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
- Meet AEC-Q101 Requirements
- Green molding compound as per IEC61249 standard

DO-218AB

Schematic Symbol

MECHANICAL DATA

- Case : Molded plastic,DO-218AB
- Meets MSL Level 1 per J-STD-020
- Only suitable for P-type chip

APPROVALS

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

MAXIMUMRATINGS (T_A=25°C)

Parameter	Symbo	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	$R_{\theta JC}$	0.90	°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℃)

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)
SM8S14A	SM8S14A	14.0	15.6	17.2	5.0	23.2	284	1.0	150
SM8S15A	SM8S15A	15.0	16.7	18.5	5.0	24.4	270	1.0	150
SM8S16A	SM8S16A	16.0	17.8	19.7	5.0	26.0	254	1.0	150
SM8S17A	SM8S17A	17.0	18.9	20.9	5.0	27.6	239	1.0	150
SM8S18A	SM8S18A	18.0	20.0	22.1	5.0	29.2	226	0.5	150
SM8S20A	SM8S20A	20.0	22.2	24.5	5.0	32.4	204	0.5	150
SM8S22A	SM8S22A	22.0	24.4	26.9	5.0	35.5	186	0.5	150
SM8S24A	SM8S24A	24.0	26.7	29.5	5.0	38.9	170	0.5	150
SM8S26A	SM8S26A	26.0	28.9	31.9	5.0	42.1	157	0.5	150
SM8S28A	SM8S28A	28.0	31.1	34.4	5.0	45.4	145	0.5	150
SM8S30A	SM8S30A	30.0	33.3	36.8	5.0	48.4	136	0.5	150
SM8S33A	SM8S33A	33.0	36.7	40.6	5.0	53.3	124	0.5	150
SM8S36A	SM8S36A	36.0	40.0	44.2	5.0	58.1	114	0.5	150
SM8S40A	SM8S40A	40.0	44.4	49.1	5.0	64.5	102	0.5	150
SM8S43A	SM8S43A	43.0	47.8	52.8	5.0	69.4	95	0.5	150
SM8S48A	SM8S48A	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 T_A=25℃ per Fig.1

