	E480232

400 Watt TVS
12 to 220 Volts

Features

- AEC-Q101 Qualified
- For Surface Mount Applicationsin in Order to Optimize Board Space
- Halogen Free. “Green” Device (Note 1)
- Low Profile Package
- Unidirectional and Bidirectional Available,for Bidirectional Devices add 'C' Suffix to The pn#, i.e.SMAJP4KE12CAHE3
- Fast Response Time: Typical Less Than 1.0ps From 0 Volts to V_{BR} Minimum
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating

Mechanical Data

- Polarity: Color Band Denotes Positive end (cathode) Except Bidirectional
- Maximum Soldering Temperature: 260°C for 10 Seconds
- Manufacturing Code Added for Better Tracking
- CASE:JEDEC DO214AC
- Terminals: Plated Axial leads, Solderable Per MIL-STD-750, Methode 2026

Maximum Ratings

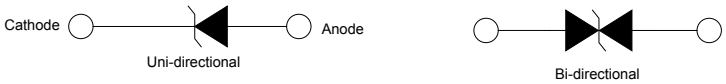
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 100°C/W Junction to Ambient

Peak Pulse Power Surge Current with a 10/1000μs Waveform	I_{PP}	See the Table	Note 2
Peak Pulse Power Dissipation	P_{PP}	400W	Note 2

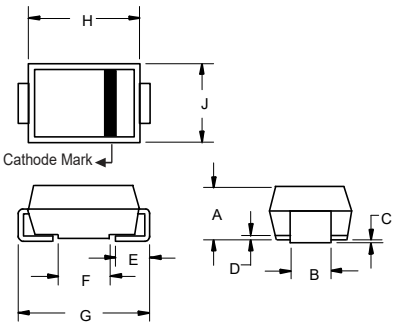
Note:

1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Non-repetitive current pulse, per Fig.3 and derated above T_A=25 °C per Fig.4.
3. Mounted on 5.0mm² copper pads to each terminal.

Pin Configuration:

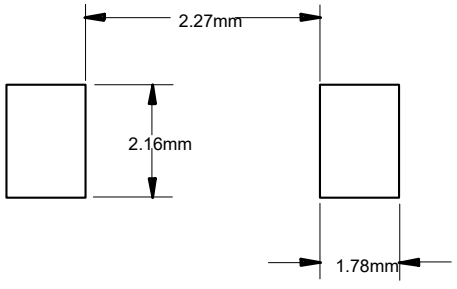


SMA (DO-214AC)
LEAD FRAME



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.096	2.00	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.181	4.00	4.60	
J	0.090	0.115	2.25	2.92	

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	
SMAJP4KE12AHE3	10.20	11.40	12.60	1	16.7	24.6	5	12A
SMAJP4KE13AHE3	11.10	12.40	13.70	1	18.2	22.5	1	13A
SMAJP4KE15AHE3	12.80	14.30	15.80	1	21.2	19.3	1	15A
SMAJP4KE16AHE3	13.60	15.20	16.80	1	22.5	18.2	1	16A
SMAJP4KE18AHE3	15.30	17.10	18.90	1	25.5	16.1	1	18A
SMAJP4KE20AHE3	17.10	19.00	21.00	1	27.7	14.8	1	20A
SMAJP4KE22AHE3	18.80	20.90	23.10	1	30.6	13.4	1	22A
SMAJP4KE24AHE3	20.50	22.80	25.20	1	33.2	12.3	1	24A
SMAJP4KE27AHE3	23.10	25.70	28.40	1	37.5	10.9	1	27A
SMAJP4KE30AHE3	25.60	28.50	31.50	1	41.4	9.9	1	30A
SMAJP4KE33AHE3	28.20	31.40	34.70	1	45.7	9.0	1	33A
SMAJP4KE36AHE3	30.80	34.20	37.80	1	49.9	8.2	1	36A
SMAJP4KE39AHE3	33.30	37.10	41.00	1	53.9	7.6	1	39A
SMAJP4KE43AHE3	36.80	40.90	45.20	1	59.3	6.9	1	43A
SMAJP4KE47AHE3	40.20	44.70	49.40	1	64.8	6.3	1	47A
SMAJP4KE51AHE3	43.60	48.50	53.60	1	70.1	5.8	1	51A
SMAJP4KE56AHE3	47.80	53.20	58.80	1	77.0	5.3	1	56A
SMAJP4KE62AHE3	53.00	58.90	65.10	1	85.0	4.8	1	62A
SMAJP4KE68AHE3	58.10	64.60	71.40	1	92.0	4.5	1	68A
SMAJP4KE75AHE3	64.10	71.30	78.80	1	103.0	4.0	1	75A
SMAJP4KE82AHE3	70.10	77.90	86.10	1	113.0	3.6	1	82A
SMAJP4KE91AHE3	77.80	86.50	95.50	1	125.0	3.3	1	91A
SMAJP4KE100AHE3	85.50	95.00	105.00	1	137.0	3.0	1	100A
SMAJP4KE110AHE3	94.00	105.00	116.00	1	152.0	2.7	1	110A
SMAJP4KE120AHE3	102.00	114.00	126.00	1	165.0	2.5	1	120A
SMAJP4KE130AHE3	111.00	124.00	137.00	1	179.0	2.3	1	130A
SMAJP4KE150AHE3	128.00	143.00	158.00	1	207.0	2.0	1	150A
SMAJP4KE160AHE3	136.00	152.00	168.00	1	219.0	1.9	1	160A
SMAJP4KE170AHE3	145.00	162.00	179.00	1	234.0	1.8	1	170A
SMAJP4KE180AHE3	154.00	171.00	189.00	1	246.0	1.7	1	180A
SMAJP4KE200AHE3	171.00	190.00	210.00	1	274.0	1.5	1	200A
SMAJP4KE220AHE3	185.00	209.00	231.00	1	328.0	1.2	1	220A

