

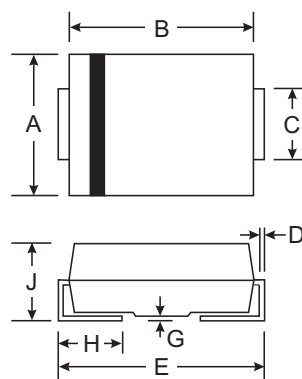
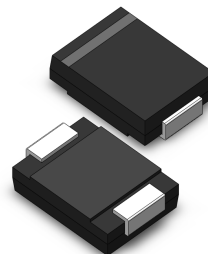
VOLTAGE RANGE: 6.8 - 43V
POWER: 1500Watts

Features

- a 10/1000ms waveform, repetition rate (duty cycle): 0.01%
- Excellent clamping capability
- Low incremental surge resistance
- Very fast response time

Mechanical Data

- Case: DO-214AB(SMC)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Marking: Date Code and Marking Code See Page 2
- Weight: 0.21 grams (approximate)



SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation with a 10/1000 μs waveform (1)(2) Fig.5	P _{PPM}	Minimum 1500	W
Peak power pulse current with a 10/1000μs waveform (1) Fig.2	I _{PPM}	See Next Table	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave (2)(3)	I _{FSM}	200	A
Maximum instantaneous forward voltage at 100A(3)	V _F	3.5	V
Operating and Storage Temperature Range	T _J , T _{STG}	- 65 to + 185	°C

Notes :

- (1) Non-repetitive Current pulse, per Fig. 5 and derated above T_a = 25 °C per Fig. 1
- (2) Mounted on 0.31 x 0.31" (8.0 x 8.0mm) 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

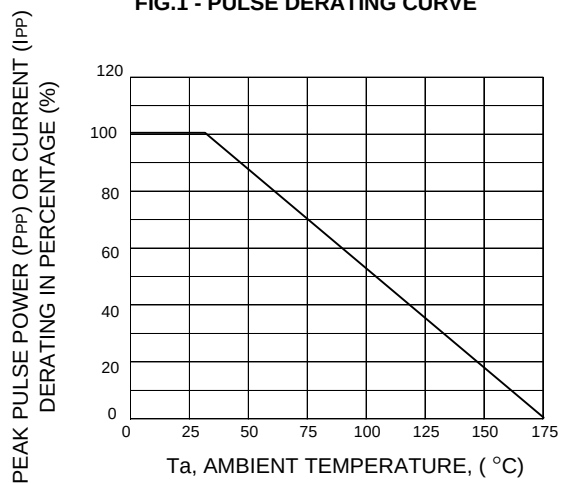
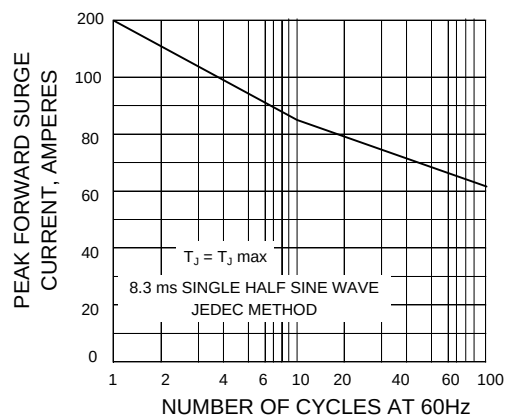
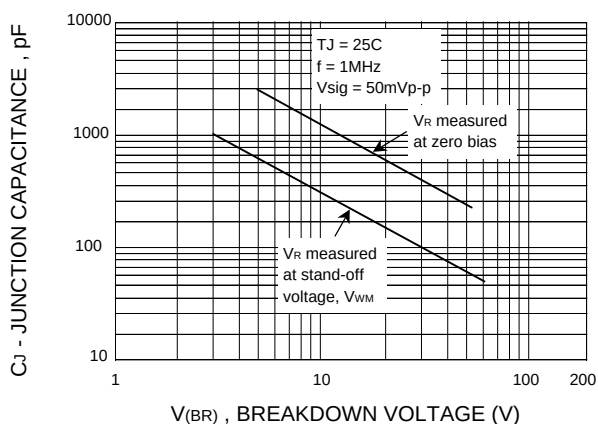
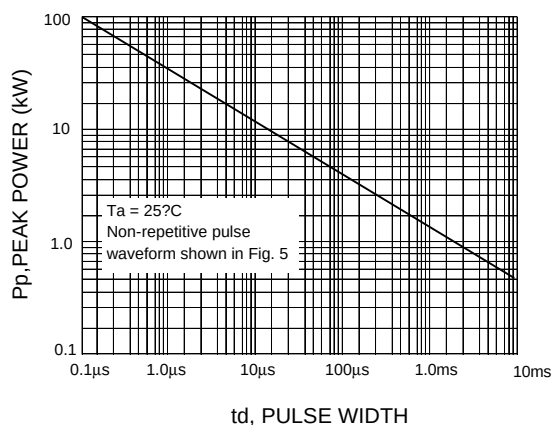


