



# THE DATASHEET OF SMAJP4KE43A-TP



	<b>E480232</b>
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### Features

- For Surface Mount Applications in Order to Optimize Board Space
- Low Profile Package
- Unidirectional and Bidirectional Available, for Bidirectional Devices add 'C' Suffix to The pn#, i.e..SMAJP4KE6.8CA for 5% Tolerance
- Fast Response Time: Typical Less Than 1.0ps From 0 Volts to  $V_{BR}$  Minimum
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)

### Mechanical Data

- Polarity: Color Band Denotes Positive end (cathode) Except Bidirectional
- Maximum Soldering Temperature: 260°C for 10 Seconds
- Case: JEDEC DO-214AC
- Terminals: Solderable Per MIL-STD-750, Method 2026

### Maximum Ratings

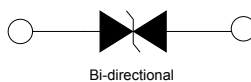
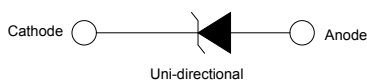
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Typical Thermal Resistance: 100°C/W Junction to Ambient

Peak Pulse Power Surge Current with a 10/1000µs Waveform	$I_{PP}$	See the Table	Note 3
Peak Pulse Power Dissipation	$P_{PP}$	400W	Note 3

#### Note:

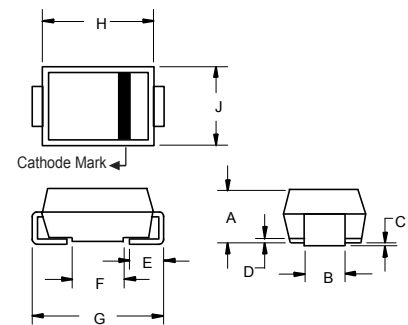
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.
3. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.4. Pin

Configuration:



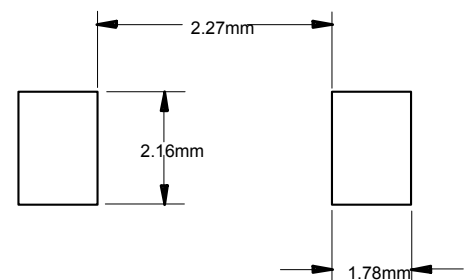
## 400 Watt TVS 6.8 to 550 Volts

### SMA (DO-214AC) LEAD FRAME



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)	$\mu A$	
SMAJP4KE6.8A	5.80	6.45	7.14	10	10.5	39.0	1000	6V8A
SMAJP4KE7.5A	6.40	7.13	7.88	10	11.3	36.3	500	7V5A
SMAJP4KE8.2A	7.02	7.79	8.61	10	12.1	33.9	200	8V2A
SMAJP4KE9.1A	7.78	8.65	9.55	1	13.4	30.6	50	9V1A
SMAJP4KE10A	8.55	9.50	10.50	1	14.5	28.3	10	10A
SMAJP4KE11A	9.40	10.50	11.60	1	15.6	26.3	5	11A
SMAJP4KE12A	10.20	11.40	12.60	1	16.7	24.6	5	12A
SMAJP4KE13A	11.10	12.40	13.70	1	18.2	22.5	1	13A
SMAJP4KE15A	12.80	14.30	15.80	1	21.2	19.3	1	15A
SMAJP4KE16A	13.60	15.20	16.80	1	22.5	18.2	1	16A
SMAJP4KE18A	15.30	17.10	18.90	1	25.5	16.1	1	18A
SMAJP4KE20A	17.10	19.00	21.00	1	27.7	14.8	1	20A
SMAJP4KE22A	18.80	20.90	23.10	1	30.6	13.4	1	22A
SMAJP4KE24A	20.50	22.80	25.20	1	33.2	12.3	1	24A
SMAJP4KE27A	23.10	25.70	28.40	1	37.5	10.9	1	27A
SMAJP4KE30A	25.60	28.50	31.50	1	41.4	9.9	1	30A
SMAJP4KE33A	28.20	31.40	34.70	1	45.7	9.0	1	33A
SMAJP4KE36A	30.80	34.20	37.80	1	49.9	8.2	1	36A
SMAJP4KE39A	33.30	37.10	41.00	1	53.9	7.6	1	39A
SMAJP4KE43A	36.80	40.90	45.20	1	59.3	6.9	1	43A
SMAJP4KE47A	40.20	44.70	49.40	1	64.8	6.3	1	47A
SMAJP4KE51A	43.60	48.50	53.60	1	70.1	5.8	1	51A
SMAJP4KE56A	47.80	53.20	58.80	1	77.0	5.3	1	56A
SMAJP4KE62A	53.00	58.90	65.10	1	85.0	4.8	1	62A
SMAJP4KE68A	58.10	64.60	71.40	1	92.0	4.5	1	68A
SMAJP4KE75A	64.10	71.30	78.80	1	103.0	4.0	1	75A
SMAJP4KE82A	70.10	77.90	86.10	1	113.0	3.6	1	82A
SMAJP4KE91A	77.80	86.50	95.50	1	125.0	3.3	1	91A
SMAJP4KE100A	85.50	95.00	105.00	1	137.0	3.0	1	100A
SMAJP4KE110A	94.00	105.00	116.00	1	152.0	2.7	1	110A
SMAJP4KE120A	102.00	114.00	126.00	1	165.0	2.5	1	120A
SMAJP4KE130A	111.00	124.00	137.00	1	179.0	2.3	1	130A
SMAJP4KE150A	128.00	143.00	158.00	1	207.0	2.0	1	150A
SMAJP4KE160A	136.00	152.00	168.00	1	219.0	1.9	1	160A
SMAJP4KE170A	145.00	162.00	179.00	1	234.0	1.8	1	170A
SMAJP4KE180A	154.00	171.00	189.00	1	246.0	1.7	1	180A
SMAJP4KE200A	171.00	190.00	210.00	1	274.0	1.5	1	200A
SMAJP4KE220A	185.00	209.00	231.00	1	328.0	1.3	1	220A
SMAJP4KE250A	214.00	237.00	263.00	1	344.0	1.2	1	250A
SMAJP4KE300A	256.00	285.00	315.00	1	414.0	1.0	1	300A
SMAJP4KE350A	300.00	332.00	368.00	1	482.0	0.9	1	350A

