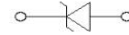
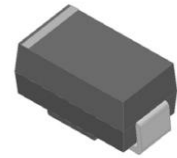


**Product:** SMAJ AU Series

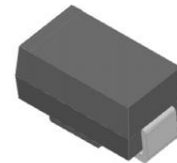
**Feature**

- For surface mounted applications
- 400W peak pulse power capability on 10/1000µs waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 265°C/10 seconds
- Component in accordance to RoHS
- AEC-Q101

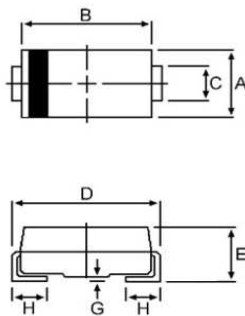
Uni-directional



Bi-directional



**Dimension Figure**



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	2.20	2.80	0.866	0.110
B	3.90	4.50	0.154	0.177
C	1.25	1.70	0.049	0.067
D	4.70	5.30	0.185	0.207
E	1.90	2.50	0.075	0.098
G	-	0.203	-	0.008
H	0.75	1.55	0.030	0.061

**Maximum Ratings**

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A=25^{\circ}\text{C}$ by 10x1000µs waveform	$P_{PPM}$	400	W
Power Dissipation on infinite heat sink at $T_A=50^{\circ}\text{C}$	$P_{M(AV)}$	3.3	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	$I_{FSM}$	40	A
Maximum Instantaneous Forward Voltage at 0.2A for Unidirectional	$V_F$	1.2	V
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Lead	$R_{uJL}$	30	$^{\circ}\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{uJA}$	120	$^{\circ}\text{C/W}$

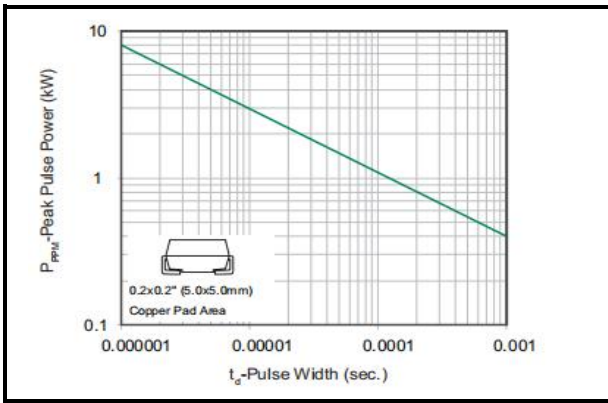
## Electrical Characteristics

P/N		Marking		VR (V)	VBR @ IT (V)		IT (mA)	IR@ VR ( $\mu$ A)		Ipp (A)	VC@ Ipp (V)
Uni	Bi	Uni	Bi		MIN	MAX		Uni	Bi		
SMAJ5.0A-AU	SMAJ5.0CA-AU	AE	WE	5	6.4	7	10	100	200	43.5	9.2
SMAJ6.0A-AU	SMAJ6.0CA-AU	AG	WG	6	6.67	7.37	10	100	200	38.8	10.3
SMAJ6.5A-AU	SMAJ6.5CA-AU	AK	WK	6.5	7.22	7.98	10	50	100	35.7	11.2
SMAJ7.0A-AU	SMAJ7.0CA-AU	AM	WM	7	7.78	8.6	10	50	80	33.3	12
SMAJ7.5A-AU	SMAJ7.5CA-AU	AP	WP	7.5	8.33	9.21	1	3	30	31.0	12.9
SMAJ8.0A-AU	SMAJ8.0CA-AU	AR	WR	8	8.89	9.83	1	3	4	29.4	13.6
SMAJ8.5A-AU	SMAJ8.5CA-AU	AT	WT	8.5	9.44	10.4	1	2	8	27.8	14.4
SMAJ9.0A-AU	SMAJ9.0CA-AU	AV	WV	9	10	11.1	1	1.0	2.0	26.0	15.4
SMAJ10A-AU	SMAJ10CA-AU	AX	WX	10	11.1	12.3	1	1.0	1.0	23.5	17
SMAJ11A-AU	SMAJ11CA-AU	AZ	WZ	11	12.2	13.5	1	1.0	1.0	22.0	18.2
SMAJ12A-AU	SMAJ12CA-AU	BE	XE	12	13.3	14.7	1	1.0	1.0	20.1	19.9
SMAJ13A-AU	SMAJ13CA-AU	BG	XG	13	14.4	15.9	1	1.0	1.0	18.6	21.5
SMAJ14A-AU	SMAJ14CA-AU	BK	XK	14	15.6	17.2	1	1.0	1.0	17.2	23.2
SMAJ15A-AU	SMAJ15CA-AU	BM	XM	15	16.7	18.5	1	1.0	1.0	16.4	24.4
SMAJ16A-AU	SMAJ16CA-AU	BP	XP	16	17.8	19.7	1	1.0	1.0	15.4	26
SMAJ17A-AU	SMAJ17CA-AU	BR	XR	17	18.9	20.9	1	1.0	1.0	14.5	27.6
SMAJ18A-AU	SMAJ18CA-AU	BT	XT	18	20	22.1	1	1.0	1.0	13.7	29.2
SMAJ20A-AU	SMAJ20CA-AU	BV	XV	20	22.2	24.5	1	1.0	1.0	12.3	32.4
SMAJ22A-AU	SMAJ22CA-AU	BX	XX	22	24.4	26.9	1	1.0	1.0	11.3	35.5
SMAJ24A-AU	SMAJ24CA-AU	BZ	XZ	24	26.7	29.5	1	1.0	1.0	10.3	38.9
SMAJ26A-AU	SMAJ26CA-AU	CE	YE	26	28.9	31.9	1	1.0	1.0	9.5	42.1
SMAJ28A-AU	SMAJ28CA-AU	CG	YG	28	31.1	34.4	1	1.0	1.0	8.8	45.4
SMAJ30A-AU	SMAJ30CA-AU	CK	YK	30	33.3	36.8	1	1.0	1.0	8.3	48.4
SMAJ33A-AU	SMAJ33CA-AU	CM	YM	33	36.7	40.6	1	1.0	1.0	7.5	53.3
SMAJ36A-AU	SMAJ36CA-AU	CP	YP	36	40	44.2	1	1.0	1.0	6.9	58.1
SMAJ40A-AU	SMAJ40CA-AU	CR	YR	40	44.4	49.1	1	1.0	1.0	6.2	64.5
SMAJ43A-AU	SMAJ43CA-AU	CT	YT	43	47.8	52.8	1	1.0	1.0	5.8	69.4
SMAJ45A-AU	SMAJ45CA-AU	CV	YV	45	50	55.3	1	1.0	1.0	5.5	72.7
SMAJ48A-AU	SMAJ48CA-AU	CX	YX	48	53.3	58.9	1	1.0	1.0	5.2	77.4
SMAJ51A-AU	SMAJ51CA-AU	CZ	YZ	51	56.7	62.7	1	1.0	1.0	4.9	82.4
SMAJ54A-AU	SMAJ54CA-AU	RE	ZE	54	60	66.3	1	1.0	1.0	4.6	87.1
SMAJ58A-AU	SMAJ58CA-AU	RG	ZG	58	64.4	71.2	1	1.0	1.0	4.3	93.6
SMAJ60A-AU	SMAJ60CA-AU	RK	ZK	60	66.7	73.7	1	1.0	1.0	4.1	96.8
SMAJ64A-AU	SMAJ64CA-AU	RM	ZM	64	71.1	78.6	1	1.0	1.0	3.9	103
SMAJ70A-AU	SMAJ70CA-AU	RP	ZP	70	77.8	86	1	1.0	1.0	3.5	113
SMAJ75A-AU	SMAJ75CA-AU	RR	ZR	75	83.3	92.1	1	1.0	1.0	3.3	121
SMAJ78A-AU	SMAJ78CA-AU	RT	ZT	78	86.7	95.8	1	1.0	1.0	3.2	126
SMAJ85A-AU	SMAJ85CA-AU	RV	ZV	85	94.4	104	1	1.0	1.0	2.9	137
SMAJ90A-AU	SMAJ90CA-AU	RX	ZX	90	100	111	1	1.0	1.0	2.7	146
SMAJ100A-AU	SMAJ100CA-AU	RZ	ZZ	100	111	123	1	1.0	1.0	2.5	162
SMAJ110A-AU	SMAJ110CA-AU	SE	VE	110	122	135	1	1.0	1.0	2.3	177
SMAJ120A-AU	SMAJ120CA-AU	SG	VG	120	133	147	1	1.0	1.0	2.1	193
SMAJ130A-AU	SMAJ130CA-AU	SK	VK	130	144	159	1	1.0	1.0	1.9	209
SMAJ150A-AU	SMAJ150CA-AU	SM	VM	150	167	185	1	1.0	1.0	1.6	243
SMAJ160A-AU	SMAJ160CA-AU	SP	VP	160	178	197	1	1.0	1.0	1.5	259
SMAJ170A-AU	SMAJ170CA-AU	SR	VR	170	189	209	1	1.0	1.0	1.5	275
SMAJ180A-AU	SMAJ180CA-AU	ST	VT	180	201	222	1	1.0	1.0	1.4	292
SMAJ200A-AU	SMAJ200CA-AU	SV	VV	200	224	247	1	1.0	1.0	1.2	324
SMAJ220A-AU	SMAJ220CA-AU	SX	VX	220	246	272	1	1.0	1.0	1.1	356
SMAJ250A-AU	SMAJ250CA-AU	SZ	VZ	250	279	309	1	1.0	1.0	1.0	405
SMAJ300A-AU*	SMAJ300CA-AU*	TE	UE	300	335	371	1	1.0	1.0	0.8	486
SMAJ350A-AU*	SMAJ350CA-AU*	TG	UG	350	391	432	1	1.0	1.0	0.7	567
SMAJ400A-AU*	SMAJ400CA-AU*	TK	UK	400	447	494	1	1.0	1.0	0.6	648
SMAJ440A-AU*	SMAJ440CA-AU*	TM	UM	440	492	543	1	1.0	1.0	0.6	713

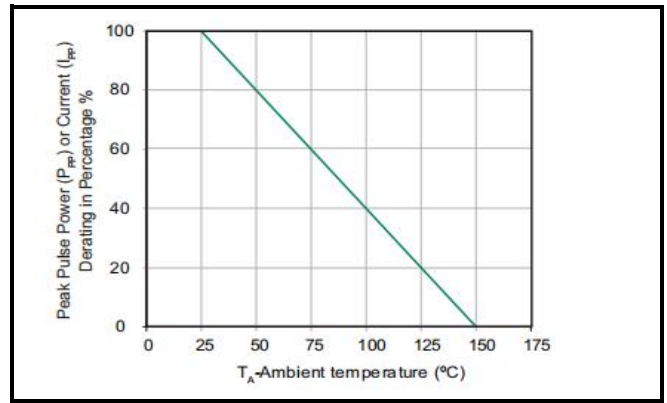
Notes: For stack-die parts, use \* to label the part number.

**Ratings and Characteristic Curves (TA=25°C unless otherwise noted)**

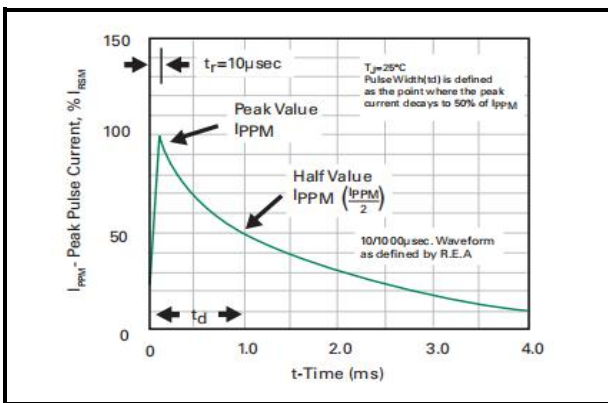
**Figure 1 - Peak Pulse Power Rating Curve**



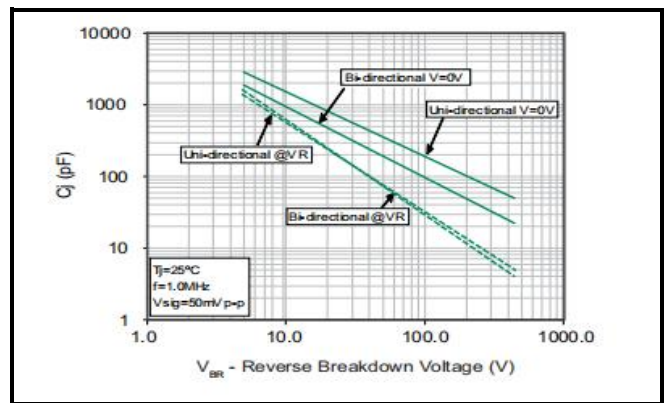
**Figure 2 - Pulse Derating Curve**



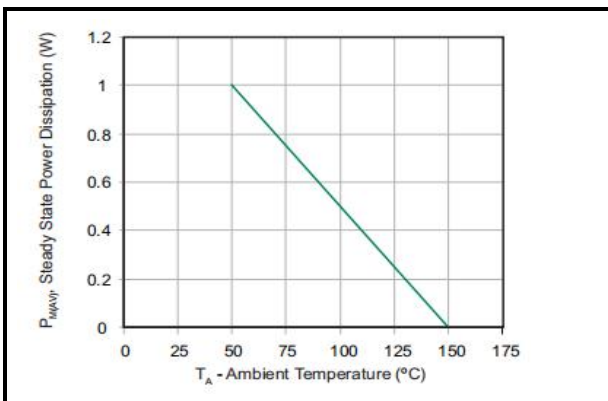
**Figure 3 - Pulse Waveform**



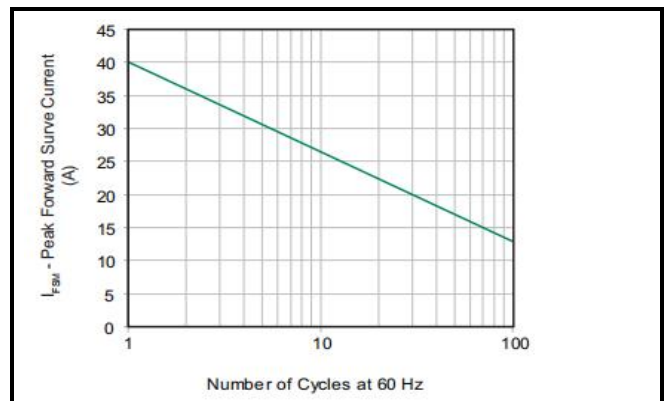
**Figure 4 - Typical Junction Capacitance**



**Figure 5 - Steady State Power Dissipation Derating Curve**



**Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only**



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