

FEATURES

- | ISO10605(C=330pF, R=330Ω):±30kV Air , ±30kV(Contact)
- | HBM ≥±8kV & CDM ≥±2kV
- | Rated for load dump protection (ISO16750-2)in automotive applications
- | Meets ISO7637-2 Requirements
- | Meets MSL Level 1 per J-STD-020
- | Meet AEC-Q101 Requirements
- | Lead free in compliance with EU RoHS 2.0
- | Green molding compound as per IEC61249 standard



DO-218mini



Schematic Symbol

MECHANICAL DATA

- | Case : Molded plastic,BKM Tentative
- | Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- | Approx Weight : 2.5 grams
- | Only suitable for P-type chip

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
10/1,000us Peak Pulse Power Dissipation on T _A =25°C	P _{PPM1} ⁽¹⁾	6600	W
10/10,000us Peak Pulse Power Dissipation on T _A =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=330pF, R=330Ω) Contact	V _{ESD}	30	kV
ISO10605 (C=330pF, R=330Ω) Air	V _{ESD}	30	kV
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to 175	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}	Reverse Leakage @V _{RWM} T _J =175°C
		V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A) ⁽¹⁾	I _R (uA) ⁽¹⁾	I _R (uA)
SMD8S14A	SMD8S14A	14.0	15.6	17.2	5.0	23.2	284	1.0	150
SMD8S15A	SMD8S15A	15.0	16.7	18.5	5.0	24.4	270	1.0	150
SMD8S16A	SMD8S16A	16.0	17.8	19.7	5.0	26.0	254	1.0	150
SMD8S17A	SMD8S17A	17.0	18.9	20.9	5.0	27.6	239	1.0	150
SMD8S18A	SMD8S18A	18.0	20.0	22.1	5.0	29.2	226	0.5	150
SMD8S20A	SMD8S20A	20.0	22.2	24.5	5.0	32.4	204	0.5	150
SMD8S22A	SMD8S22A	22.0	24.4	26.9	5.0	35.5	186	0.5	150
SMD8S24A	SMD8S24A	24.0	26.7	29.5	5.0	38.9	170	0.5	150
SMD8S26A	SMD8S26A	26.0	28.9	31.9	5.0	42.1	157	0.5	150
SMD8S28A	SMD8S28A	28.0	31.1	34.4	5.0	45.4	145	0.5	150
SMD8S30A	SMD8S30A	30.0	33.3	36.8	5.0	48.4	136	0.5	150
SMD8S33A	SMD8S33A	33.0	36.7	40.6	5.0	53.3	124	0.5	150
SMD8S36A	SMD8S36A	36.0	40.0	44.2	5.0	58.1	114	0.5	150
SMD8S40A	SMD8S40A	40.0	44.4	49.1	5.0	64.5	102	0.5	150
SMD8S43A	SMD8S43A	43.0	47.8	52.8	5.0	69.4	95	0.5	150
SMD8S48A	SMD8S48A	48.0	53.3	58.7	5.0	80.6	82	0.5	150

NOTES:

