.00
F	0.098	0.138	2.50	3.50
G	0.020	0.028	0.50	0.70
H	0.059	0.098	1.50	2.50
I	0.000	0.016	0.00	0.40
J	0.189	0.205	4.80	5.20

Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics

(TA = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
10/1,000us Peak Pulse Power Dissipation on TA = 25°C	P _{PPM1} ⁽¹⁾	6600	W
10/10,000us Peak Pulse Power Dissipation on TA = 25°C	P _{PPM2}	5200	W
Peak Surge Current (60Hz half wave)	I _{FSM}	700	A
Typical Thermal Resistance Junction to Case	R _{θJC}	0.9	°C/W
Power Dissipation on infinite heatsink T _C = 25°C	P _D	8	W
ISO10605(C=330 pF,R=330Ω) Contact	V _{ESD}	30	kV
ISO10605(C=330 pF,R=330Ω) Air	V _{ESD}	30	kV
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to 175	°C

RATING AND CHARACTERISTIC CURVES (SM8S SERIES)

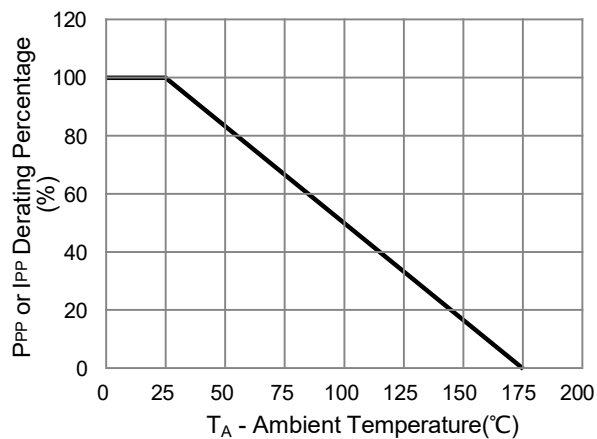


Fig.1 Pulse Power Rating Curve

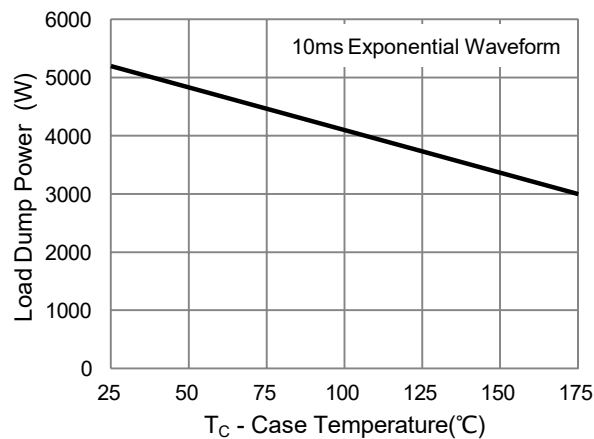


Fig.2 Load Dump Power Characteristics

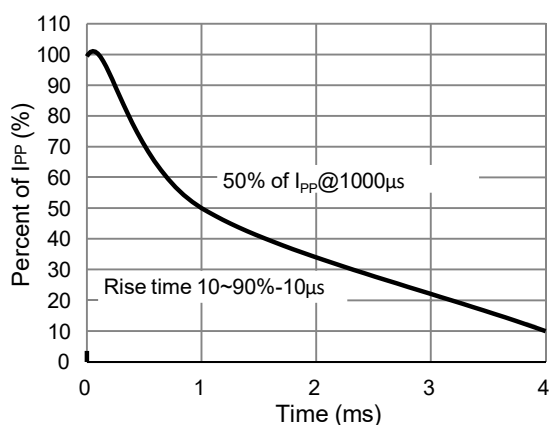


Fig.3 Pulse Waveform

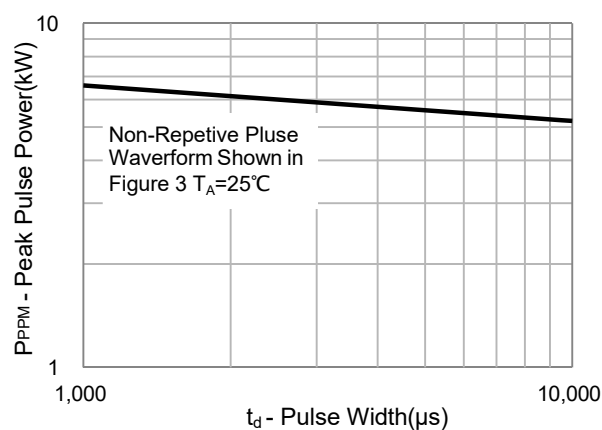


Fig.4 Peak Pulse Power Rating Curve

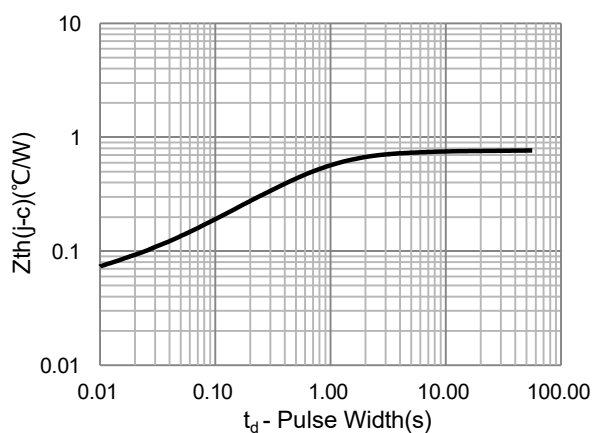


Fig.5 Typical Transient Thermal Impedance

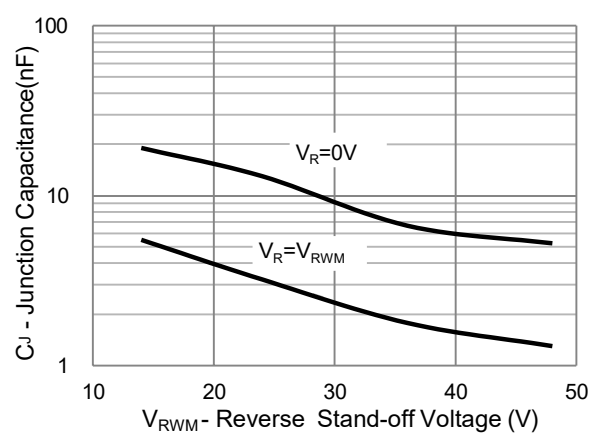


Fig.6 Typical Capacitance

RATING AND CHARACTERISTIC CURVES (SM8S SERIES)

