

Features

- 3000 watts Peak Pulse Power (10/1000 μ s)
- Unidirectional and Bidirectional Protection
- Fast Response Time : Typically < 1ns
- Excellent Clamping Capability
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperaturesolder:260 $^{\circ}$ C/10 seconds at terminal
- AEC-Q101 compliant
- IEC 61000-4-2 (ESD) \pm 30kV(air), \pm 30kV(contact)

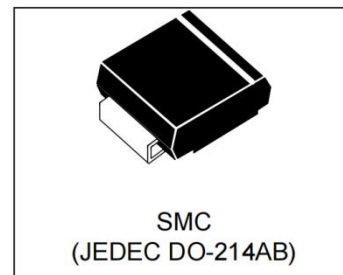
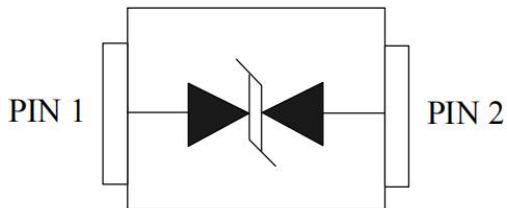
Application

- Auto power system
- Car audio and video
- Automotive instrument
- Car GPS
- Can-bus

Mechanical Characteristics

- JEDEC DO-214AB package
- Molding compound flammability rating: UL94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Equivalent Circuit & Pin Configuration



Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 10/1000\mu s$) (see Note1&2)	P _{PPM}	3000	Watts
Peak pulse current (10/1000 μs) (see Note2)	I _{PPM}	See Electrical Characteristics	A
Power Dissipation on infinite heat sink T _L = 50 °C (Fig 4)	P _D	6.5	W
Operating Junction Temperature range	T _J	-65 to + 150	°C
Storage Temperature range	T _{STG}	-65 to + 150	°C

Note1: Peak Pulse Power Rating as Pulse Width ,per Fig1.

Note2: Peak Pulse Power or Current Derated above T_A=25°C Per Fig. 2 and Non-Repetitive Current Pulse, Per Fig.3.

Electrical Characteristics (Ta=25°C)

Part Number		Reverse Stand off Voltage V_{RWM} (Volts)	Breakdown Voltage $V_{BR@IT}$ (Volts)		Test Current I_T (mA)	Maximum Clamping Voltage $V_C@I_{PP}$ (Volts)	Maximum Peak Pulse Current I_{PP} (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ (μ A)
UNI-POLAR	BI-POLAR		MIN	MAX				
SMDJ15AQ	SMDJ15CAQ	15	16.70	18.50	1	24.4	122.95	2
SMDJ16AQ	SMDJ16CAQ	16	17.80	19.70	1	26.0	115.38	2
SMDJ18AQ	SMDJ18CAQ	18	20.00	22.10	1	29.2	102.74	2
SMDJ20AQ	SMDJ20CAQ	20	22.20	24.50	1	32.4	92.59	2
SMDJ22AQ	SMDJ22CAQ	22	24.40	26.90	1	35.5	84.51	2
SMDJ24AQ	SMDJ24CAQ	24	26.70	29.50	1	38.9	77.09	2
SMDJ26AQ	SMDJ26CAQ	26	28.90	31.90	1	42.1	71.26	2
SMDJ28AQ	SMDJ28CAQ	28	31.10	34.40	1	45.4	66.08	2
SMDJ30AQ	SMDJ30CAQ	30	33.30	36.80	1	48.4	62.0	2
SMDJ33AQ	SMDJ33CAQ	33	36.70	40.60	1	53.3	56.29	2
SMDJ36AQ	SMDJ36CAQ	36	40.00	44.20	1	58.1	51.64	2
SMDJ40AQ	SMDJ40CAQ	40	44.40	49.10	1	64.5	46.51	2
SMDJ43AQ	SMDJ43CAQ	43	47.80	52.80	1	69.4	43.23	2
SMDJ45AQ	SMDJ45CAQ	45	50.00	55.30	1	72.7	41.27	2
SMDJ48AQ	SMDJ48CAQ	48	53.30	58.90	1	77.4	38.76	2
SMDJ51AQ	SMDJ51CAQ	51	56.70	62.70	1	82.4	36.39	2
SMDJ54AQ	SMDJ54CAQ	54	60.00	66.30	1	87.1	34.42	2
SMDJ58AQ	SMDJ58CAQ	58	64.40	71.20	1	93.6	32.11	2
SMDJ60AQ	SMDJ60CAQ	60	66.70	73.70	1	96.8	31.01	2
SMDJ64AQ	SMDJ64CAQ	64	71.10	78.60	1	103	29.09	2
SMDJ70AQ	SMDJ70CAQ	70	77.80	86.00	1	113	26.52	2
SMDJ75AQ	SMDJ75CAQ	75	83.30	92.10	1	121	24.83	2
SMDJ78AQ	SMDJ78CAQ	78	86.70	95.80	1	126	23.81	2
SMDJ85AQ	SMDJ85CAQ	85	94.40	104	1	137	21.90	2
SMDJ90AQ	SMDJ90CAQ	90	100	111	1	146	20.51	2