CHARACTERISTIC CURVES

Fig.1 Pulse Power Rating Curve

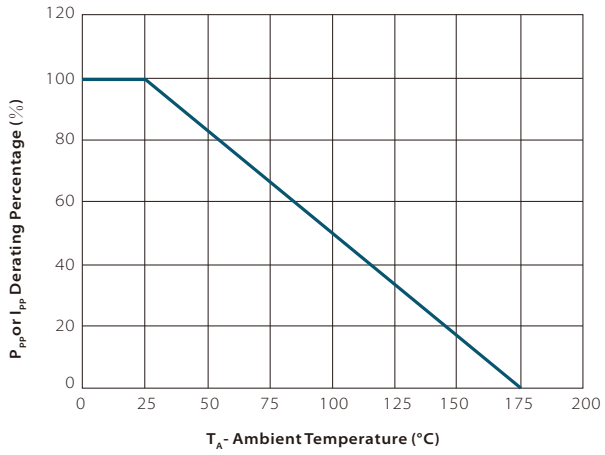


Fig.2 Load Dump Power Characteristics

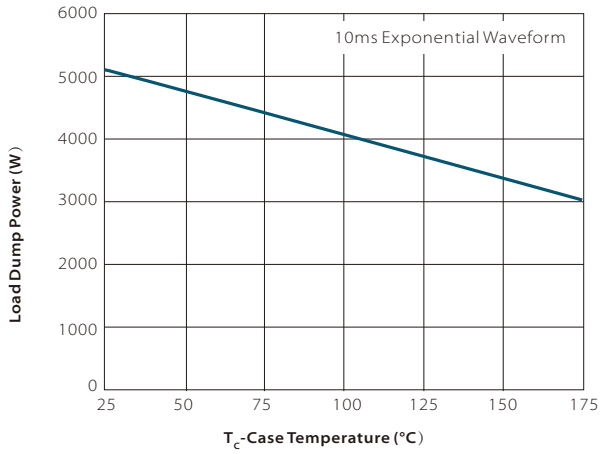


Fig.3 Pulse Waveform

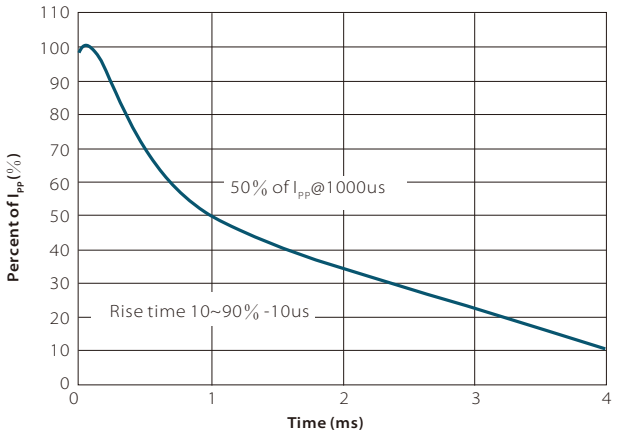


Fig.4 Peak Pulse Power Rating Curve

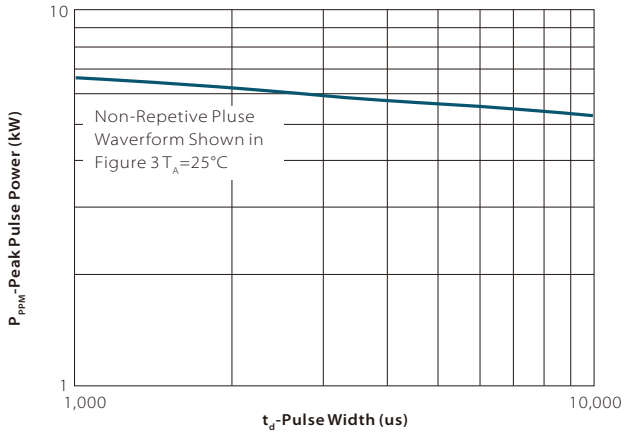


Fig.5 Typical Transient Thermal Impedance

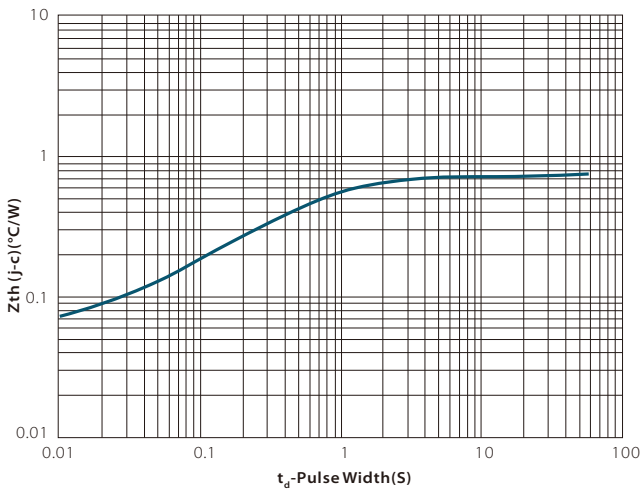


Fig.6 Typical Capacitance

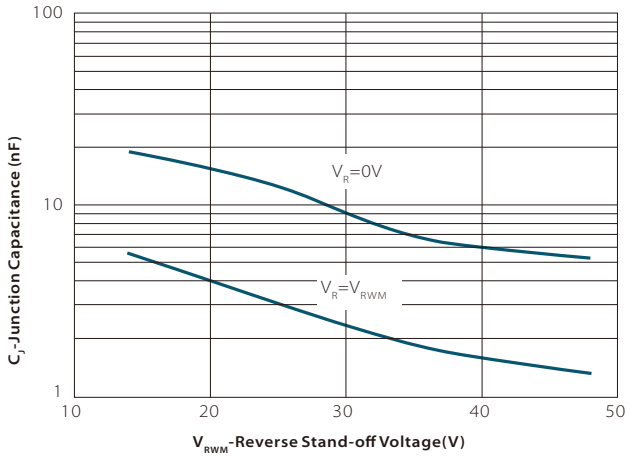


