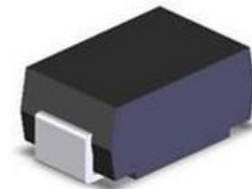


# 400Watts Transient Voltage Suppressor SMAJ5.0(C)A - SMAJ550(C)A

## Features

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard



**SMA  
DO-214AC**



## Mechanical Characteristics

- JEDEC DO-214AC(SMA) package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481

## Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak power dissipation with a 10/1000 us waveform <sup>(1)</sup>	PPPM	400	W
Peak pulse current with a 10/1000 us waveform <sup>(1)</sup>	IPPM	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	Pd	3.0	W
Peak forward surge current, 8.3 ms single half sine wave unidirectional only <sup>(2)</sup>	IFSM	40	A
Maximum instantaneous forward voltage at 25 A for unidirectional only <sup>(3)</sup>	VF	3.5/6.5	V
Operating junction and storage temperature range	TJ , Tstg	-55 to +150	°C

1) Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1 ;

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

3) VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V.

## 400Watts Transient Voltage Suppressor SMAJ5.0(C)A - SMAJ550(C)A

### Electrical Characteristics

Part Number		Marking		Reverse Stand Off Voltage $V_R$ (V)	Breakdown Voltage		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_C$ (V) @ $I_{PP}$	Maximum Peak Pulse Current $I_{PP}$ (A)	Maximum Reverse Leakage $I_R$ ( $\mu$ A) @ $V_R$
Uni	Bi	Uni	Bi		$V_{BR}$ (V) @ $I_T$	Min.				
SMAJ5.0A	SMAJ5.0CA	AE	WE	5	6.4	7	10	9.2	43.5	800
SMAJ6.0A	SMAJ6.0CA	AG	WG	6	6.67	7.37	10	10.3	38.8	800
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.7	500
SMAJ7.0A	SMAJ7.0CA	AM	WM	7	7.78	8.6	10	12	33.3	200
SMAJ7.5A	SMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	31	100
SMAJ8.0A	SMAJ8.0CA	AR	WR	8	8.89	9.83	1	13.6	29.4	50
SMAJ8.5A	SMAJ8.5CA	AT	WT	8.5	9.44	10.4	1	14.4	27.8	20
SMAJ9.0A	SMAJ9.0CA	AV	WV	9	10	11.1	1	15.4	26	10
SMAJ10A	SMAJ10CA	AX	WX	10	11.1	12.3	1	17	23.5	5
SMAJ11A	SMAJ11CA	AZ	WZ	11	12.2	13.5	1	18.2	22	1
SMAJ12A	SMAJ12CA	BE	XE	12	13.3	14.7	1	19.9	20.1	1
SMAJ13A	SMAJ13CA	BG	XG	13	14.4	15.9	1	21.5	18.6	1
SMAJ14A	SMAJ14CA	BK	XK	14	15.6	17.2	1	23.2	17.2	1
SMAJ15A	SMAJ15CA	BM	XM	15	16.7	18.5	1	24.4	16.4	1
SMAJ16A	SMAJ16CA	BP	XP	16	17.8	19.7	1	26	15.4	1
SMAJ17A	SMAJ17CA	BR	XR	17	18.9	20.9	1	27.6	14.5	1
SMAJ18A	SMAJ18CA	BT	XT	18	20	22.1	1	29.2	13.7	1
SMAJ20A	SMAJ20CA	BV	XV	20	22.2	24.5	1	32.4	12.3	1
SMAJ22A	SMAJ22CA	BX	XX	22	24.4	26.9	1	35.5	11.3	1
SMAJ24A	SMAJ24CA	BZ	XZ	24	26.7	29.5	1	38.9	10.3	1
SMAJ26A	SMAJ26CA	CE	YE	26	28.9	31.9	1	42.1	9.5	1
SMAJ28A	SMAJ28CA	CG	YG	28	31.1	34.4	1	45.4	8.8	1
SMAJ30A	SMAJ30CA	CK	YK	30	33.3	36.8	1	48.4	8.3	1
SMAJ33A	SMAJ33CA	CM	YM	33	36.7	40.6	1	53.3	7.5	1
SMAJ36A	SMAJ36CA	CP	YP	36	40	44.2	1	58.1	6.9	1
SMAJ40A	SMAJ40CA	CR	YR	40	44.4	49.1	1	64.5	6.2	1
SMAJ43A	SMAJ43CA	CT	YT	43	47.8	52.8	1	69.4	5.8	1
SMAJ45A	SMAJ45CA	CV	YV	45	50	55.3	1	72.7	5.5	1
SMAJ48A	SMAJ48CA	CX	YX	48	53.3	58.9	1	77.4	5.2	1
SMAJ51A	SMAJ51CA	CZ	YZ	51	56.7	62.7	1	82.4	4.9	1
SMAJ54A	SMAJ54CA	RE	ZE	54	60	66.3	1	87.1	4.6	1
SMAJ58A	SMAJ58CA	RG	ZG	58	64.4	71.2	1	93.6	4.3	1
SMAJ60A	SMAJ60CA	RK	ZK	60	66.7	73.7	1	96.8	4.1	1
SMAJ64A	SMAJ64CA	RM	ZM	64	71.1	78.6	1	103	3.9	1
SMAJ70A	SMAJ70CA	RP	ZP	70	77.8	86	1	113	3.5	1
SMAJ75A	SMAJ75CA	RR	ZR	75	83.3	92.1	1	121	3.3	1
SMAJ78A	SMAJ78CA	RT	ZT	78	86.7	95.8	1	126	3.2	1
SMAJ85A	SMAJ85CA	RV	ZV	85	94.4	104	1	137	2.9	1
SMAJ90A	SMAJ90CA	RX	ZX	90	100	111	1	146	2.7	1
SMAJ100A	SMAJ100CA	RZ	ZZ	100	111	123	1	162	2.5	1

