FEATURES

- Junction passivation optimized design passivated anisotropic rectifier technology.
- T_J = 175°C capability suitable for high reliability and automotive requirement.
- Available in Bi-directional polarity.
- Low leakage current.
- High surge capability.
- Meets ISO16750-2 surge specification(varied by test condition).
- Meet AEC-Q101 Requirements

DO-218AB

Schematic Symbol

TYPICAL APPLICATIONS

- Inductive load switching
- Alternator Load Dump
- Other applications in automotive circuits

APPROVALS

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

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000μs waveform (Note1)	P_{PPM}	10000	Watts
Power Dissipation On Infinite Heat Sink at T_L=75°C	$P_{M(AV)}$	8.5	Watts
Peak Pulse Current of on 10/1000us waveform (Note1)	I_{PPM}	237.5	Amps

Notes : 1.Non-repetitive current pulse,T_A=25°C.
2.8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum

THERMAL CONSIDERATIONS

Parameter	Symbol	Value	Unit
Operating junction Temperature	T_J	-55 to +175	°C
Storage Temperature Range	T_S	-55 to +175	°C
Junction to Ambient on Printed circuit	$R_{\theta JA}$	0.90	°C/W

ELECTRICAL CHARACTERISTICS

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}	Maximum Peak Pulse Current	Maximum Reverse Leakage @V_{RWM}	Reverse Leakage @VRWM T_J=175°C
		V_{RWM}(V)	V_{BR}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)	I_R(μA)
SM8T26CA-10KW	SM8T26CA	26.0	28.9	31.9	5.0	42.1	237.5	5.0	150.0

RATINGS AND CHARACTERISTICS CURVES (T_A=25°C)

