

**SMBJP6KE13(C)AHE3
THRU
SMBJP6KE91(C)AHE3**

Features

- Halogen free
- For surface mount applications in order to optimize board space
- Available in both unidirectional and bidirectional construction and suffix "C" designates bidirectional type
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Fast response time: typical less than 1.0ps from 0 volts to V_{BR} minimum
- Low inductance
- Meet AEC-Q101 Requirement
- Excellent clamping capability
- UL Recognized File # E331408

Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Terminals: solderable per MIL-STD-750, Method 2026
- Manufacturing code added for better tracking
- Polarity: Color band denotes positive end (cathode) except Bidirectional
- Maximum soldering temperature: 260°C for 10 seconds

Maximum Ratings @ 25°C Unless Otherwise Specified

Peak Pulse Current on 10/1000us waveform	I_{PP}	See Table 1	Note: 2
Peak Pulse Power Dissipation	P_{PP}	600W	Note: 2,
Operation And Storage Temperature Range	T_J, T_{STG}	-55°C to +175°C	
Thermal Resistance	R_{thJC}	25°C/W	
	R_{thJL}	20°C/W	

- NOTES: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.
2. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2.

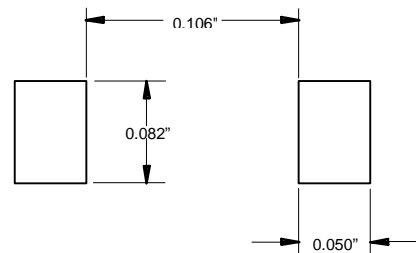
**Transient
Voltage Suppressor
13 to 91 Volts
600 Watt**

**DO-214AA
(SMBJ) (LEAD FRAME)**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.180	.185	4.06	4.70	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.200	.220	5.08	5.59	
F	.079	.096	2.00	2.44	
G	.075	.087	1.91	2.21	
H	.002	.008	0.05	0.203	

**SUGGESTED SOLDER
PAD LAYOUT**



SMBJP6KE13(C)AHE3 THRU SMBJP6KE91(C)AHE3

ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	REVERSE STAND-OFF VOLTAGE V_{WM} (VOLTS)	BREAKDOWN VOLTAGE $V_{(BR)}$ @ I_T (VOLTS)			MAXIMUM CLAMPING VOLTAGE @ I_{PP} (VOLTS)	PEAK PULSE CURRENT I_{PP} (AMPS)	MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D (μA)	MARKING CODE
		MIN	MAX	I_T (mA)				
SMBJP6KE13AHE3	11.10	12.40	13.70	1	18.2	33.5	1	13A
SMBJP6KE15AHE3	12.80	14.30	15.80	1	21.2	28.8	1	15A
SMBJP6KE16AHE3	13.60	15.20	16.80	1	22.5	27.1	1	16A
SMBJP6KE18AHE3	15.30	17.10	18.90	1	25.5	24.2	1	18A
SMBJP6KE20AHE3	17.10	19.00	21.00	1	27.7	22.0	1	20A
SMBJP6KE22AHE3	18.80	20.90	23.10	1	30.6	19.9	1	22A
SMBJP6KE24AHE3	20.50	22.80	25.20	1	33.2	18.4	1	24A
SMBJP6KE27AHE3	23.10	25.70	28.40	1	37.5	16.3	1	27A
SMBJP6KE30AHE3	25.60	28.50	31.50	1	41.4	14.7	1	30A
SMBJP6KE33AHE3	28.20	31.40	34.70	1	45.7	13.3	1	33A
SMBJP6KE36AHE3	30.80	34.20	37.80	1	49.9	12.2	1	36A
SMBJP6KE39AHE3	33.30	37.10	41.00	1	53.9	11.3	1	39A
SMBJP6KE43AHE3	36.80	40.90	45.20	1	59.3	10.3	1	43A
SMBJP6KE47AHE3	40.20	44.70	49.40	1	64.8	9.4	1	47A
SMBJP6KE51AHE3	43.60	48.50	53.60	1	70.1	8.7	1	51A
SMBJP6KE56AHE3	47.80	53.20	58.80	1	77.0	7.9	1	56A
SMBJP6KE62AHE3	53.00	58.90	65.10	1	85.0	7.2	1	62A
SMBJP6KE68AHE3	58.10	64.60	71.40	1	92.0	6.6	1	68A
SMBJP6KE75AHE3	64.10	71.30	78.80	1	103.0	5.9	1	75A
SMBJP6KE82AHE3	70.10	77.90	86.10	1	113.0	5.4	1	82A
SMBJP6KE91AHE3	77.80	86.50	95.50	1	125.0	4.9	1	91A

For bi-directional type having V_{rwm} of 10 volts and less, the I_R limit is double.