\*For Bi-directional type having  $V_{WM}$  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.

**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)	$\mu A$	
SMAJP4KE400A	342.00	380.00	420.00	1	548.0	0.8	1	400A
SMAJP4KE440A	376.00	418.00	462.00	1	602.0	0.7	1	440A
SMAJP4KE480A	408.00	456.00	504.00	1	658.0	0.6	1	480A
SMAJP4KE510A	434.00	485.00	535.00	1	698.0	0.6	1	510A
SMAJP4KE530A	477.00	503.50	556.50	1	725.0	0.6	1	530A
SMAJP4KE540A	459.00	513.00	567.00	1	740.0	0.5	1	540A
SMAJP4KE550A	495.00	522.50	577.50	1	760.0	0.5	1	550A
SMAJP4KE6.8CA	5.80	6.45	7.14	10	10.5	39.0	1000	6V8C
SMAJP4KE7.5CA	6.40	7.13	7.88	10	11.3	36.3	500	7V5C
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SMAJP4KE9.1CA	7.78	8.65	9.55	1	13.4	30.6	50	9V1C
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SMAJP4KE11CA	9.40	10.50	11.60	1	15.6	26.3	5	11C
SMAJP4KE12CA	10.20	11.40	12.60	1	16.7	24.6	5	12C
SMAJP4KE13CA	11.10	12.40	13.70	1	18.2	22.5	1	13C
SMAJP4KE15CA	12.80	14.30	15.80	1	21.2	19.3	1	15C
SMAJP4KE16CA	13.60	15.20	16.80	1	22.5	18.2	1	16C
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SMAJP4KE47CA	40.20	44.70	49.40	1	64.8	6.3	1	47C
SMAJP4KE51CA	43.60	48.50	53.60	1	70.1	5.8	1	51C
SMAJP4KE56CA	47.80	53.20	58.80	1	77.0	5.3	1	56C
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Curve Characteristics