1.Non-repetitive current pulse per Fig.3 and derated above TA=25°C per Fig.1

CHARACTERISTIC CURVES

Fig.1 Pulse Power Rating Curve

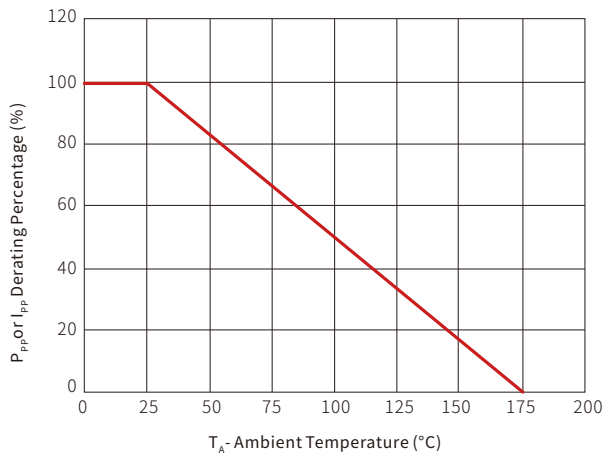


Fig.2 Load Dump Power Characteristics

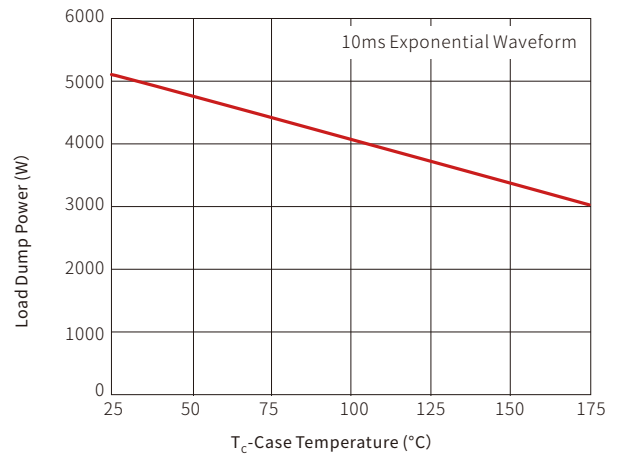


Fig.3 Pulse Waveform

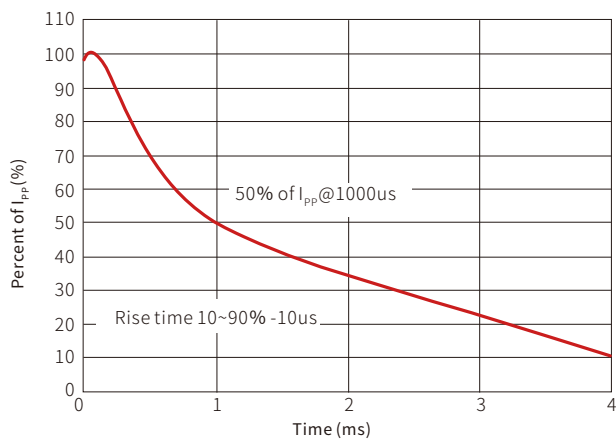


Fig.4 Peak Pulse Power Rating Curve