**400Watts**  
**Transient Voltage Suppressor**  
**SMAJ5.0(C)A - SMAJ550(C)A**

**Electrical Characteristics** (continued)

Part Number		Marking		Reverse Stand Off Voltage	Breakdown Voltage		Test Current	Maximum Clamping Voltage	Maximum Peak Pulse Current	Maximum Reverse Leakage
Uni	Bi	Uni	Bi	$V_R$ (V)	$V_{BR}$ (V) @ $I_T$		$I_T$ (mA)	$V_C$ (V) @ $I_{PP}$	$I_{PP}$ (A)	$I_R$ ( $\mu$ A) @ $V_R$
					Min.	Max.				
SMAJ110A	SMAJ110CA	SE	VE	110	122	135	1	177	2.3	1
SMAJ120A	SMAJ120CA	SG	VG	120	133	147	1	193	2.1	1
SMAJ130A	SMAJ130CA	SK	VK	130	144	159	1	209	1.9	1
SMAJ150A	SMAJ150CA	SM	VM	150	167	185	1	243	1.6	1
SMAJ160A	SMAJ160CA	SP	VP	160	178	197	1	259	1.5	1
SMAJ170A	SMAJ170CA	SR	VR	170	189	209	1	275	1.5	1
SMAJ180A	SMAJ180CA	ST	VT	180	201	222	1	292	1.4	1
SMAJ190A	SMAJ190CA	SU	YU	190	209	243	1	308	1.3	1
SMAJ200A	SMAJ200CA	SV	VV	200	224	247	1	324	1.2	1
SMAJ210A	SMAJ210CA	SW	YW	210	231	268	1	340	1.2	1
SMAJ220A	SMAJ220CA	GX	VX	220	246	272	1	356	1.1	1
SMAJ250A	SMAJ250CA	SZ	VZ	250	279	309	1	405	1	1
SMAJ300A	SMAJ300CA	TE	UE	300	335	371	1	486	0.8	1
SMAJ350A	SMAJ350CA	TG	UG	350	391	432	1	567	0.7	1
SMAJ400A	SMAJ400CA	TK	UK	400	447	494	1	648	0.6	1
SMAJ440A	SMAJ440CA	TM	UM	440	492	543	1	713	0.6	1
SMAJ480A	SMAJ480CA	TP	UP	480	536	593	1	750	0.5	1
SMAJ520A	SMAJ520CA	TR	UR	520	578	640	1	762	0.5	1
SMAJ550A	SMAJ550CA	TT	UT	550	615	680	1	860	0.4	1