Note:
*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 ±10%) is not available.

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	
SMAJP4KE12CAHE3	10.20	11.40	12.60	1	16.7	24.6	5	12C
SMAJP4KE13CAHE3	11.10	12.40	13.70	1	18.2	22.5	1	13C
SMAJP4KE15CAHE3	12.80	14.30	15.80	1	21.2	19.3	1	15C
SMAJP4KE16CAHE3	13.60	15.20	16.80	1	22.5	18.2	1	16C
SMAJP4KE18CAHE3	15.30	17.10	18.90	1	25.5	16.1	1	18C
SMAJP4KE20CAHE3	17.10	19.00	21.00	1	27.7	14.8	1	20C
SMAJP4KE22CAHE3	18.80	20.90	23.10	1	30.6	13.4	1	22C
SMAJP4KE24CAHE3	20.50	22.80	25.20	1	33.2	12.3	1	24C
SMAJP4KE27CAHE3	23.10	25.70	28.40	1	37.5	10.9	1	27C
SMAJP4KE30CAHE3	25.60	28.50	31.50	1	41.4	9.9	1	30C
SMAJP4KE33CAHE3	28.20	31.40	34.70	1	45.7	9.0	1	33C
SMAJP4KE36CAHE3	30.80	34.20	37.80	1	49.9	8.2	1	36C
SMAJP4KE39CAHE3	33.30	37.10	41.00	1	53.9	7.6	1	39C
SMAJP4KE43CAHE3	36.80	40.90	45.20	1	59.3	6.9	1	43C
SMAJP4KE47CAHE3	40.20	44.70	49.40	1	64.8	6.3	1	47C
SMAJP4KE51CAHE3	43.60	48.50	53.60	1	70.1	5.8	1	51C
SMAJP4KE56CAHE3	47.80	53.20	58.80	1	77.0	5.3	1	56C
SMAJP4KE62CAHE3	53.00	58.90	65.10	1	85.0	4.8	1	62C
SMAJP4KE68CAHE3	58.10	64.60	71.40	1	92.0	4.5	1	68C
SMAJP4KE75CAHE3	64.10	71.30	78.80	1	103.0	4.0	1	75C
SMAJP4KE82CAHE3	70.10	77.90	86.10	1	113.0	3.6	1	82C
SMAJP4KE91CAHE3	77.80	86.50	95.50	1	125.0	3.3	1	91C
SMAJP4KE100CAHE3	85.50	95.00	105.00	1	137.0	3.0	1	100C
SMAJP4KE110CAHE3	94.00	105.00	116.00	1	152.0	2.7	1	110C
SMAJP4KE120CAHE3	102.00	114.00	126.00	1	165.0	2.5	1	120C
SMAJP4KE130CAHE3	111.00	124.00	137.00	1	179.0	2.3	1	130C
SMAJP4KE150CAHE3	128.00	143.00	158.00	1	207.0	2.0	1	150C
SMAJP4KE160CAHE3	136.00	152.00	168.00	1	219.0	1.9	1	160C
SMAJP4KE170CAHE3	145.00	162.00	179.00	1	234.0	1.8	1	170C
SMAJP4KE180CAHE3	154.00	171.00	189.00	1	246.0	1.7	1	180C
SMAJP4KE200CAHE3	171.00	190.00	210.00	1	274.0	1.5	1	200C
SMAJP4KE220CAHE3	185.00	209.00	231.00	1	328.0	1.2	1	220C

