



E480232

Features

- AEC-Q101 Qualified
- For Surface Mount Applications in Order to Optimize Board Space
- Low Inductance
- Fast Response Time: Typical Less Than 1ps From 0V to V_{BR} min
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- For Bidirectional Devices Add "C" To The Suffix of The Part Number: i.e.SMBJ11CAHE3 for 5% Tolerance

Mechanical Data

- Polarity: Color Band Denotes Positive End(cathode) Except Bi-directional Types
- Maximum Soldering Temperature: 260°C for 10 Seconds
- Manufacturing Code Added for Better Tracking
- Terminals: Solderable Per MIL-STD-750, Method 2026

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance : 20°C/W Junction to Lead
- Thermal Resistance : 25°C/W Junction to Case

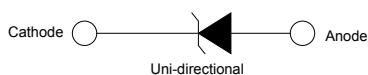
Electrical Characteristics @ 25°C Unless Otherwise Specified

Peak Pulse Power Surge Current on 10/1000µs Waveform	I_{PP}	See the Table	Note 2
Peak Pulse Power Dissipation	P_{PP}	600W	Note 2,3

NOTES:

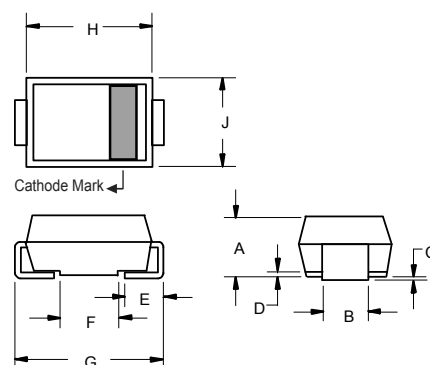
1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
2. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.4.
3. Mounted on 5.0mm² copper pads to each terminal.

Pin Configuration:



