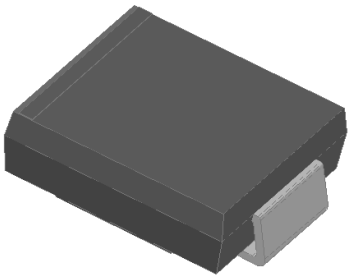
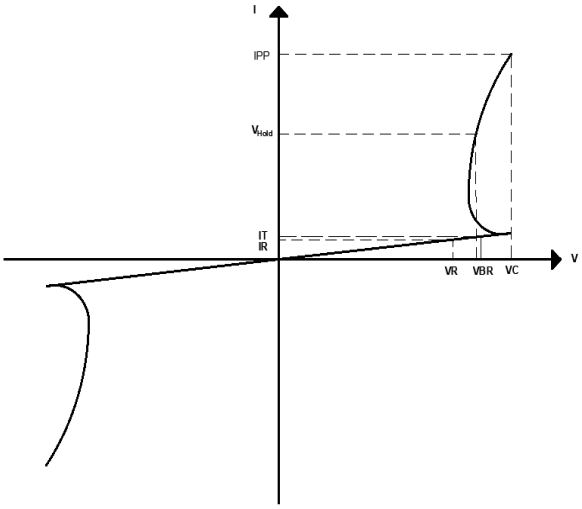
Surface Mount Transient Voltage Suppressor Diodes

Bi-directional





Features

- For surface mounted applications
- Low-profile package
- Ideal for automated placement
- 8000W peak pulse power capability with a 10/1000 μs waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260 °C/10 s at terminals
- Meets MSL level 1
- Component in accordance to RoHS

Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, telecommunication.

Mechanical Data

- **Package**: DO-214AB (SMC)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: For uni-directional types the band denotes cathode end

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Peak power dissipation, with a 10/1000us waveform (1)(2)	P_{PPM}	W	8000
Peak pulse current, with a 10/1000us waveform (1)	I_{PPM}	A	See Next Table
Operating junction and storage temperature range	T_J, T_{STG}	℃	-55 to +150
Electrostatic Discharge（HBM Model）	ESD	KV	8
Electrostatic Discharge（IEC61000-4-2 air discharge）	ESD	KV	±30
Electrostatic Discharge（IEC61000-4-2 contact discharge）			

■Thermal Characteristics （Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Thermal Resistance(Typical)	$R_{\theta J-A}$(4)	℃/W	junction to ambient	75
	$R_{\theta J-L}$	℃/W	junction to lead	15

Notes:
(1) Non-repetitive current pulse, per Fig. 3 and derated above T_A= 25℃ per Fig.2.
(2) Mounted on 0.31 x 0.31" (8.0 x 8.0 mm) copper pads to each terminal
(3) Measured on 8.3ms single half sine-wave or equivalent square wave,duty cycle=4 pulses per minute maximum.
(4) Mounted on minimum recommended pad layout.

■Electrical Characteristics (TA=25℃ unless otherwise noted)

Part Number	V_{BR}@I_T			I_R @ V_{RWM}	V_{RWM}	Vc@ IPP(1)		V_{Hold}@IPP(2)	
	V	V	mA	uA	V	V	A	V	A
	Min	Max	I_T	Max		Max		Typ	Min
P8.0SMDJ64CA	71.1	78.6	1	5	64	103	78	68	2000

Notes:
(1) Surge current waveform :10/1000us
(2) Surge current waveform: 8/20us，the Hold voltage is the typical value when the current is at its maximum；

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
P8.0SMDJ64CA	F1	Approximate 0.257	3000	/	42000	13” reel

■ Characteristics(Typical)