Note:
*For Bi-directional type having V_{rwm} of 10 volts and less, the I_R limit is double.
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Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

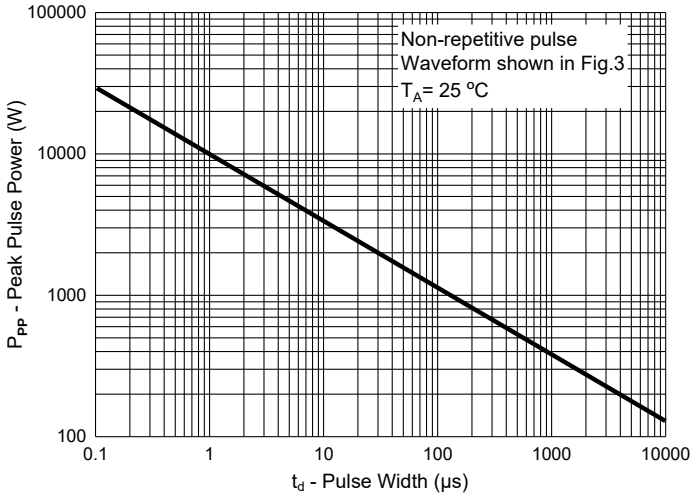


Fig. 2 - Typical Junction Capacitance

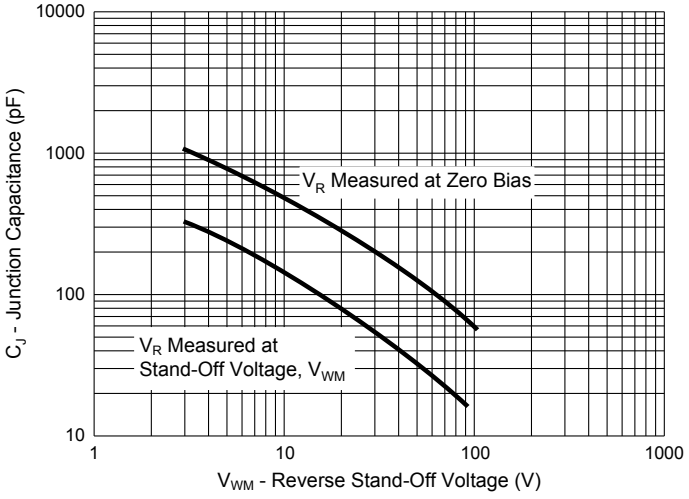


Fig. 3 - Pulse Waveform

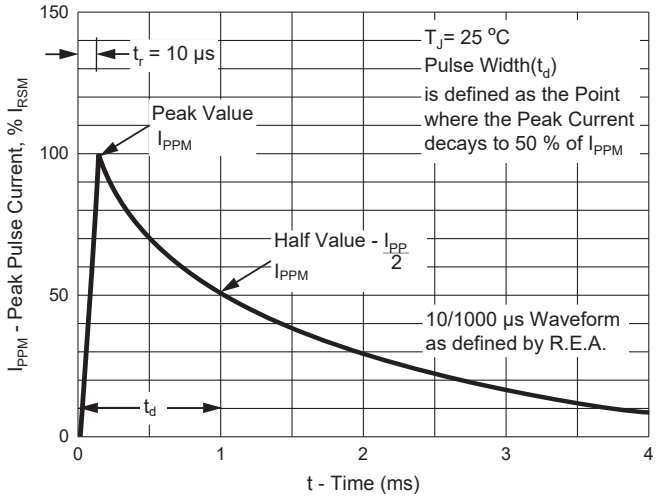
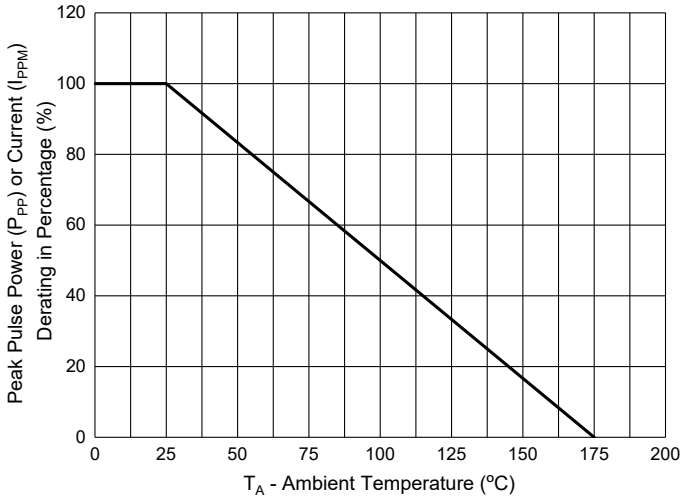


Fig. 4 - Pulse Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel