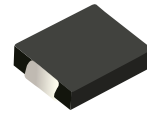
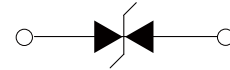


FEATURES

- | Glass passivated chip
- | 13000 W peak pulse power capability with a 10/1000 us waveform
- | Excellent clamping capability
- | Low reverse leakage
- | Very fast response time



DO-214AB(SMC)



Schematic Symbol

APPLICATIONS

- | Case: DO-214AB/(SMC) Molded plastic
- | Epoxy: UL 94V-0 rate flame retardant
- | Polarity: Color band denotes cathode end except Bipolar
- | Mounting position: Any

APPROVALS

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

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P_{PPM}	13000	Watts
Power dissipation on infinite heatsink at $T_L = 75^{\circ}\text{C}$	P_D	8.0	Watts

Note:

1)Non-repetitive current pulse per Fig.4 and derated above $T_A = 25^{\circ}\text{C}$ per Fig.1;

THERMAL CONSIDERATIONS

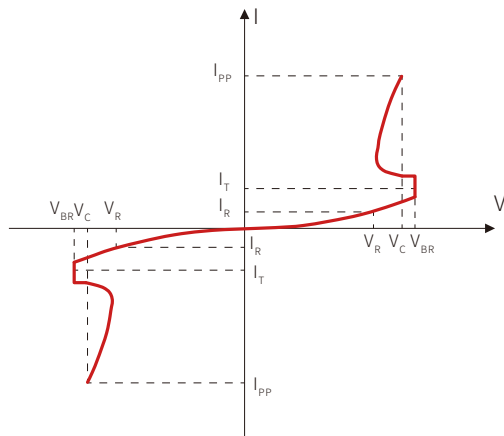
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

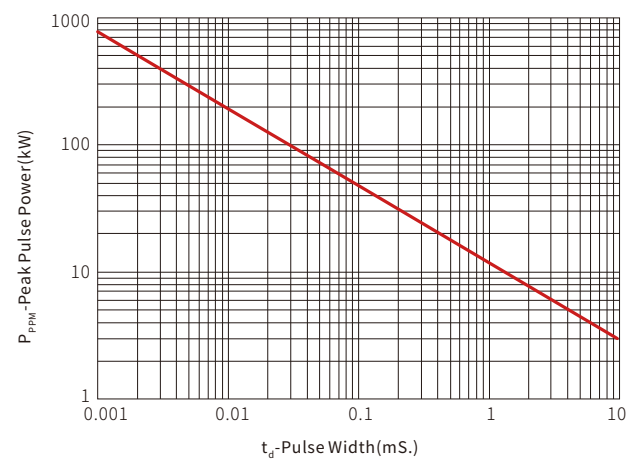
Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage Min.@ I_T	Breakdown Voltage Max.@ I_T	Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}
		V_{RWM} (V)	V_{BR} (V)	V_{BR} (V)	I_T (mA)	V_C (V)	I_{PP} (A)	I_R (μA)
13SMDJ87CA	13BGU	87.0	96.0	106.5	1	108	120	5

