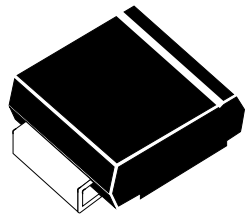
Features

- 3000 watts Peak Pulse Capability(10/1000μs waveform) Repetition Rate(duty cycles):0.01%
- Typical Maximum Temperature Coefficient $\Delta V_{BR} = 0.1\% \times V_{BR}$@25°C
- Glass Passivated chip junction in P600 Package
- Fast Response Time: Typically < 1.0ps from 0V to BV min
- Excellent Clamping Capability
- Low incremental surge resistance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Typical I_R less than 2μA above 12V
- High temperature soldering guaranteed:260°C /40 seconds/.375",(9.5mm) lead length,5lbs.,(2.3kg) tension
- Matte Tin Lead-free plated



SMDJ
(JEDEC DO-214AB)

Mechanical Characteristics

- JEDEC DO-214AB molded plastic
- Polarity: Color band denoted cathode except Bipolar
- Marking : Marking Code
- Mounting Position: Any
- RoHS/WEEE Compliant

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Signal lines of sensor units for consumer
- Industrial Electronics
- Computer

Maximum Rating and Thermal Characteristics (T_A=25°C)

Rating	Symbol	Value	Units
Peak Pulse Power (t_p =10/1000μs) (see Note1,2& 3)	P_{PPM}	3000	W
Peak pulse current (10/1000 μs) (see Note2&3)	I_{PPM}	See Electrical Characteristics	A
Peak Forward surge current (see Note4&5)	I_{FSM}	300	A
Power Dissipation on infinite heat sink T_A = 50 °C (Fig5)	P_D	6.5	W
Operating Junction Temperature range	T_J	-65 to 150	°C
Typical Thermal Resistance Junction to Lead	R_{uJL}	15	°C/W

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
2. Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4 per minute maximum.
3. Mounted on copper pad area of 0.31x0.31"(8.0x8.0mm) to each terminal

Electrical Characteristics

Part Number		Reverse Stand off Voltage V_{RWM}	Breakdown Voltage V_{BR}(V)@I_T		Test Current I_T	Maximum Clamping Voltage V_c@I_{PP}	Maximum PeakPulse Current I_{pp}	Maximum Reverse Leakage Current I_R@V_{RWM}
UNI-POLAR	BI-POLAR	(V)	MIN	MAX	(mA)	(V)	(A)	(μA)
SMDJ5.0A	SMDJ5.0CA	5.0	6.40	7.00	10	9.2	326.1	800
SMDJ6.0A	SMDJ6.0CA	6.0	6.67	7.37	10	10.3	291.3	800
SMDJ6.5A	SMDJ6.5CA	6.5	7.22	7.98	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	7.0	7.78	8.60	10	12.0	250.0	200
SMDJ7.5A	SMDJ7.5CA	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	8.0	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	8.5	9.44	10.40	1	14.4	208.3	20
SMDJ9.0A	SMDJ9.0CA	9.0	10.00	11.10	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	10.0	11.10	12.30	1	17.0	176.5	5
SMDJ11A	SMDJ11CA	11.0	12.20	13.50	1	18.2	164.8	2
SMDJ12A	SMDJ12CA	12.0	13.30	14.70	1	19.9	150.8	2
SMDJ13A	SMDJ13CA	13.0	14.40	15.90	1	21.5	139.5	2
SMDJ14A	SMDJ14CA	14.0	15.60	17.20	1	23.2	129.3	2
SMDJ15A	SMDJ15CA	15.0	16.70	18.50	1	24.4	123.0	2
SMDJ16A	SMDJ16CA	16.0	17.80	19.70	1	26.0	115.4	2
SMDJ17A	SMDJ17CA	17.0	18.90	20.90	1	27.6	108.7	2
SMDJ18A	SMDJ18CA	18.0	20.00	22.10	1	29.2	102.7	2
SMDJ20A	SMDJ20CA	20.0	22.20	24.50	1	32.4	92.6	2
SMDJ22A	SMDJ22CA	22.0	24.40	26.90	1	35.5	84.5	2
SMDJ24A	SMDJ24CA	24.0	26.70	29.50	1	38.9	77.1	2
SMDJ26A	SMDJ26CA	26.0	28.90	31.90	1	42.1	71.3	2
SMDJ28A	SMDJ28CA	28.0	31.10	34.40	1	45.4	66.1	2
SMDJ30A	SMDJ30CA	30.0	33.30	36.80	1	48.4	62.0	2
SMDJ33A	SMDJ33CA	33.0	36.70	40.60	1	53.3	56.3	2
SMDJ36A	SMDJ36CA	36.0	40.00	44.20	1	58.1	51.6	2
SMDJ40A	SMDJ40CA	40.0	44.40	49.10	1	64.5	46.5	2
SMDJ43A	SMDJ43CA	43.0	47.80	52.80	1	69.4	43.2	2

Electrical Characteristics (Cont.)