FIG1:Peak Pulse Power Rating Curve

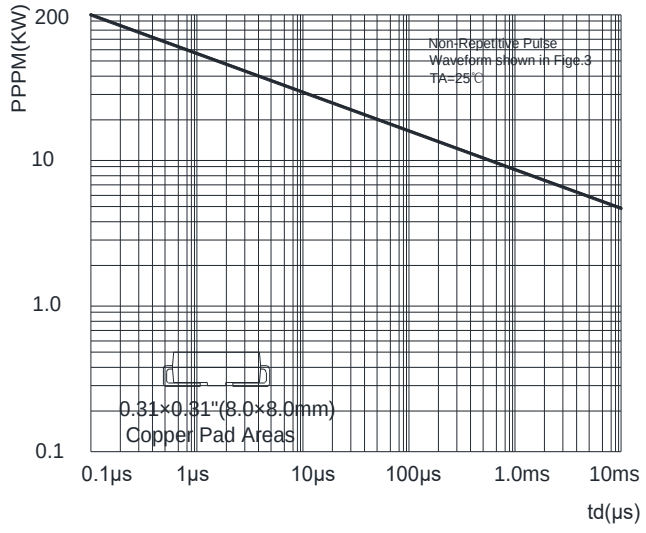


FIG2: Pulse Power or Current vs. Initial Junction Temperature

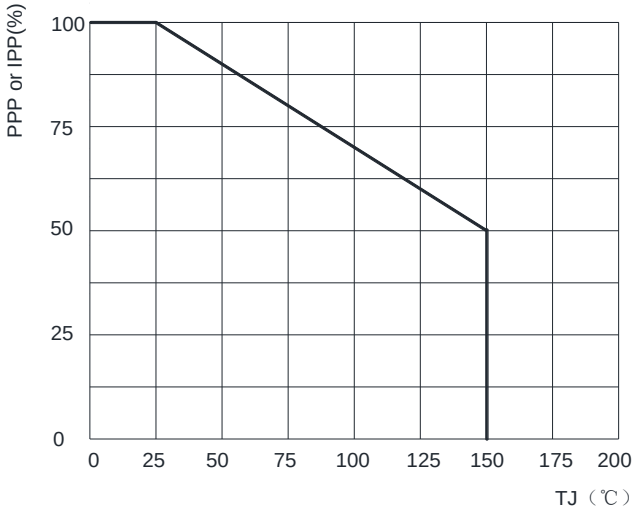


FIG3: Pulse Waveform

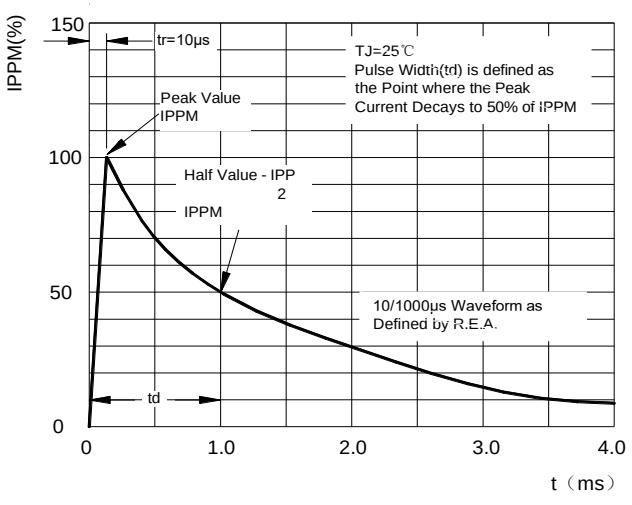
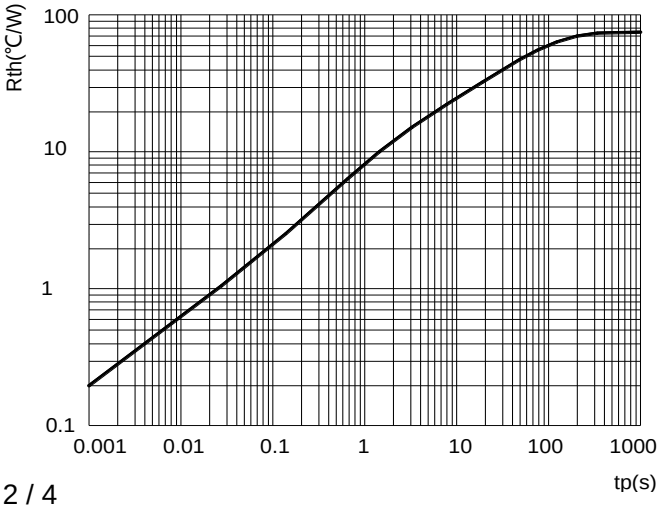
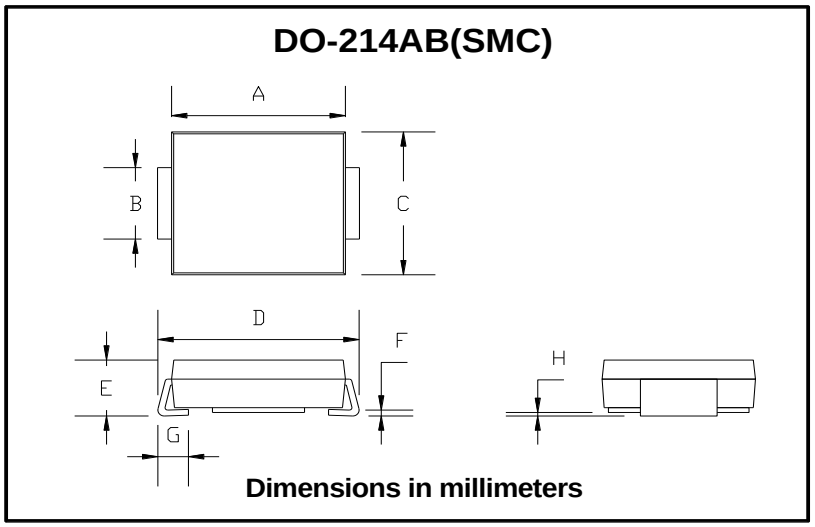


FIG4:Typical Transient Thermal Impedance

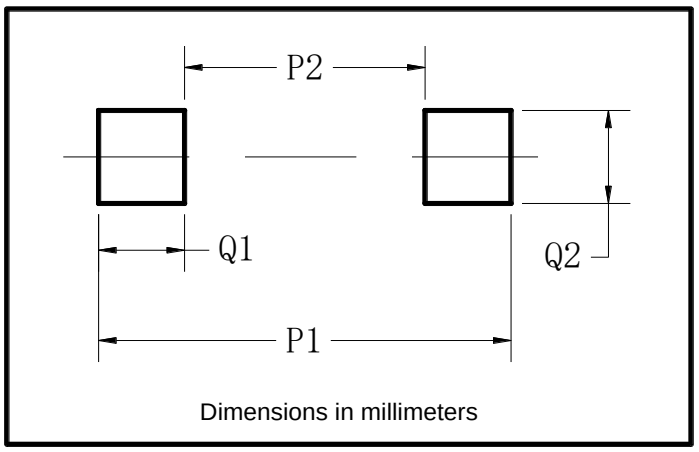


■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.05	0.20

■ Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82

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