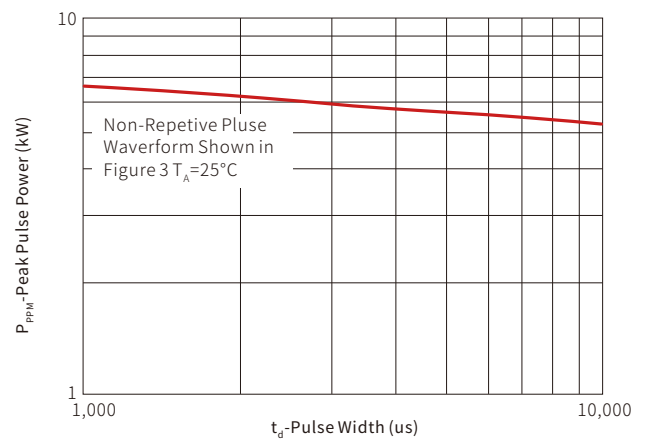


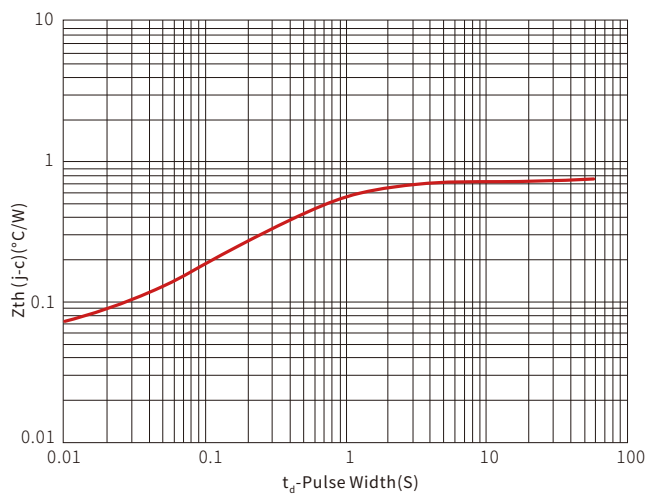
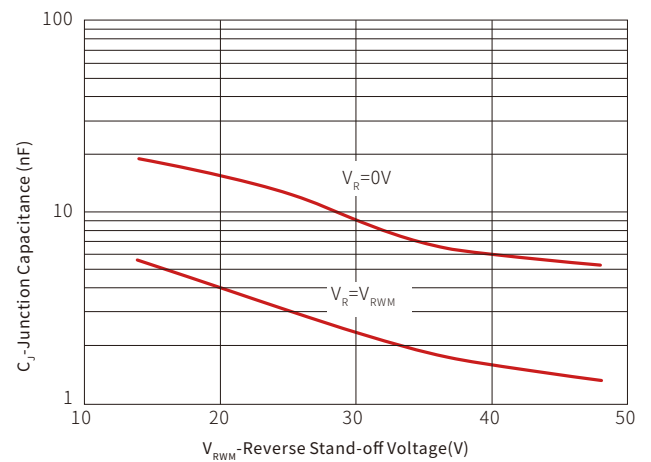
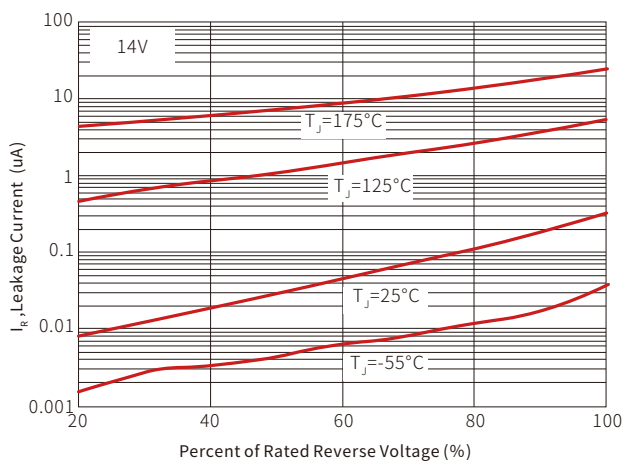
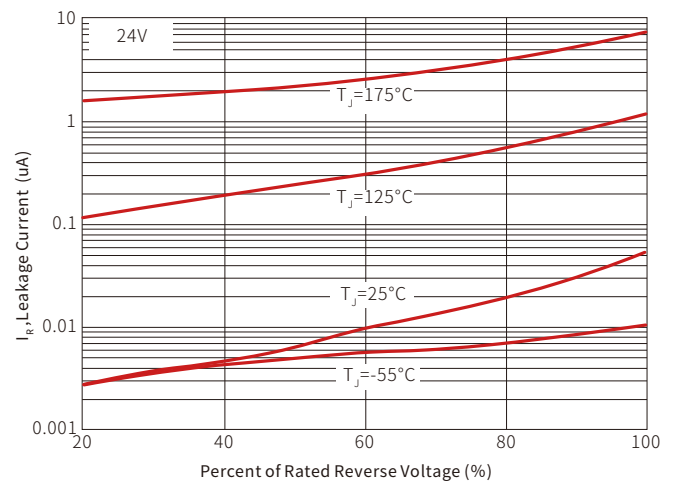
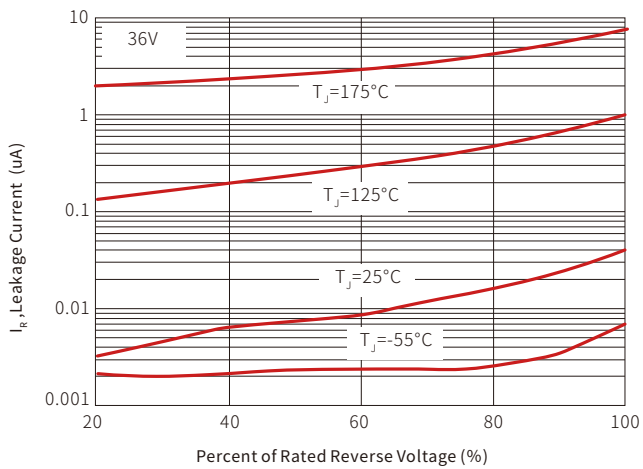
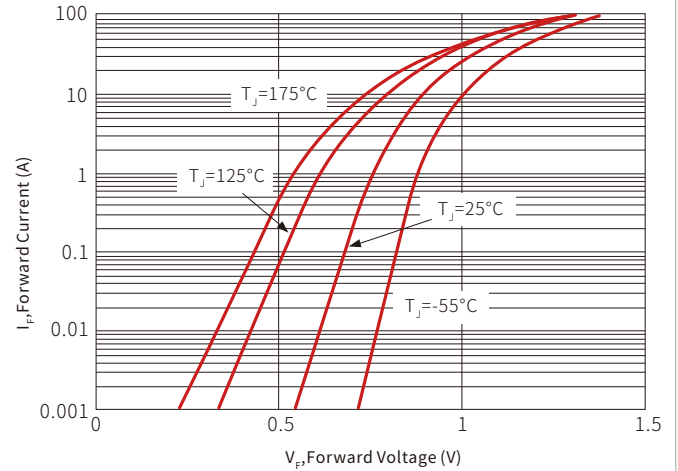
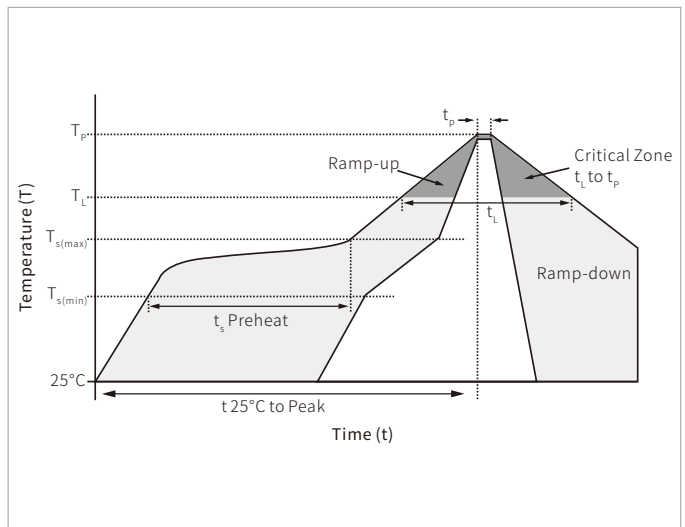
Fig.5 Typical Transient Thermal Impedance