Part Number		Reverse Stand off Voltage V_{RWM} (V)	Breakdown Voltage V_{BR}(V)@I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_c@I_{PP} (V)	Maximum PeakPulse Current I_{pp} (A)	Maximum Reverse Leakage Current I_R@V_{RWM} (μA)
UNI-POLAR	BI-POLAR		MIN	MAX				
SMDJ45A	SMDJ45CA	45.0	50.00	55.30	1	72.7	41.3	2
SMDJ48A	SMDJ48CA	48.0	53.30	58.90	1	77.4	38.8	2
SMDJ51A	SMDJ51CA	51.0	56.70	62.70	1	82.4	36.4	2
SMDJ54A	SMDJ54CA	54.0	60.00	66.30	1	87.1	34.4	2
SMDJ58A	SMDJ58CA	58.0	64.40	71.20	1	93.6	32.1	2
SMDJ60A	SMDJ60CA	60.0	66.70	73.70	1	96.8	31.0	2
SMDJ64A	SMDJ64CA	64.0	71.10	78.60	1	103.0	29.1	2
SMDJ70A	SMDJ70CA	70.0	77.80	86.00	1	113.0	26.5	2
SMDJ75A	SMDJ75CA	75.0	83.30	92.10	1	121.0	24.8	2
SMDJ78A	SMDJ78CA	78.0	86.70	95.80	1	126.0	23.8	2
SMDJ85A	SMDJ 85CA	85.0	94.40	104.00	1	137.0	21.9	2
SMDJ 90A	SMDJ 90CA	90.0	100.00	111.00	1	146.0	20.5	2
SMDJ100A	SMDJ100CA	100.0	111.00	123.00	1	162.0	18.5	2
SMDJ110A	SMDJ110CA	110.0	122.00	135.00	1	177.0	16.9	2
SMDJ120A	SMDJ120CA	120.0	133.00	147.00	1	193.0	15.5	2
SMDJ130A	SMDJ130CA	130.0	144.00	159.00	1	209.0	14.4	2
SMDJ150A	SMDJ150CA	150.0	167.00	185.00	1	243.0	12.3	2
SMDJ160A	SMDJ160CA	160.0	178.00	197.00	1	259.0	11.6	2
SMDJ170A	SMDJ1710CA	170.0	189.00	209.00	1	275.0	10.9	2

