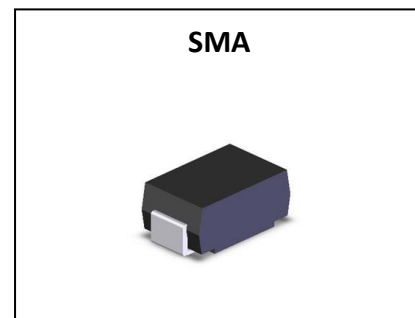


Feature

- Glass passivated chip
- 400W peak pulse power capability with a 10/1000us waveform
- Repetitive rate (duty cycle): 0.01%
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with Rohs standard
- Complies with following standards:
 - IEC 61000-4-2(ESD) immunity test level 4
 - Air discharge : $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$



Mechanical Data

- Case: SMA/DO214AC Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform	P_{PP}	400	W
Peak pulse current with a 10/1000 us waveform	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	P_D	3.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ¹⁾	I_{FSM}	60	A
Maximum instantaneous forward voltage at 25A for unidirectional only ²⁾	V_F	3.5/6.5	V
Junction Temperature	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

1) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum;

2) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.

Electrical Characteristics (T_a=25°C unless otherwise specified)

Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (µA)	Package SMA Marking Instructions	
			MIN	MAX					UNI	BI
SMAJ5.0A	SMAJ5.0CA	5	6.4	7	10	9.2	43.5	800	SMAJ5.0A or AE****(1)	SMAJ5.0CA or WE****
SMAJ6.0A	SMAJ6.0CA	6	6.67	7.37	10	10.3	38.8	800	SMAJ6.0A or AG****	SMAJ6.0CA or WG****
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	11.2	35.7	500	SMAJ6.5A or AK****	SMAJ6.5CA or WK****
SMAJ7.0A	SMAJ7.0CA	7	7.78	8.6	10	12	33.3	200	SMAJ7.0A or AM****	SMAJ7.0CA or WM****
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.21	1	12.9	31	100	SMAJ7.5A or AP****	SMAJ7.5CA or WP****
SMAJ8.0A	SMAJ8.0CA	8	8.89	9.83	1	13.6	29.4	50	SMAJ8.0A or AR****	SMAJ8.0CA or WR****
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.4	1	14.4	27.8	20	SMAJ8.5A or AT****	SMAJ8.5CA or WT****
SMAJ9.0A	SMAJ9.0CA	9	10	11.1	1	15.4	26	10	SMAJ9.0A or AV****	SMAJ9.0CA or WV****
SMAJ10A	SMAJ10CA	10	11.1	12.3	1	17	23.5	5	SMAJ10A or AX****	SMAJ10CA or WX****
SMAJ11A	SMAJ11CA	11	12.2	13.5	1	18.2	22	1	SMAJ11A or AZ****	SMAJ11CA or WZ****
SMAJ12A	SMAJ12CA	12	13.3	14.7	1	19.9	20.1	1	SMAJ12A or BE****	SMAJ12CA or XE****
SMAJ13A	SMAJ13CA	13	14.4	15.9	1	21.5	18.6	1	SMAJ13A or BG****	SMAJ13CA or XG****
SMAJ14A	SMAJ14CA	14	15.6	17.2	1	23.2	17.2	1	SMAJ14A or BK****	SMAJ14CA or XK****
SMAJ15A	SMAJ15CA	15	16.7	18.5	1	24.4	16.4	1	SMAJ15A or BM****	SMAJ15CA or XM****
SMAJ16A	SMAJ16CA	16	17.8	19.7	1	26	15.4	1	SMAJ16A or BP****	SMAJ16CA or XP****
SMAJ17A	SMAJ17CA	17	18.9	20.9	1	27.6	14.5	1	SMAJ17A or BR****	SMAJ17CA or XR****
SMAJ18A	SMAJ18CA	18	20	22.1	1	29.2	13.7	1	SMAJ18A or BT****	SMAJ18CA or XT****
SMAJ20A	SMAJ20CA	20	22.2	24.5	1	32.4	12.3	1	SMAJ20A or BV****	SMAJ20CA or XV****
SMAJ22A	SMAJ22CA	22	24.4	26.9	1	35.5	11.3	1	SMAJ22A or BX****	SMAJ22CA or XX****

Electrical Characteristics (T_a=25°C unless otherwise specified)

Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μA)	Package SMA Marking	
			MIN	MAX						
SMAJ24A	SMAJ24CA	24	26.7	29.5	1	38.9	10.3	1	SMAJ24A or BZ****	SMAJ24CA or XZ****
SMAJ26A	SMAJ26CA	26	28.9	31.9	1	42.1	9.5	1	SMAJ26A or CE****	SMAJ26CA or YE****
SMAJ28A	SMAJ28CA	28	31.1	34.4	1	45.4	8.8	1	SMAJ28A or CG****	SMAJ28CA or YG****
SMAJ30A	SMAJ30CA	30	33.3	36.8	1	48.4	8.3	1	SMAJ30A or CK****	SMAJ30CA or YK****
SMAJ33A	SMAJ33CA	33	36.7	40.6	1	53.3	7	1	SMAJ33A or CM****	SMAJ33CA or YM****
SMAJ36A	SMAJ36CA	36	40	44.2	1	58.1	6.9	1	SMAJ36A or CP****	SMAJ36CA or YP****
SMAJ40A	SMAJ40CA	39	44.4	49.1	1	64.5	6.2	1	SMAJ40A or CR****	SMAJ40CA or YR****
SMAJ43A	SMAJ43CA	42	47.8	52.8	1	69.4	5.8	1	SMAJ43A or CT****	SMAJ43CA or YT****
SMAJ45A	SMAJ45CA	45	50	55.3	1	72.7	5.5	1	SMAJ45A or CV****	SMAJ45CA or YV****
SMAJ48A	SMAJ48CA	48	53.3	58.9	1	77.4	5.2	1	SMAJ48A or CX****	SMAJ48CA or YX****
SMAJ51A	SMAJ51CA	51	56.7	62.7	1	82.4	4.9	1	SMAJ51A or CZ****	SMAJ51CA or YZ****
SMAJ54A	SMAJ54CA	54	60	66.3	1	87.1	4.6	1	SMAJ54A or RE****	SMAJ54CA or ZE****
SMAJ58A	SMAJ58CA	58	64.4	71.2	1	93.6	4.3	1	SMAJ58A or RG****	SMAJ58CA or ZG****
SMAJ60A	SMAJ60CA	62	66.7	73.7	1	96.8	4.1	1	SMAJ60A or RK****	SMAJ60CA or ZK****
SMAJ64A	SMAJ64CA	66	71.1	78.6	1	103	3.9	1	SMAJ64A or RM****	SMAJ64CA or ZM****
SMAJ70A	SMAJ70CA	70	77.8	86	1	113	3.5	1	SMAJ70A or RP****	SMAJ70CA or ZP****
SMAJ75A	SMAJ75CA	75	83.3	92.1	1	121	3.3	1	SMAJ75A or RR****	SMAJ75CA or ZR****
SMAJ78A	SMAJ78CA	78	86.7	95.8	1	126	3.2	1	SMAJ78A or RT****	SMAJ78CA or ZT****
SMAJ85A	SMAJ85CA	85	94.4	104	1	137	2.9	1	SMAJ85A or RV****	SMAJ85CA or ZV****

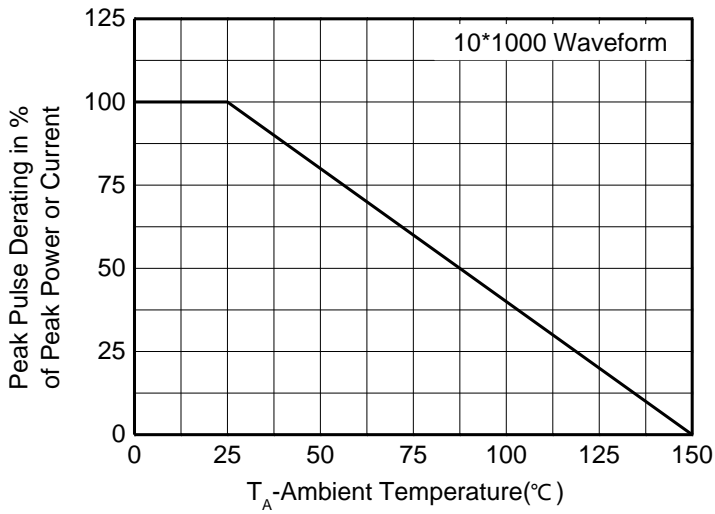
Electrical Characteristics (T_a=25°C unless otherwise specified)

Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μA)	Package SMA Marking	
			MIN	MAX						
SMAJ90A	SMAJ90CA	90	100	111	1	146	2.7	1	SMAJ90A or RX****	SMAJ90CA or ZX****
SMAJ100A	SMAJ100CA	100	111	123	1	162	2.5	1	SMAJ100A or RZ****	SMAJ100CA or ZZ****
SMAJ110A	SMAJ110CA	110	122	135	1	177	2.3	1	SMAJ110A or SE****	SMAJ110CA or VE****
SMAJ120A	SMAJ120CA	120	133	147	1	193	2.1	1	SMAJ120A or SG****	SMAJ120CA or VG****
SMAJ130A	SMAJ130CA	130	144	159	1	209	1.9	1	SMAJ130A or SK****	SMAJ130CA or VK****
SMAJ150A	SMAJ150CA	150	167	185	1	243	1.6	1	SMAJ150A or SM****	SMAJ150CA or VM****
SMAJ160A	SMAJ160CA	160	178	197	1	259	1.5	1	SMAJ160A or SP****	SMAJ160CA or VP****
SMAJ170A	SMAJ170CA	170	189	209	1	275	1.5	1	SMAJ170A or SR****	SMAJ170CA or VR****
SMAJ180A	SMAJ180CA	180	201	222	1	292	1.4	1	SMAJ180A or ST****	SMAJ180CA or VT****
SMAJ200A	SMAJ200CA	200	224	247	1	324	1.2	1	SMAJ200A or SV****	SMAJ200CA or VV****
SMAJ220A	SMAJ220CA	220	246	272	1	356	1.1	1	SMAJ220A or SX****	SMAJ220CA or VX****
SMAJ250A	SMAJ250CA	250	279	309	1	405	1	1	SMAJ250A or SZ****	SMAJ250CA or VZ****
SMAJ300A	SMAJ300CA	300	335	371	1	486	0.8	1	SMAJ300A or TE****	SMAJ300CA or UE****
SMAJ350A	SMAJ350CA	350	391	432	1	567	0.7	1	SMAJ350A or TG****	SMAJ350CA or UG****
SMAJ400A	SMAJ400CA	400	447	494	1	648	0.6	1	SMAJ400A or TK****	SMAJ400CA or UK****
SMAJ440A	SMAJ440CA	440	492	543	1	713	0.6	1	SMAJ440A or TM****	SMAJ440CA or UM****

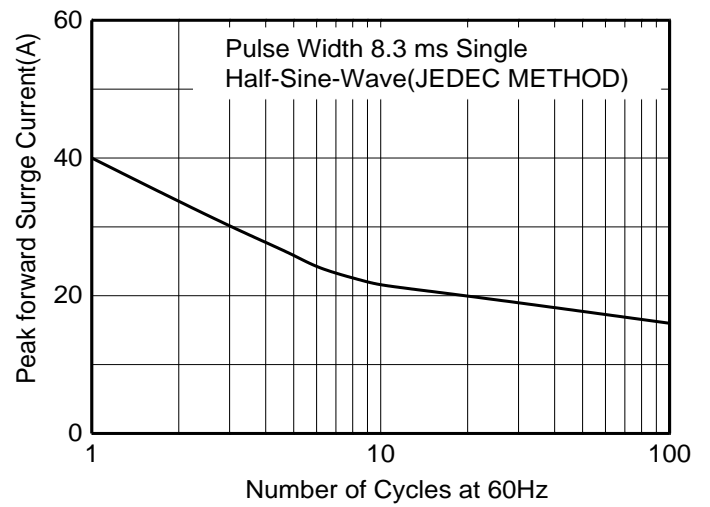
NOTE: AE****; AE: Product Type Code; ****: Lot No. Code, The 1st * means:YM Code, The last 3 * means:little Lot No. Code