The available parts are "A" type only, the parts without A (V_{BR} is $\pm 10\%$) is not available.

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ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	REVERSE STAND-OFF VOLTAGE V_{WM} (VOLTS)	BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ (VOLTS)			MAXIMUM CLAMPING VOLTAGE @ I_{PP} (VOLTS)	PEAK PULSE CURRENT I_{PP} (AMPS)	MAXIMUM REVERSE LEAKAGE @ V_{WM} I_D (μA)	MARKING CODE
		MIN	MAX	I_T (mA)				
SMBJP6KE13CAHE3	11.10	12.40	13.70	1	18.2	33.5	1	13C
SMBJP6KE15CAHE3	12.80	14.30	15.80	1	21.2	28.8	1	15C
SMBJP6KE16CAHE3	13.60	15.20	16.80	1	22.5	27.1	1	16C
SMBJP6KE18CAHE3	15.30	17.10	18.90	1	25.5	24.2	1	18C
SMBJP6KE20CAHE3	17.10	19.00	21.00	1	27.7	22.0	1	20C
SMBJP6KE22CAHE3	18.80	20.90	23.10	1	30.6	19.9	1	22C
SMBJP6KE24CAHE3	20.50	22.80	25.20	1	33.2	18.4	1	24C
SMBJP6KE27CAHE3	23.10	25.70	28.40	1	37.5	16.3	1	27C
SMBJP6KE30CAHE3	25.60	28.50	31.50	1	41.4	14.7	1	30C
SMBJP6KE33CAHE3	28.20	31.40	34.70	1	45.7	13.3	1	33C
SMBJP6KE36CAHE3	30.80	34.20	37.80	1	49.9	12.2	1	36C
SMBJP6KE39CAHE3	33.30	37.10	41.00	1	53.9	11.3	1	39C
SMBJP6KE43CAHE3	36.80	40.90	45.20	1	59.3	10.3	1	43C
SMBJP6KE47CAHE3	40.20	44.70	49.40	1	64.8	9.4	1	47C
SMBJP6KE51CAHE3	43.60	48.50	53.60	1	70.1	8.7	1	51C
SMBJP6KE56CAHE3	47.80	53.20	58.80	1	77.0	7.9	1	56C
SMBJP6KE62CAHE3	53.00	58.90	65.10	1	85.0	7.2	1	62C
SMBJP6KE68CAHE3	58.10	64.60	71.40	1	92.0	6.6	1	68C
SMBJP6KE75CAHE3	64.10	71.30	78.80	1	103.0	5.9	1	75C
SMBJP6KE82CAHE3	70.10	77.90	86.10	1	113.0	5.4	1	82C
SMBJP6KE91CAHE3	77.80	86.50	95.50	1	125.0	4.9	1	91C

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Peak Pulse Power Rating Curve