Typical Characteristics

Figure 1. Peak Pulse Power Rating Curve

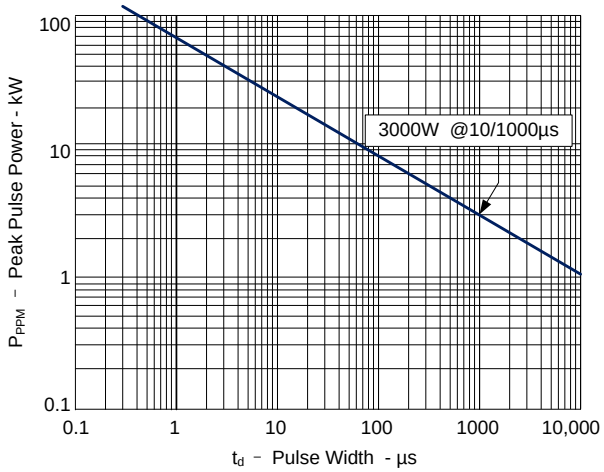


Figure 2. Pulse Derating Curve

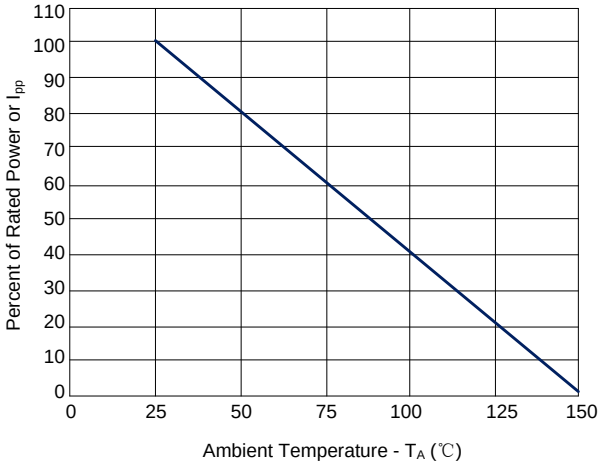


Figure 3. Pulse Waveform

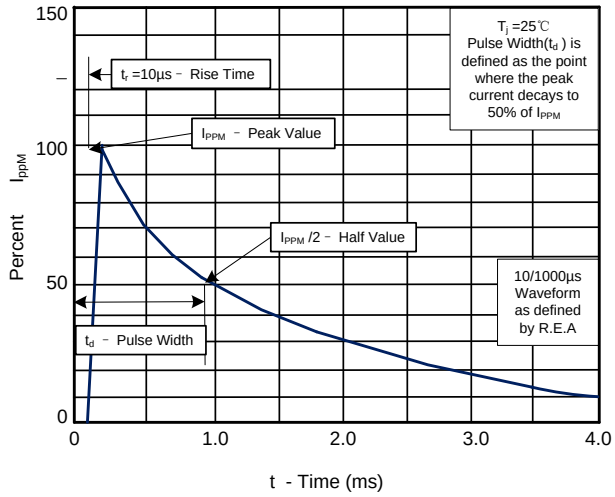


Figure 4. Typical Junction Capacitance

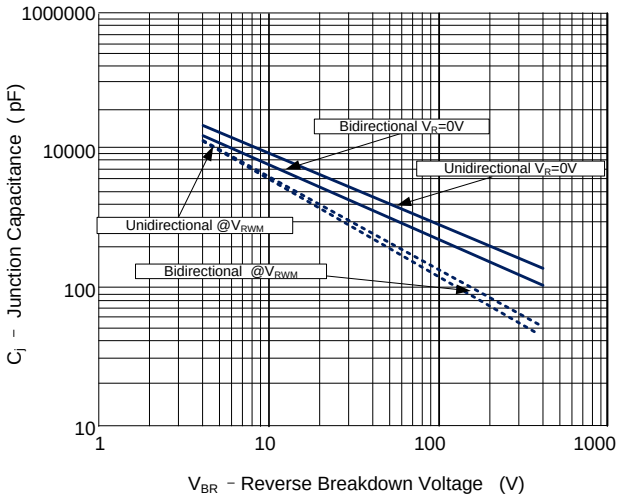


Figure 5. Steady State Power Dissipation Derating Curve

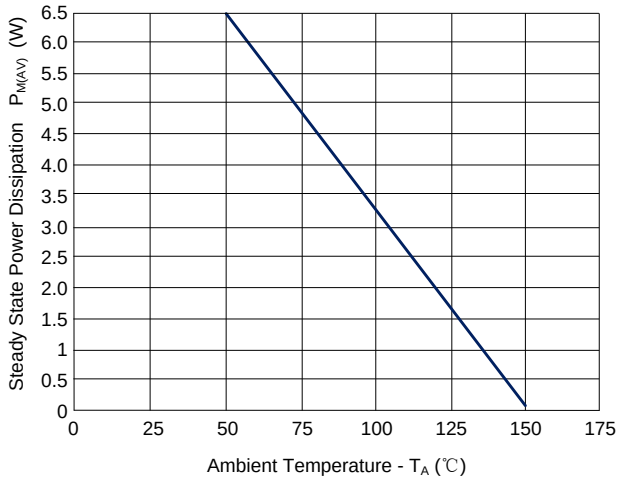
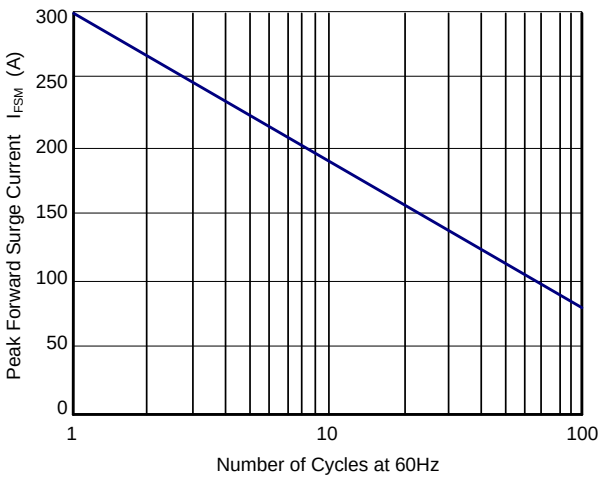


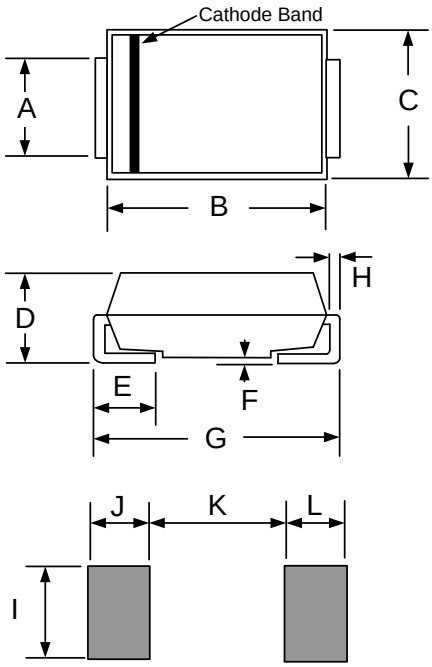
Figure 6. Maximum Non-Repetitive Forward Surge Current Only Unidirectional



Package Outline Dimension

Ref.(mm)	Inches		Millimeters	
	Min	Max	Min.	Max.
A	0.114	0.126	2.900	3.200
B	0.260	0.280	6.600	7.110
C	0.220	0.245	5.590	6.220
D	0.079	0.103	2.060	2.620
E	0.030	0.060	0.760	1.520
F	-	0.008	-	0.203
G	0.305	0.320	7.750	8.130
H	0.006	0.012	0.152	0.305
I	0.129	-	3.300	-
J	0.094	-	2.400	-
K	-	0.165	4.200	
L	0.094	-	2.400	-

DO-214AB(SMC J-Bend)



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