Typical Characteristics

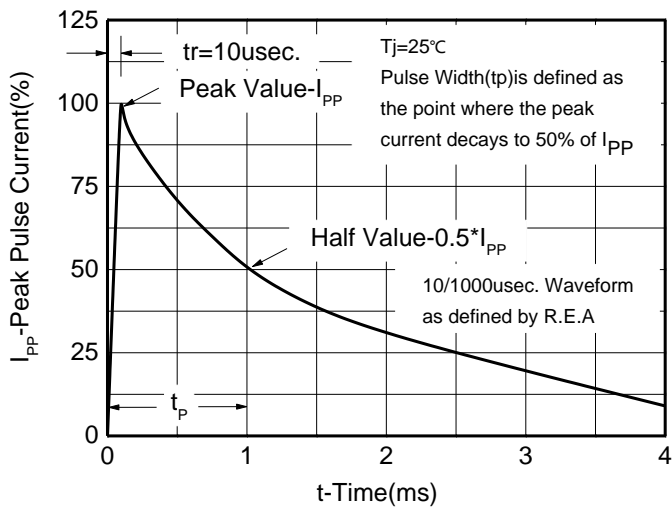
Pulse Derating Curve



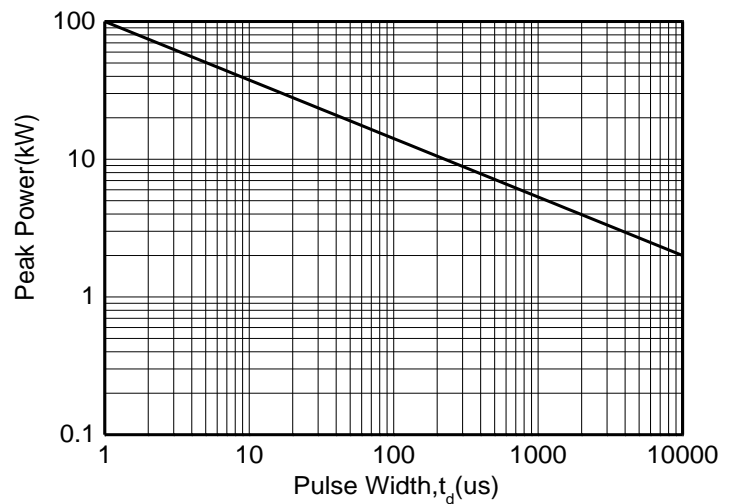
Maximum Non-Repetitive Surge Current



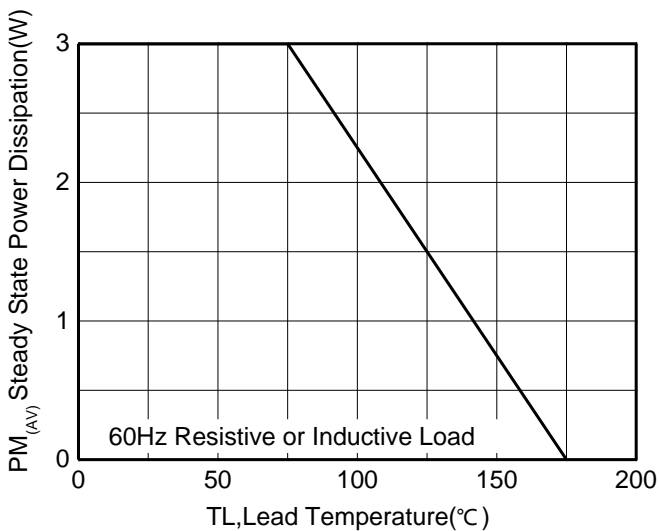
Pulse Waveform



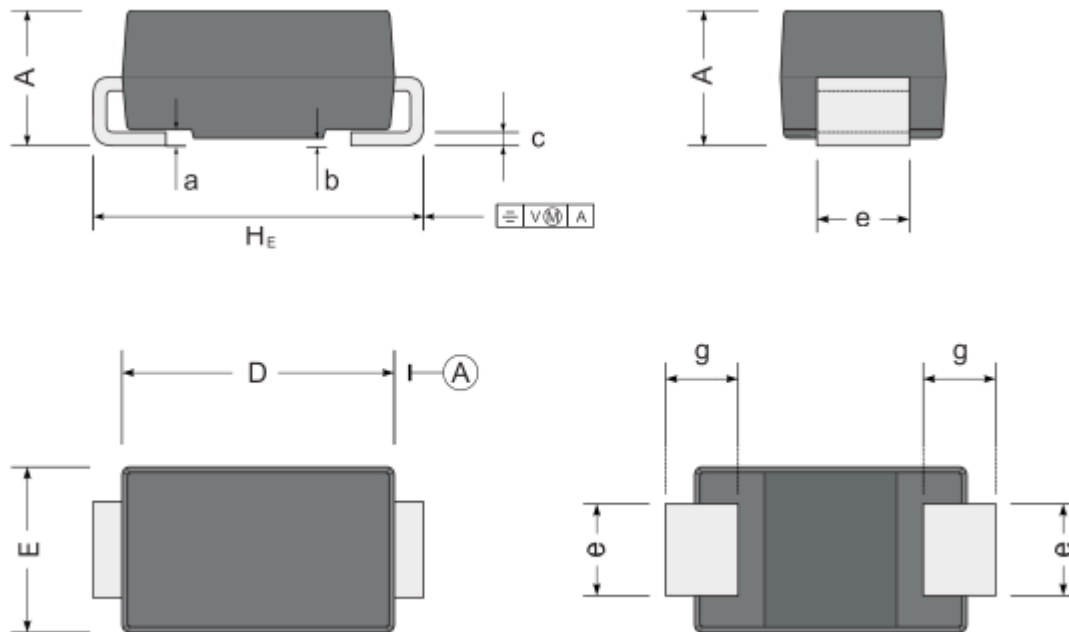
Peak Pulse Power Rating



Typical Junction Capacitance



SMA Package Outline Dimensions



UNIT		A	D	E	H _E	c	e	g	b	a
mm	Max	2.45	4.6	2.8	5.3	0.31	1.8	1.52	0.203	0.3
	Min	1.9	3.9	2.3	4.7	0.145	1.3	0.76	0.05	
mil	Max	96	181	110	209	12	71	60	8	12
	Min	75	154	91	185	6	51	30	2	