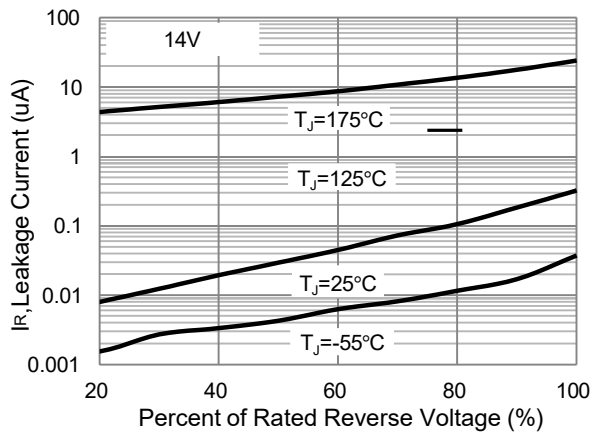


Fig.7 Typical Reverse Characteristics

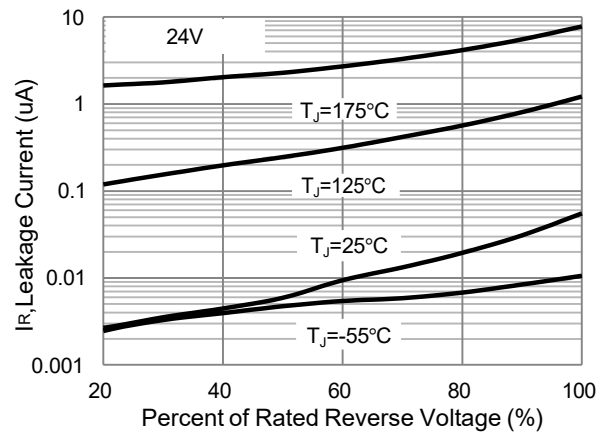


Fig.8 Typical Reverse Characteristics

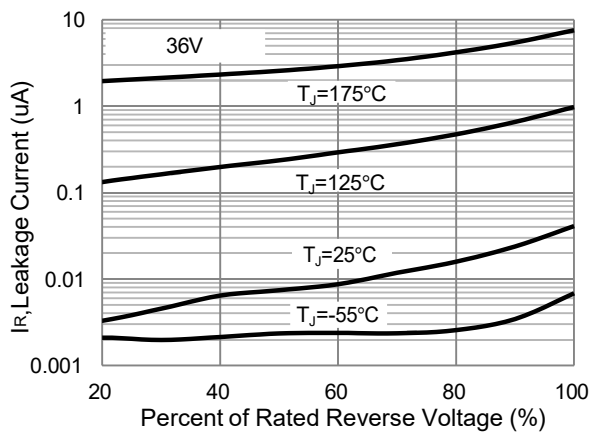


Fig.9 Typical Reverse Characteristics

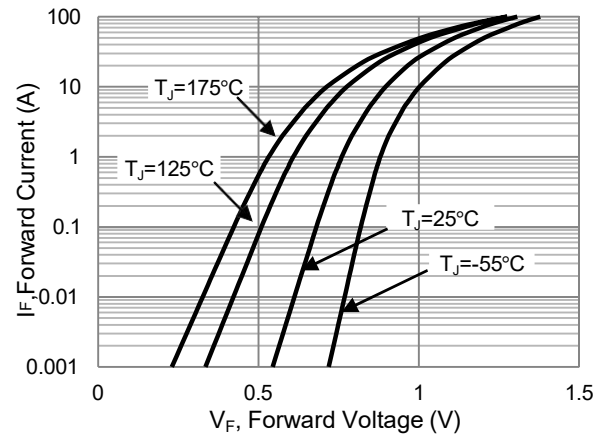


Fig.10 Typical Forward Characteristics

Electrical Characteristics

(TA = 25 °C unless otherwise noted)

Part Number	VRWM	VBR			Reverse Leakage		VC@IPP (1)	
		Min.	Max.	IT	IR@VRWM	IR@VRWM TJ=175 °C		
	V	V	V	mA	uA	uA	V	A
6600W Transient Voltage Suppressor								
SM8S14A/CA	14	15.6	17.2	5	1	150	23.2	284
SM8S15A/CA	15	16.7	18.5	5	1	150	24.4	270
SM8S16A/CA	16	17.8	19.7	5	1	150	26	254
SM8S17A/CA	17	18.9	20.9	5	1	150	27.6	239
SM8S18A/CA	18	20	22.1	5	0.5	150	29.2	226
SM8S20A/CA	20	22.2	24.5	5	0.5	150	32.4	204
SM8S22A/CA	22	24.4	26.9	5	0.5	150	35.5	186
SM8S24A/CA	24	26.7	29.5	5	0.5	150	38.9	170
SM8S26A/CA	26	28.9	31.9	5	0.5	150	42.1	157
SM8S28A/CA	28	31.1	34.4	5	0.5	150	45.4	145
SM8S30A/CA	30	33.3	36.8	5	0.5	150	48.4	136
SM8S33A/CA	33	36.7	40.6	5	0.5	150	53.3	124
SM8S36A/CA	36	40	44.2	5	0.5	150	58.1	114
SM8S40A/CA	40	44.4	49.1	5	0.5	150	64.5	102
SM8S43A/CA	43	47.8	52.8	5	0.5	150	69.4	95
SM8S48A/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 TA=25°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