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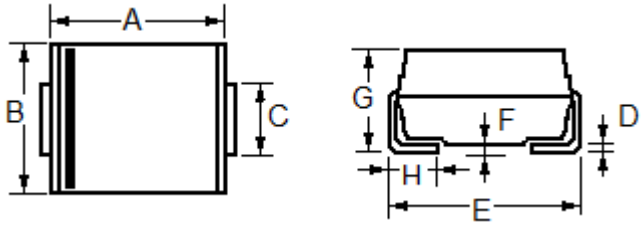
Surface Mount TVS SMDJ5.0--SMDJ170CA

- 3000 Watt Peak Power
- Dimension



SMD (DO-214AB)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	6.60	7.11	0.260	0.280
B	5.59	6.22	0.220	0.245
C	2.90	3.20	0.114	0.126
D	0.125	0.305	0.006	0.012
E	7.75	8.13	0.305	0.320
F	----	0.203	----	0.008
G	2.06	2.62	0.079	0.103
H	0.76	1.52	0.030	0.060

Maximum Ratings And Thermal Characteristics

Rating at 25℃ ambient temperature unless otherwise specified

Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @T_L = 25°C, Pulse Width = 1 ms	P_{PK}	3000	W
Forward Surge Current (Note 2.) @T_A = 25°C	I_{FSM}	200	A
Power Dissipation On Infinite Heatsink, @T_A = 50°C	$P_{M(AV)}$	5.0	W
Thermal Resistance Junction To Ambient Air (Note 3.)	$R_{\theta JA}$	75	°C/W
Thermal Resistance Junction To Leads	$R_{\theta JL}$	15	°C/W
Operating & Storage Temperature Range	T_{STG}	-55 to 150	°C
Operating Junction Temperature Range	T_J	-55 to 150	°C

1）10 X 1000 us, non–repetitive

2）1/2 sine wave (or equivalent square wave), PW = 8.3 ms, duty cycle = 4 pulses per minute maximum

3）Mounted on minimum recommended pad layout

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Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

Part Number	Part Number	Device Marking Code		Reverse Stand off Voltage VR (Volts)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μ A)
UNI	BI	UNI	BI		MIN	MAX				
SMDJ5.0A	SMDJ5.0CA	HDE	IDE	5	6.4	7.07	10	9.2	326.1	500
SMDJ6.0A	SMDJ6.0CA	HDG	IDG	6	6.67	7.37	10	10.3	291.3	500
SMDJ6.5A	SMDJ6.5CA	HDK	IDK	6.5	7.22	7.98	10	11.2	267.9	300
SMDJ7.0A	SMDJ7.0CA	HDM	IDM	7	7.78	8.6	10	12	250.0	200
SMDJ7.5A	SMDJ7.5CA	HDP	IDP	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	HDR	IDR	8	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	HDT	IDT	8.5	9.44	10.4	1	14.4	208.3	30
SMDJ9.0A	SMDJ9.0CA	HDV	IDV	9	10	11.1	1	15.4	194.8	30
SMDJ10A	SMDJ10CA	HDX	IDX	10	11.1	12.3	1	17	176.5	5
SMDJ11A	SMDJ11CA	HDZ	IDZ	11	12.2	13.5	1	18.2	164.8	1
SMDJ12A	SMDJ12CA	HEE	IEE	12	13.3	14.7	1	19.9	150.8	1
SMDJ13A	SMDJ13CA	HEG	IEG	13	14.4	15.9	1	21.5	139.5	1
SMDJ14A	SMDJ14CA	HEK	IEK	14	15.6	17.2	1	23.2	129.3	1
SMDJ15A	SMDJ15CA	HEM	IEM	15	16.7	18.5	1	24.4	123.0	1
SMDJ16A	SMDJ16CA	HEP	IEP	16	17.8	19.7	1	26	115.4	1
SMDJ17A	SMDJ17CA	HER	IER	17	18.9	20.9	1	27.6	108.7	1
SMDJ18A	SMDJ18CA	HET	IET	18	20	22.1	1	29.2	102.7	1
SMDJ20A	SMDJ20CA	HEV	IEV	20	22.2	24.5	1	32.4	92.6	1
SMDJ22A	SMDJ22CA	HEX	IEX	22	24.4	26.9	1	35.5	84.5	1
SMDJ24A	SMDJ24CA	HEZ	IEZ	24	26.7	29.5	1	38.9	77.1	1
SMDJ26A	SMDJ26CA	HFE	IFE	26	28.9	31.9	1	42.1	71.3	1
SMDJ28A	SMDJ28CA	HFG	IFG	28	31.1	34.4	1	45.4	66.1	1
SMDJ30A	SMDJ30CA	HFK	IFK	30	33.3	36.8	1	48.4	62.0	1
SMDJ33A	SMDJ33CA	HFM	IFM	33	36.7	40.6	1	53.3	56.3	1
SMDJ36A	SMDJ36CA	HFP	IFP	36	40	44.2	1	58.1	51.6	1
SMDJ40A	SMDJ40CA	HFR	IFR	40	44.4	49.1	1	64.5	46.5	1
SMDJ43A	SMDJ43CA	HFT	IFT	43	47.8	52.8	1	69.4	43.2	1
SMDJ45A	SMDJ45CA	HFV	IFV	45	50	55.3	1	72.7	41.3	1
SMDJ48A	SMDJ48CA	HFX	IFX	48	53.3	58.9	1	77.4	38.8	1
SMDJ51A	SMDJ51CA	HFZ	IFZ	51	56.7	62.7	1	82.4	36.4	1
SMDJ54A	SMDJ54CA	HGE	IGE	54	60	66.3	1	87.1	34.4	1
SMDJ58A	SMDJ58CA	HGG	IGG	58	64.4	71.2	1	93.6	32.1	1
SMDJ60A	SMDJ60CA	HGK	IGK	60	66.7	73.7	1	96.8	31.0	1
SMDJ64A	SMDJ64CA	HGM	IGM	64	71.1	78.6	1	103	29.1	1