Fig. 1 - Peak Pulse Power Rating Curve

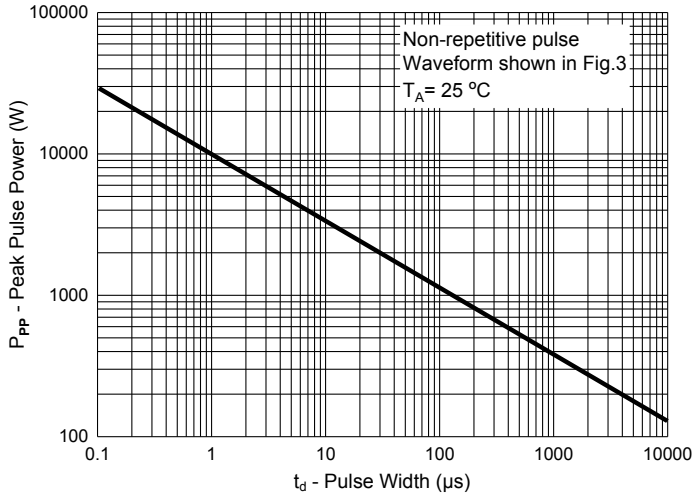


Fig. 2 - Typical Junction Capacitance

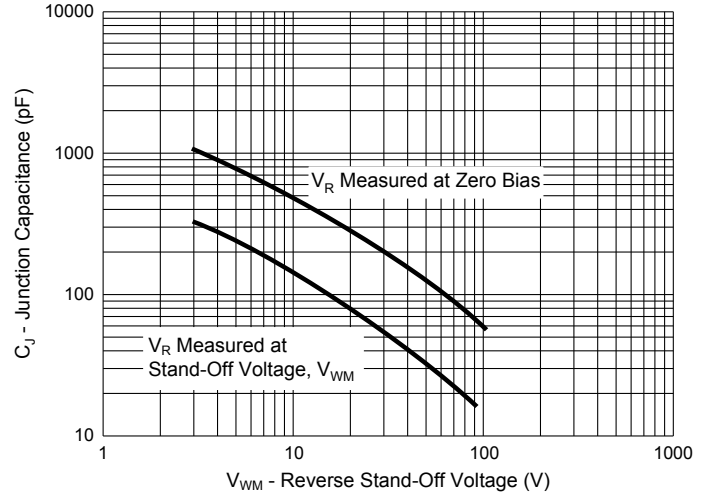


Fig. 3 - Pulse Waveform

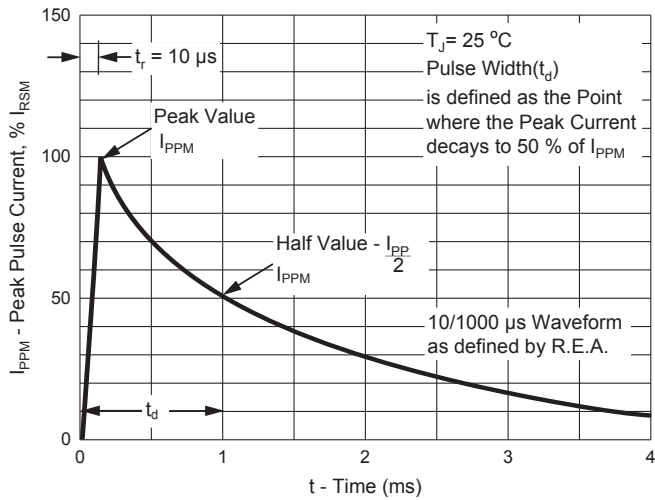
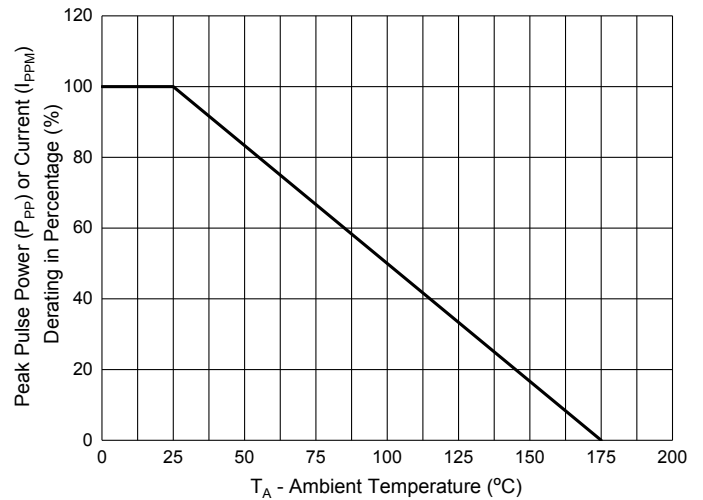


Fig. 4 - Pulse Derating Curve



## Ordering Information

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

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