Fig.7 Typical Reverse Characteristics

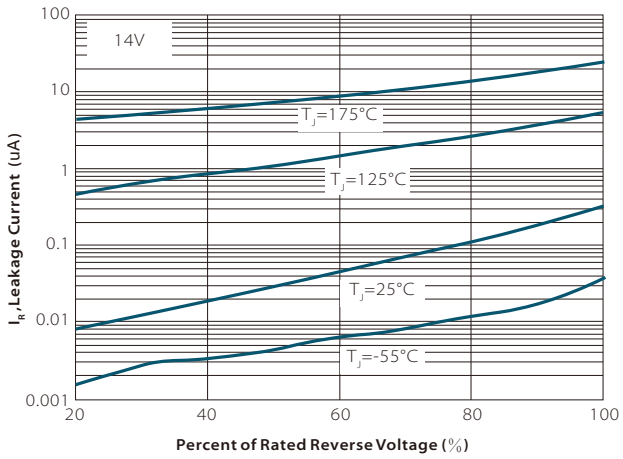


Fig.8 Typical Reverse Characteristics

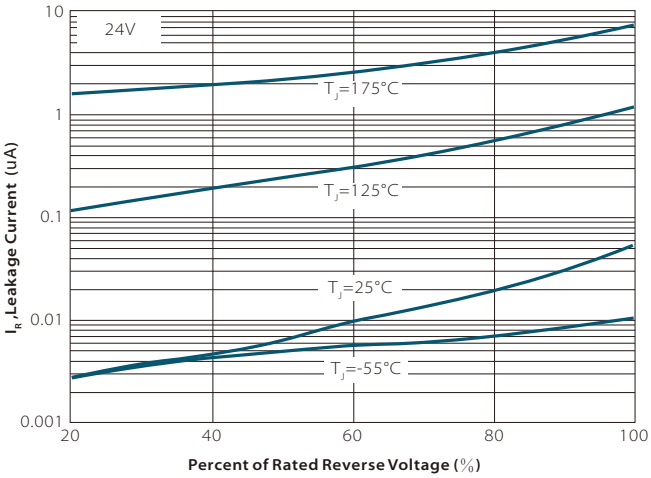


Fig.9 Typical Reverse Characteristics

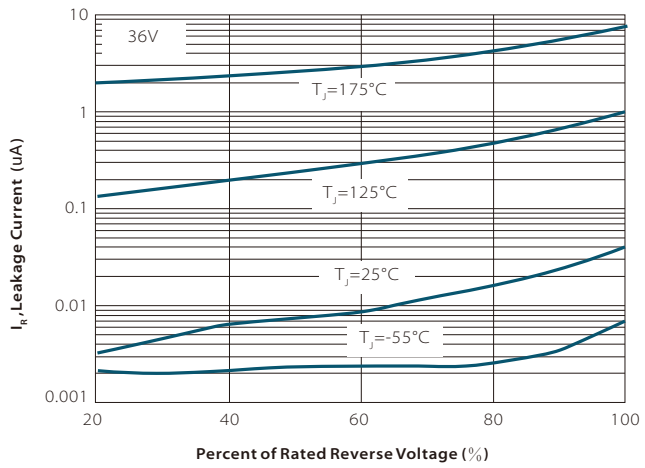
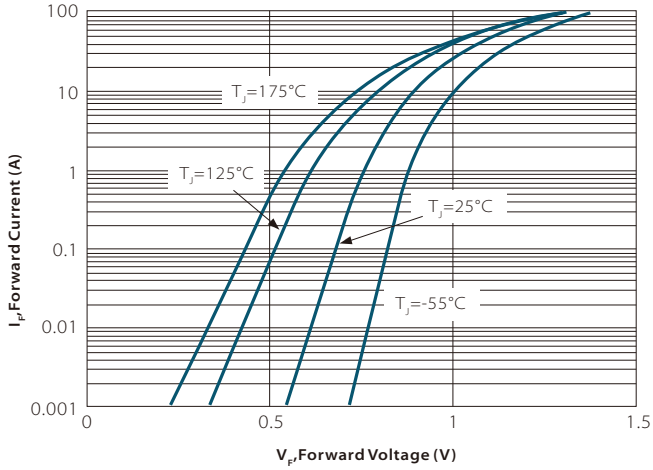
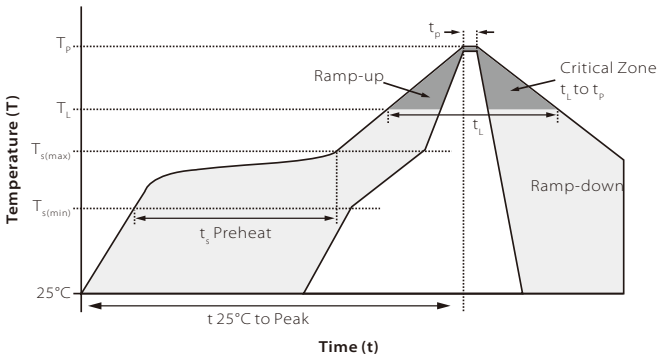


Fig.10 Typical Forward Characteristics

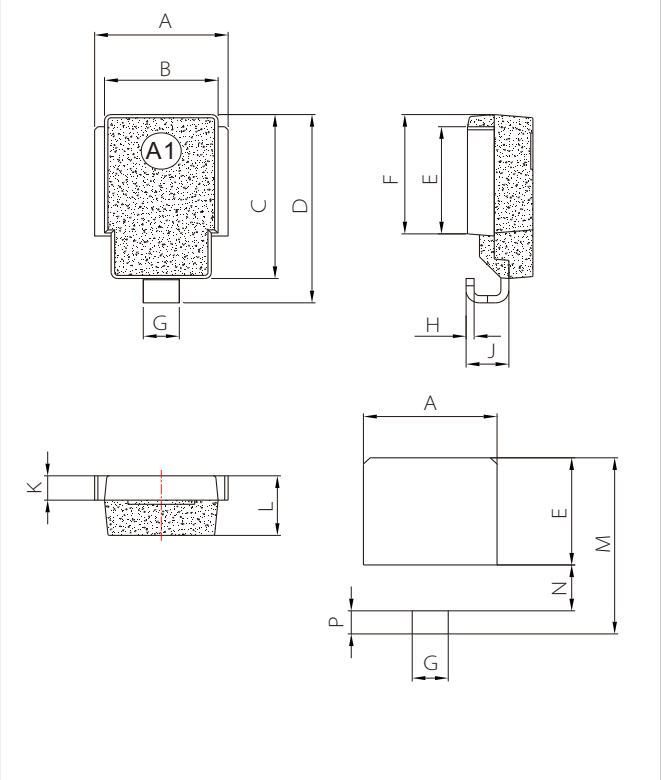


SOLDERING PARAMETERS

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-218AB PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	9.5	10.5	0.374	0.413
B	8.3	8.7	0.327	0.342
C	13.3	13.7	0.524	0.539
D	15.0	16.0	0.592	0.628
E	8.5	9.1	0.335	0.358
F	9.5	10.1	0.374	0.398
G	2.4	3.0	0.094	0.118
H	0.5	0.7	0.020	0.028
J	2.7	3.7	0.106	0.146
K	1.9	2.1	0.075	0.083
L	4.7	5.1	0.185	0.201
M	14.2	14.8	0.559	0.583
N	3.5	4.1	0.138	0.161
P	1.6	2.2	0.063	0.087

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SM8S14A-SM8S48A	DO-218AB	750PCS	13"

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