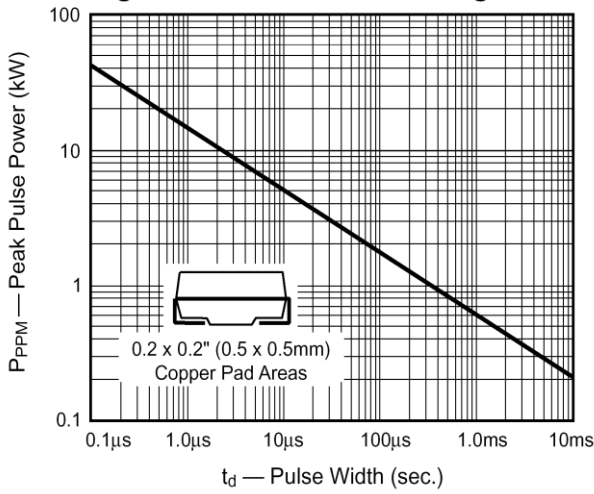


Fig. 2-PULSE RATING CURVE

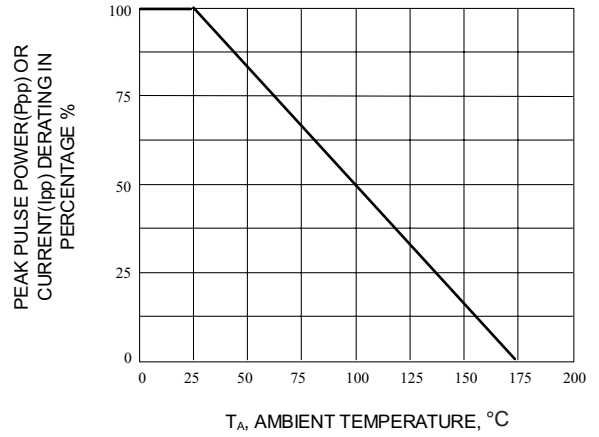


Fig. 3 – Pulse Waveform

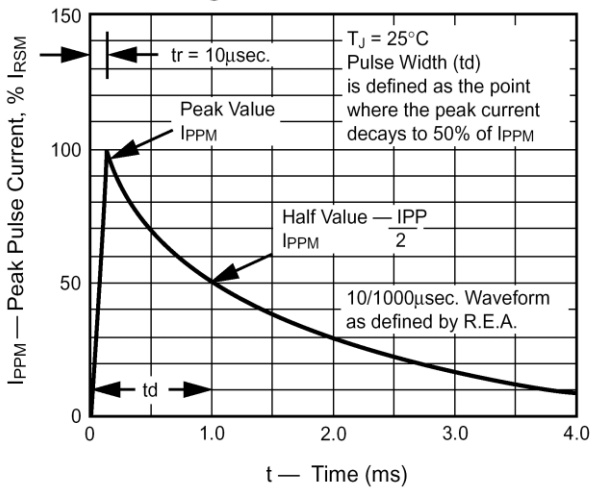


Fig. 4 – Typical Junction Capacitance

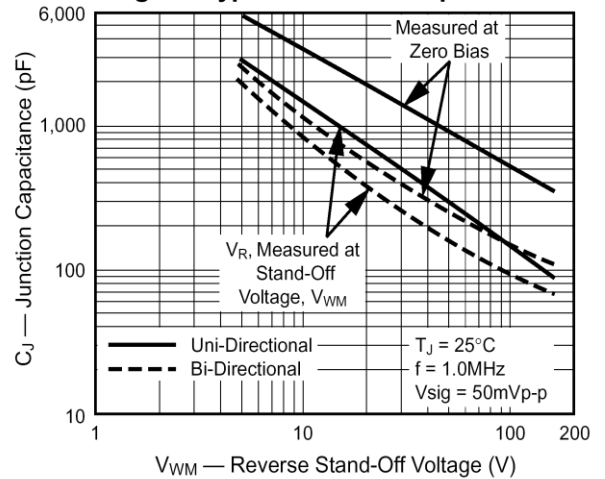
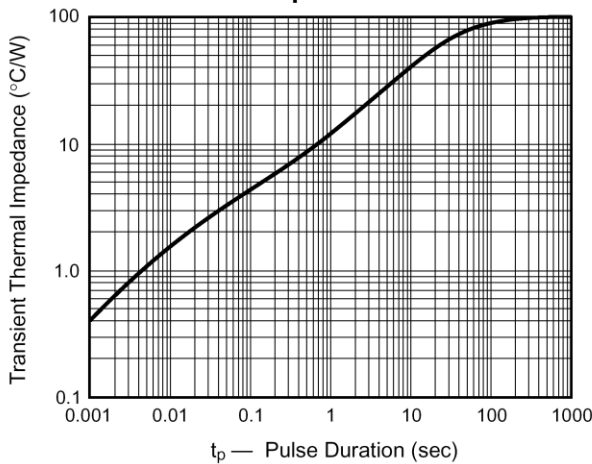


Fig. 5 – Typical Transient Thermal Impedance





Micro Commercial Components

Ordering Information :

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

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