ELECTRICAL CHARACTERISTICS Rating at 25 °C ambient temperature unless otherwise specified

Type	Breakdown Voltage Min. @ I_T	Breakdown Voltage Max. @ I_T	Test Current	Reverse Stand-Off Voltage	Reverse Leakage @ V_{RWM}	Maximum Reverse Leakage @ V_{RWM} $T_j=150^{\circ}\text{C}$	Peak Pulse Current	Maximum Clamping Voltage @ I_{PP}
	$V_{BR\ MIN}(V)$	$V_{BR\ MAX}(V)$	$I_T(mA)$	$V_{RWM}(V)$	$I_R(\mu A)$	$I_D(\mu A)$	$I_{PP}(A)$	$V_C(V)$
TPSMC6.8CA	6.12	7.48	10	5.50	1000	10000	139	10.8
TPSMC6.8A	6.45	7.14	10	5.80	1000	10000	143	10.5
TPSMC7.5CA	6.75	8.25	10	6.05	500	5000	128	11.7
TPSMC7.5A	7.13	7.88	10	6.40	500	2000	132	11.3
TPSMC8.2CA	7.38	9.02	10	6.63	200	2000	120	12.5
TPSMC8.2A	7.79	8.61	10	7.02	200	500	124	12.1
TPSMC9.1CA	8.19	10.0	1.0	7.37	50	500	109	13.8
TPSMC9.1A	8.65	9.55	1.0	7.78	50	200	112	13.4
TPSMC10CA	9.00	11.0	1.0	8.10	20	200	100	15.0
TPSMC10A	9.50	10.5	1.0	8.55	20	50	103	14.5
TPSMC11CA	9.90	12.1	1.0	8.92	5.0	50	92.6	16.2
TPSMC11A	10.5	11.6	1.0	9.40	5.0	10	96.2	15.6
TPSMC12CA	10.8	13.2	1.0	9.72	2.0	10	86.7	17.3
TPSMC12A	11.4	12.6	1.0	10.2	2.0	10	89.8	16.7
TPSMC13CA	11.7	14.3	1.0	10.5	2.0	10	78.9	19.0
TPSMC13A	12.4	13.7	1.0	11.1	2.0	10	82.4	18.2
TPSMC15CA	13.5	16.5	1.0	12.1	1.0	10	68.2	22.0
TPSMC15A	14.3	15.8	1.0	12.8	1.0	10	70.8	21.2
TPSMC16CA	14.4	17.6	1.0	12.9	1.0	10	63.8	23.5
TPSMC16A	15.2	16.8	1.0	13.6	1.0	10	66.7	22.5
TPSMC18CA	16.2	19.8	1.0	14.5	1.0	10	56.6	26.5
TPSMC18A	17.1	18.9	1.0	15.3	1.0	10	59.5	25.2
TPSMC20CA	18.0	22.0	1.0	16.2	1.0	10	51.5	29.1
TPSMC20A	19.0	21.0	1.0	17.1	1.0	10	54.2	27.7
TPSMC22CA	19.8	24.2	1.0	17.8	1.0	10	47.0	31.9
TPSMC22A	20.9	23.1	1.0	18.8	1.0	10	49.0	30.6
TPSMC24CA	21.6	26.4	1.0	19.4	1.0	10	43.2	34.7
TPSMC24A	22.8	25.2	1.0	20.5	1.0	10	45.2	33.2
TPSMC27CA	24.3	29.7	1.0	21.8	1.0	10	38.4	39.1
TPSMC27A	25.7	28.4	1.0	23.1	1.0	10	40.0	37.5
TPSMC30CA	27.0	33.0	1.0	24.3	1.0	10	34.5	43.5
TPSMC30A	28.5	31.5	1.0	25.6	1.0	10	36.2	41.4
TPSMC33CA	29.7	36.3	1.0	26.8	1.0	10	31.4	47.7
TPSMC33A	31.4	34.7	1.0	28.2	1.0	10	32.8	45.7
TPSMC36CA	32.4	39.6	1.0	29.1	1.0	10	28.8	52.0
TPSMC36A	34.2	37.8	1.0	30.8	1.0	10	30.1	49.9
TPSMC39CA	35.1	42.9	1.0	31.6	1.0	10	26.6	56.4
TPSMC39A	37.1	41.0	1.0	33.3	1.0	10	27.8	53.9
TPSMC43CA	38.7	47.3	1.0	34.8	1.0	10	24.2	61.9
TPSMC43A	40.9	45.2	1.0	36.8	1.0	10	25.3	59.3

Notes :

- (1) V_{BR} measured after I_T applied for 300 μs , I_T = square wave pulse or equivalent.
- (2) Surge current waveform per Fig. 5 and derate per Fig. 1
- (3) "PSMC" will be omitted in marking on the diode.

FIG.1 - PULSE DERATING CURVE

FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

FIG.3 - TYPICAL JUNCTION CAPACITANCE

FIG.4 - PULSE RATING CURVE

FIG.5 - PULSE WAVEFORM