Figure 1: Power derating curve

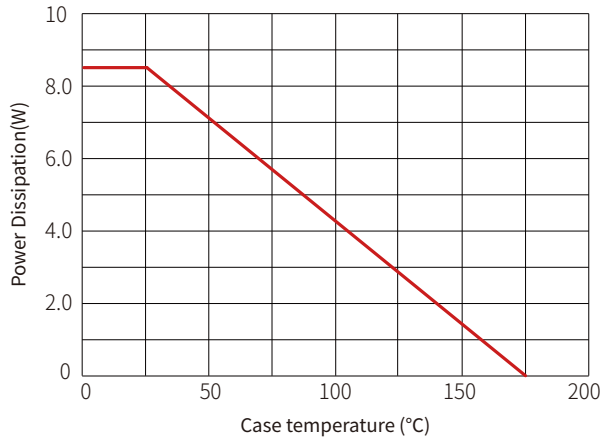


Figure 2: Load Dump Power Characteriscs

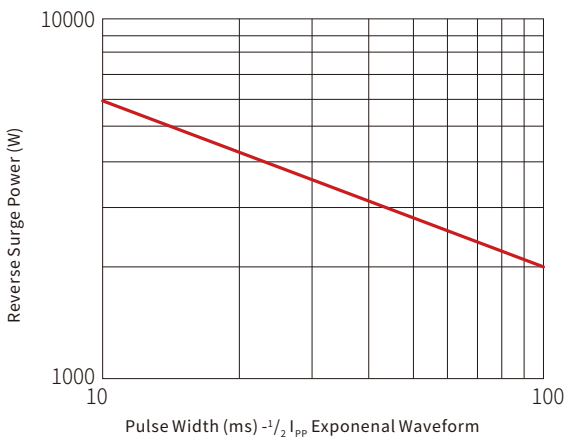


Figure 3: Pulse waveform

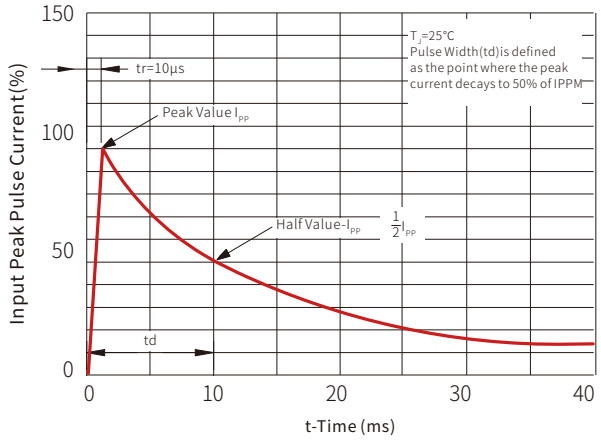
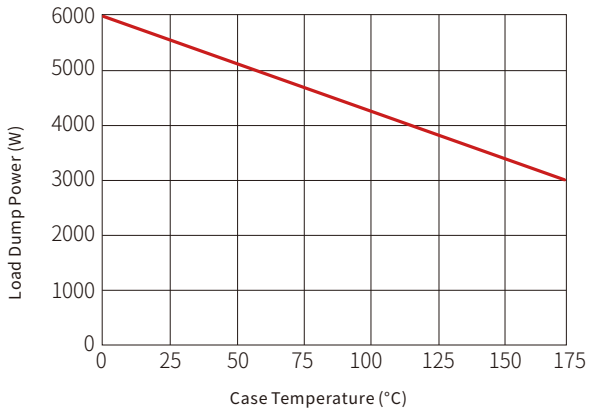
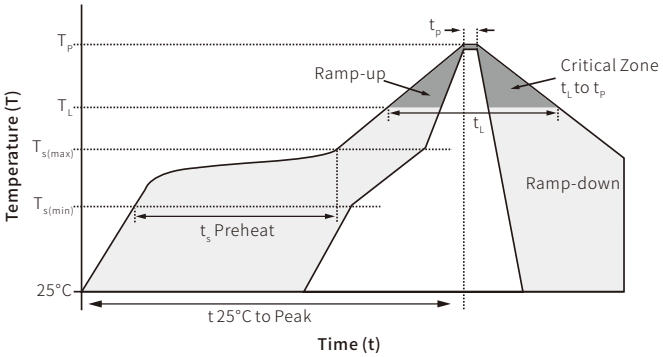


Figure 4: Reverse power capability

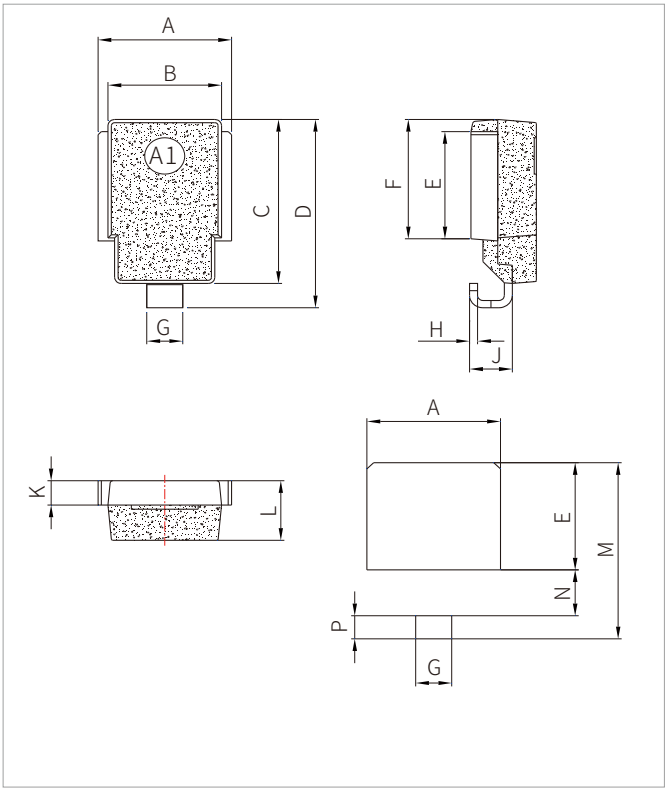


SOLDERING PARAMETERS

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
SM8T26CA-10KW	DO-218AB	750PCS	13”

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