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SMDJ70A	SMDJ70CA	HGP	IGP	70	77.8	86	1	113	26.5	1
SMDJ75A	SMDJ75CA	HGR	IGR	75	83.3	92.1	1	121	24.8	1
SMDJ78A	SMDJ78CA	HGT	IGT	78	86.7	95.8	1	126	23.8	1
SMDJ85A	SMDJ85CA	HGV	IGV	85	94.4	104	1	137	21.9	1
SMDJ90A	SMDJ90CA	HGX	IGX	90	100	111	1	146	20.5	1
SMDJ100A	SMDJ100CA	HGZ	IGZ	100	111	123	1	162	18.5	1
SMDJ110A	SMDJ110CA	HHE	IHE	110	122	135	1	177	16.9	1
SMDJ120A	SMDJ120CA	HHG	IHG	120	133	147	1	193	15.5	1
SMDJ130A	SMDJ130CA	HHK	IHK	130	144	159	1	209	14.4	1
SMDJ150A	SMDJ150CA	HHM	IHM	150	167	185	1	243	12.3	1
SMDJ160A	SMDJ160CA	HHP	IHP	160	178	197	1	259	11.6	1
SMDJ170A	SMDJ170CA	HHR	IHR	170	189	209	1	275	10.9	1

※For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

1. A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.
2. VBR measured at pulse test current IT at an ambient temperature of 25°C.
3. Surge current waveform per Figure 1 and derate per Figure 3.