Typical Characteristics

Figure 1. Peak Pulse Power Rating Curve

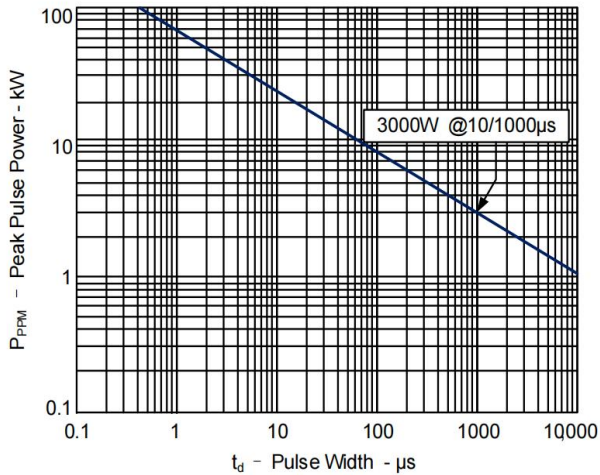


Figure 2. Pulse Derating Curve

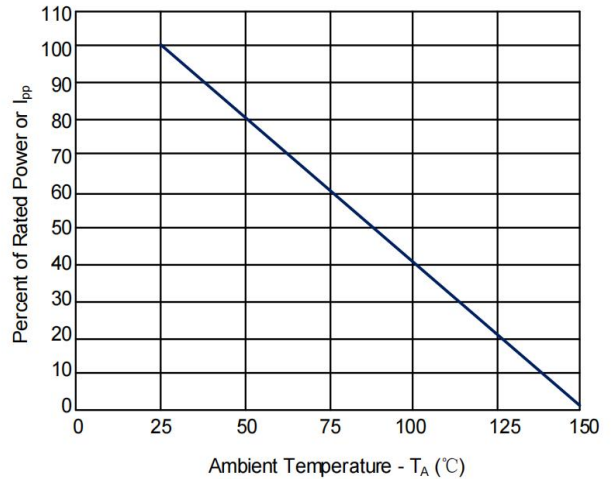


Figure 3. Pulse Waveform

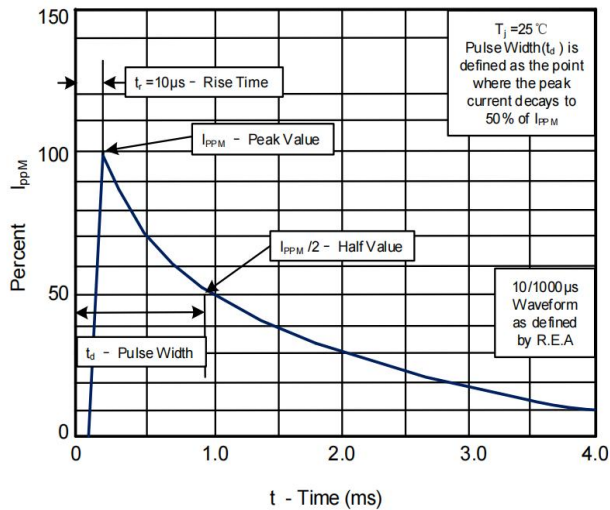
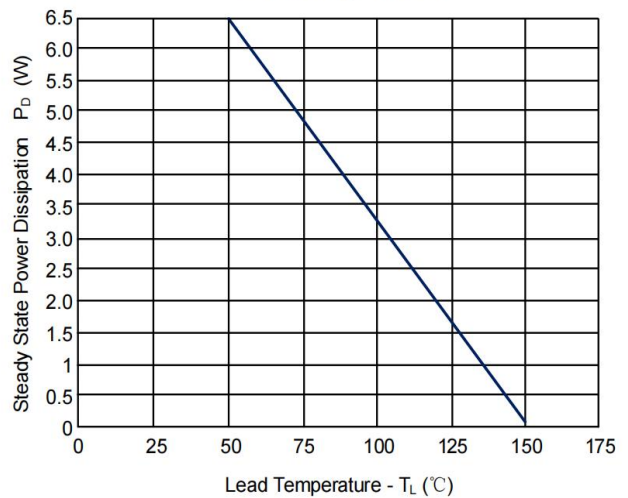


Figure 4. Steady State Power Dissipation Derating Curve



Making Code

For uni-directional products only ←



Note:

DCAQ: Making Code

XX: Date Code

Package Information

Package Type	Description	Quantity (pcs)
SMC(DO-214AB)	Tape & Reel -16mm/13" tape	3000

Outline Drawing – SMB(DO-214AB)

Ref. (mm)	Millimeters	
	Min.	Max.
A	2.06	2.70
A1	-	0.30
B	2.90	3.20
E	6.60	7.40
E1	7.75	8.13
D	5.59	6.22
L	0.76	1.52