CHARACTERISTIC CURVES

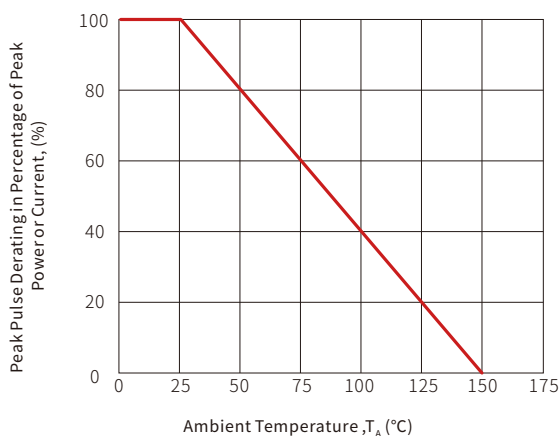
TVS Transients Clamping Waveform



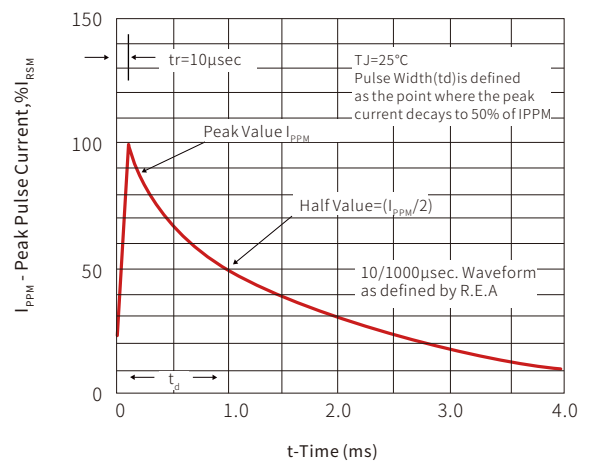
Peak Pulse Power Rating Curve



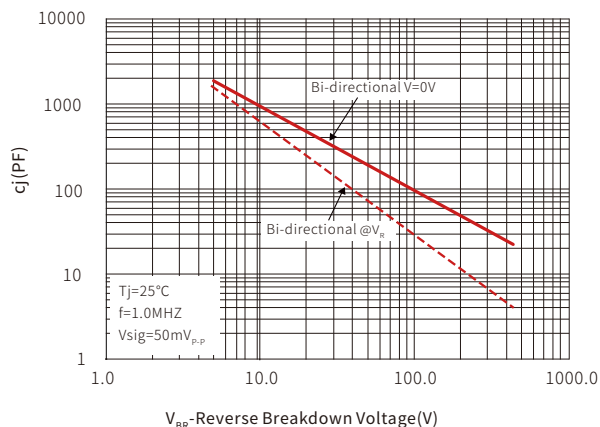
Pulse Derating Curve



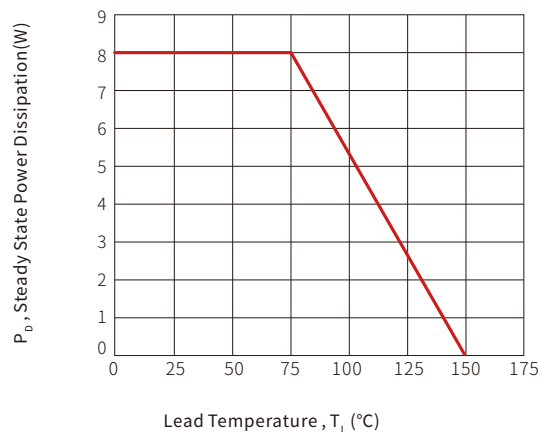
Pulse Waveform



Typical Junction Capacitance

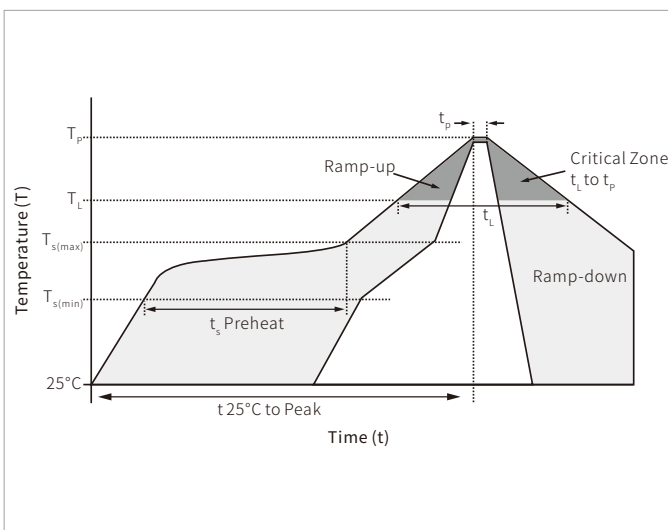


Steady State Power Dissipation Derating Curve

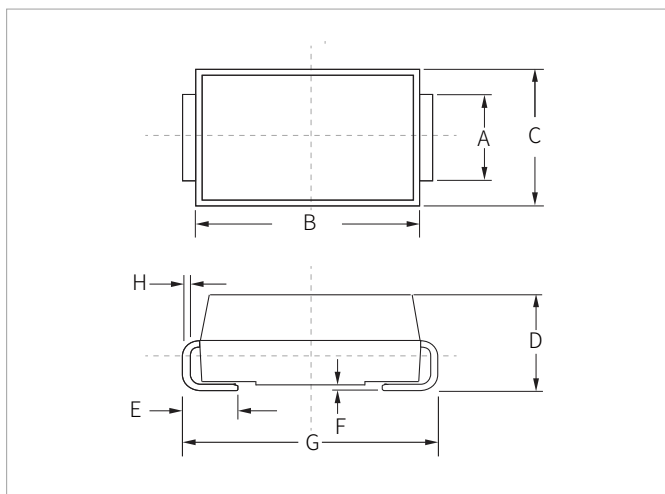


SOLDERING PARAMETERS

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

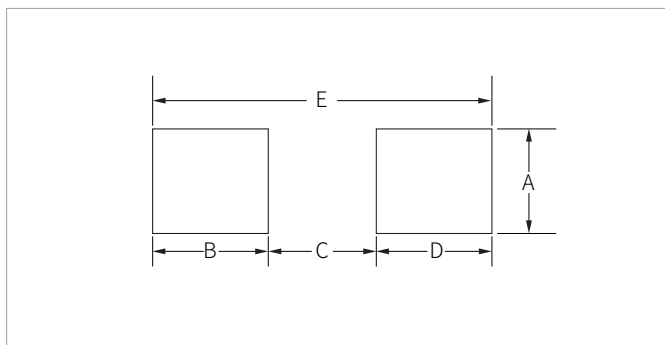


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
13SMDJ87CA	DO-214AB(SMC)	3000PCS	13"

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