Typical Characteristics

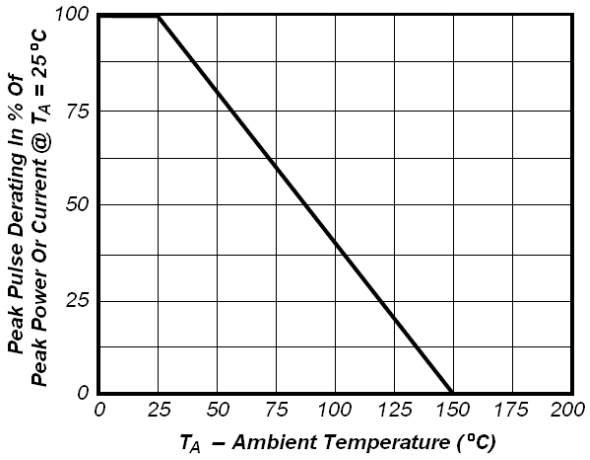

Fig1. Pulse Dearting Curve

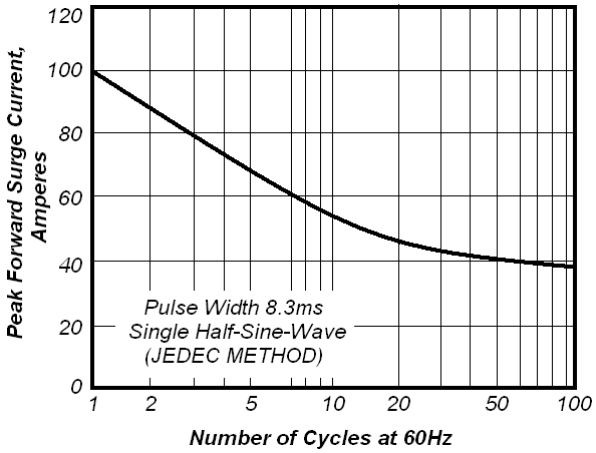

Fig2. Maximum Non-Repetitive Peak Forward Surge Current

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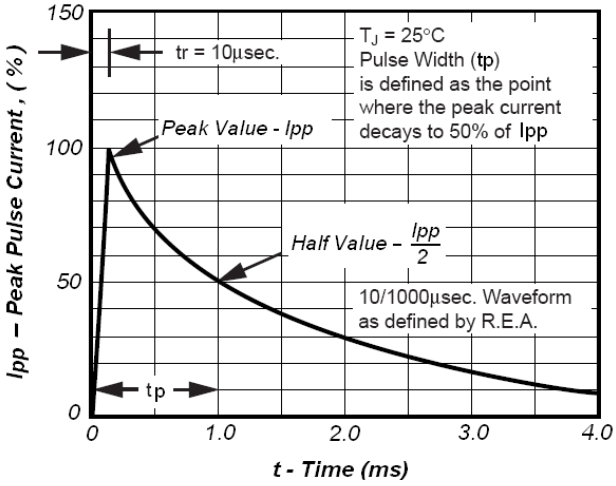

Fig3. Pulse Waveform

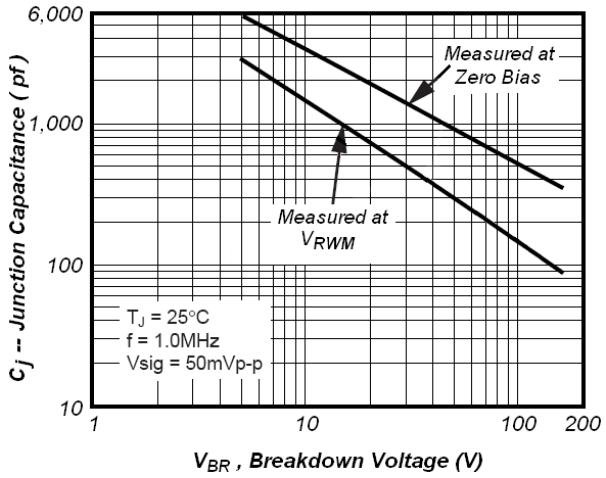

Fig4. Typical Junction Capacitance

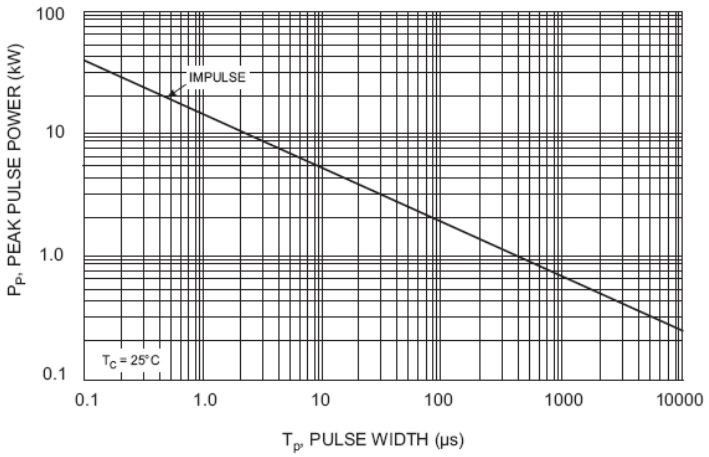

Fig5. Peak Pulse Power Rating curve

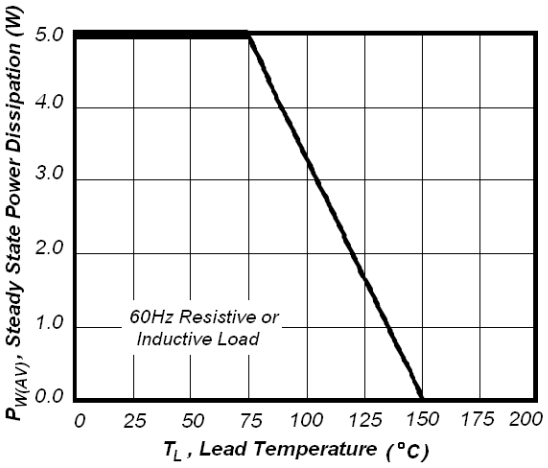

Fig6. Steady State Power Derating Curv