Fig.6 Typical Capacitance

Fig.7 Typical Reverse Characteristics

Fig.8 Typical Reverse Characteristics


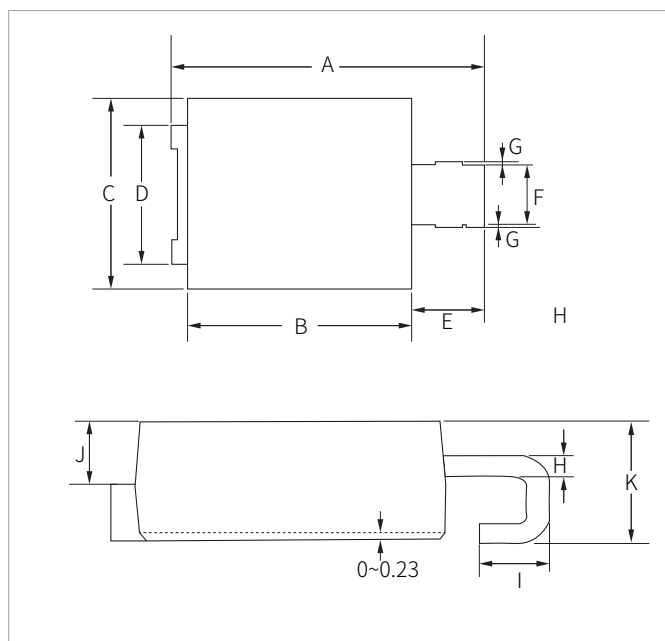
Fig.9 Typical Reverse Characteristics

Fig.10 Typical Forward Characteristics


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



DO-218MINI PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	11.50	12.50	0.453	0.492
B	8.20	8.80	0.323	0.346
C	7.70	8.70	0.303	0.342
D	6.00		0.236	
E	2.80		0.110	
F	2.60		0.102	
G	-	0.20	-	0.008
H	0.66		0.026	
I	1.90		0.075	
J	1.80	2.30	0.071	0.090
K	3.20	4.00	0.126	0.157

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SMD8SxxA	DO-218mini	1000PCS	13"

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