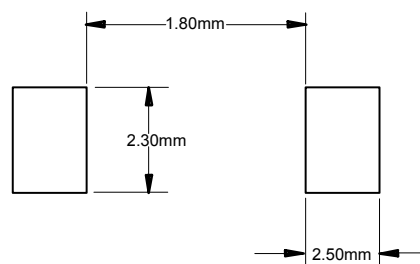
600 Watt TVS
11 to 78 Volts

SMB (DO-214AA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC PART NUMBER	REVERSE STAND-OFF VOLTAGE V_{WM}	BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ (VOLTS)			MAXIMUM CLAMPING VOLTAGE @ I_{PP}	PEAK PULSE CURRENT I_{PP}	MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D	MARKING CODE
	VOLTS	MIN	MAX	I_T (mA)	VOLTS	(AMPS)	(μA)	
SMBJ11AHE3	11	12.2	13.5	1	18.2	33.0	5	KZ
SMBJ12AHE3	12	13.3	14.7	1	19.9	30.2	5	LE
SMBJ13AHE3	13	14.4	15.9	1	21.5	27.9	5	LG
SMBJ14AHE3	14	15.6	17.2	1	23.2	25.8	5	LK
SMBJ15AHE3	15	16.7	18.5	1	24.4	24.0	5	LM
SMBJ16AHE3	16	17.8	19.7	1	26.0	23.1	5	LP
SMBJ17AHE3	17	18.9	20.9	1	27.6	21.7	5	LR
SMBJ18AHE3	18	20.0	22.1	1	29.2	20.5	5	LT
SMBJ20AHE3	20	22.2	24.5	1	32.4	18.5	5	LV
SMBJ22AHE3	22	24.4	26.9	1	35.5	16.9	5	LX
SMBJ24AHE3	24	26.7	29.5	1	38.9	15.4	5	LZ
SMBJ26AHE3	26	28.9	31.9	1	42.1	14.2	5	ME
SMBJ28AHE3	28	31.1	34.4	1	45.4	13.2	5	MG
SMBJ30AHE3	30	33.3	36.8	1	48.4	12.4	5	MK
SMBJ33AHE3	33	36.7	40.6	1	53.3	11.3	5	MM
SMBJ36AHE3	36	40.0	44.2	1	58.1	10.3	5	MP
SMBJ40AHE3	40	44.4	49.1	1	64.5	9.3	5	MR
SMBJ43AHE3	43	47.8	52.8	1	69.4	8.6	5	MT
SMBJ45AHE3	45	50.0	55.3	1	72.7	8.3	5	MV
SMBJ48AHE3	48	53.3	58.9	1	77.4	7.7	5	MX
SMBJ51AHE3	51	56.7	62.7	1	82.4	7.3	5	MZ
SMBJ54AHE3	54	60.0	66.3	1	87.1	6.9	5	NE
SMBJ58AHE3	58	64.4	71.2	1	93.6	6.4	5	NG
SMBJ60AHE3	60	66.7	73.7	1	96.8	6.2	5	NK
SMBJ64AHE3	64	71.1	78.6	1	103	5.8	5	NM
SMBJ70AHE3	70	77.8	86.0	1	113	5.3	5	NP
SMBJ75AHE3	75	83.3	92.1	1	121	4.9	5	NR
SMBJ78AHE3	78	86.7	95.8	1	126	4.7	5	NT
SMBJ11CAHE3	11	12.2	13.5	1	18.2	33.0	5	AZ
SMBJ12CAHE3	12	13.3	14.7	1	19.9	30.2	5	BE
SMBJ13CAHE3	13	14.4	15.9	1	21.5	27.9	5	BG
SMBJ14CAHE3	14	15.6	17.2	1	23.2	25.8	5	BK
SMBJ15CAHE3	15	16.7	18.5	1	24.4	24.0	5	BM
SMBJ16CAHE3	16	17.8	19.7	1	26.0	23.1	5	BP
SMBJ17CAHE3	17	18.9	20.9	1	27.6	21.7	5	BR
SMBJ18CAHE3	18	20.0	22.1	1	29.2	20.5	5	BT
SMBJ20CAHE3	20	22.2	24.5	1	32.4	18.5	5	BV
SMBJ22CAHE3	22	24.4	26.9	1	35.5	16.9	5	BX
SMBJ24CAHE3	24	26.7	29.5	1	38.9	15.4	5	BZ
SMBJ26CAHE3	26	28.9	31.9	1	42.1	14.2	5	CE
SMBJ28CAHE3	28	31.1	34.4	1	45.4	13.2	5	CG
SMBJ30CAHE3	30	33.3	36.8	1	48.4	12.4	5	CK
SMBJ33CAHE3	33	36.7	40.6	1	53.3	11.3	5	CM
SMBJ36CAHE3	36	40.0	44.2	1	58.1	10.3	5	CP
SMBJ40CAHE3	40	44.4	49.1	1	64.5	9.3	5	CR
SMBJ43CAHE3	43	47.8	52.8	1	69.4	8.6	5	CT
SMBJ45CAHE3	45	50.0	55.3	1	72.7	8.3	5	CV
SMBJ48CAHE3	48	53.3	58.9	1	77.4	7.7	5	CX
SMBJ51CAHE3	51	56.7	62.7	1	82.4	7.3	5	CZ

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	VOLTS	MIN	MAX	I_T (mA)	VOLTS	(AMPS)	(μA)	
SMBJ54CAHE3	54	60.0	66.3	1	87.1	6.9	5	DE
SMBJ58CAHE3	58	64.4	71.2	1	93.6	6.4	5	DG
SMBJ60CAHE3	60	66.7	73.7	1	96.8	6.2	5	DK
SMBJ64CAHE3	64	71.1	78.6	1	103	5.8	5	DM
SMBJ70CAHE3	70	77.8	86.0	1	113	5.3	5	DP
SMBJ75CAHE3	75	83.3	92.1	1	121	4.9	5	DR
SMBJ78CAHE3	78	86.7	95.8	1	126	4.7	5	DT

Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

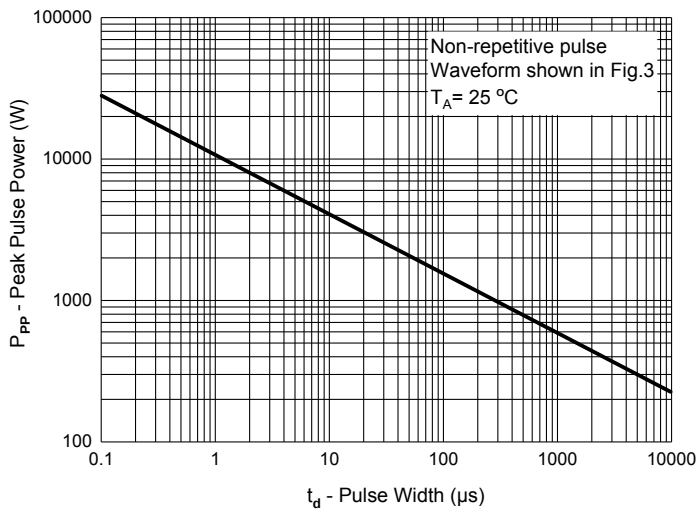


Fig. 2 - Typical Junction Capacitance

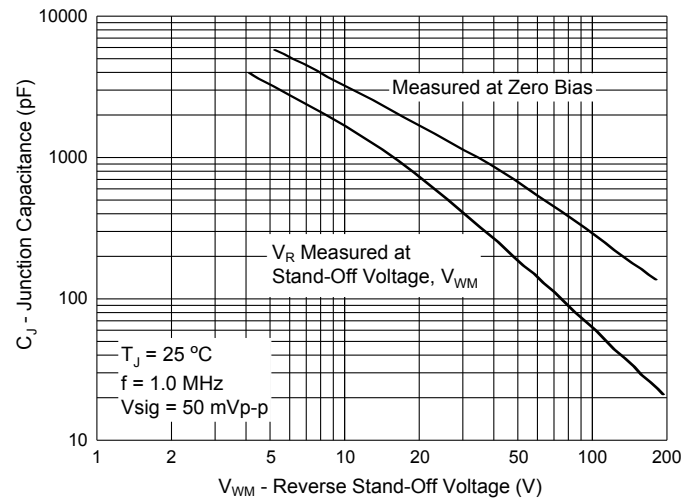


Fig. 3 - Pulse Waveform

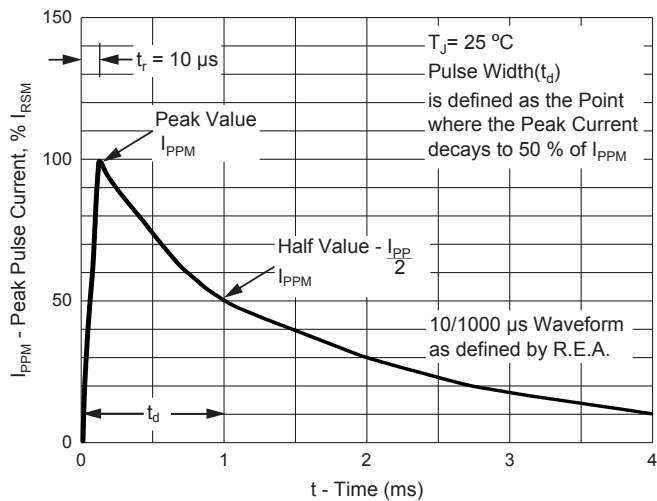
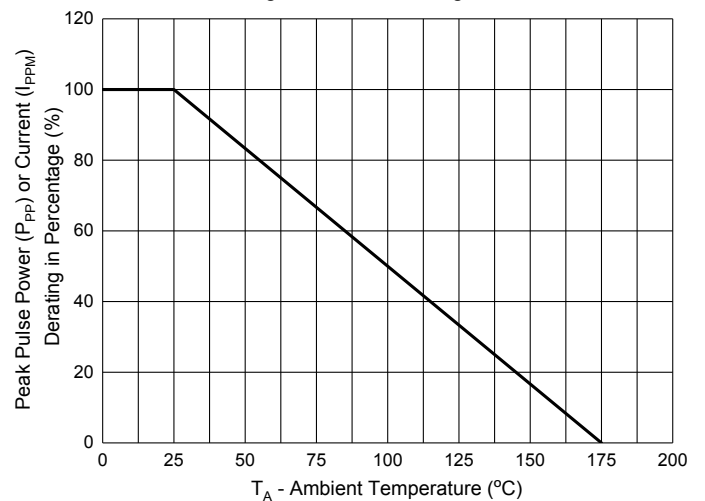


Fig. 4 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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