# 400Watts Transient Voltage Suppressor SMAJ5.0(C)A - SMAJ550(C)A

## Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

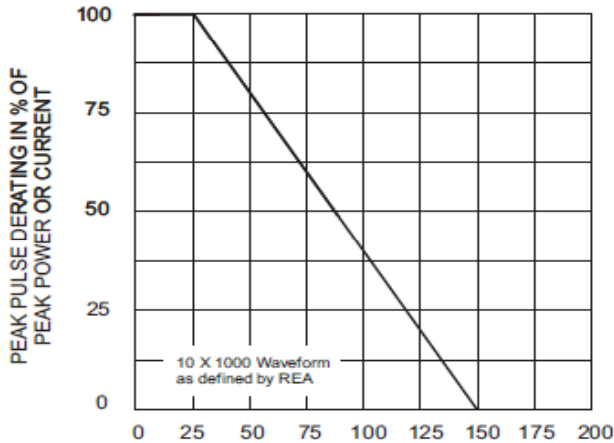


Fig. 1 - Pulse Derating Curve

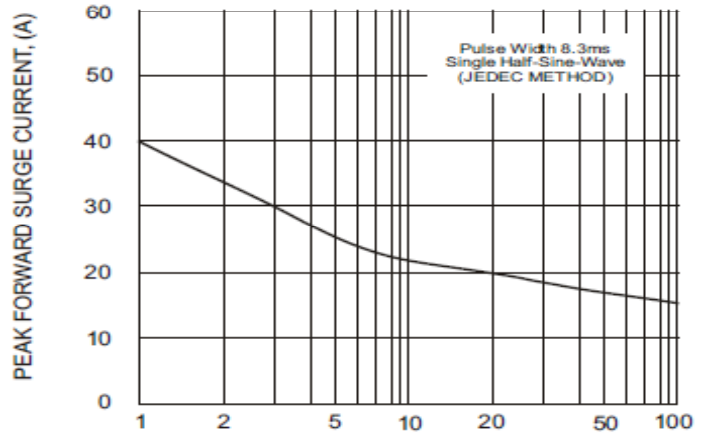


Fig. 2 - Maximum Non-Repetitive Surge Current

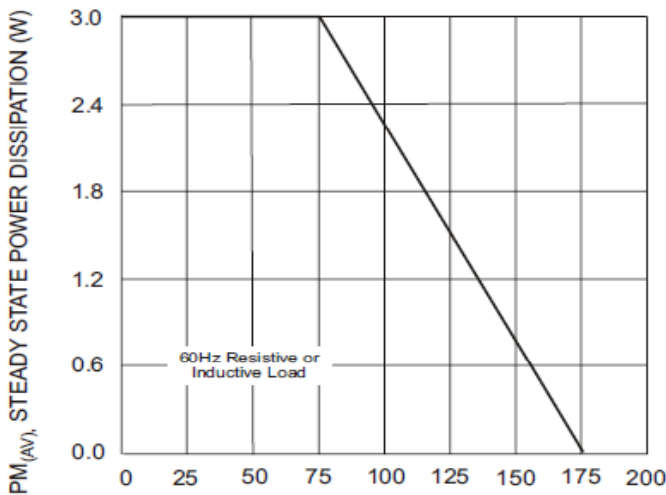


Fig. 3 - Steady State Power Derating Curve

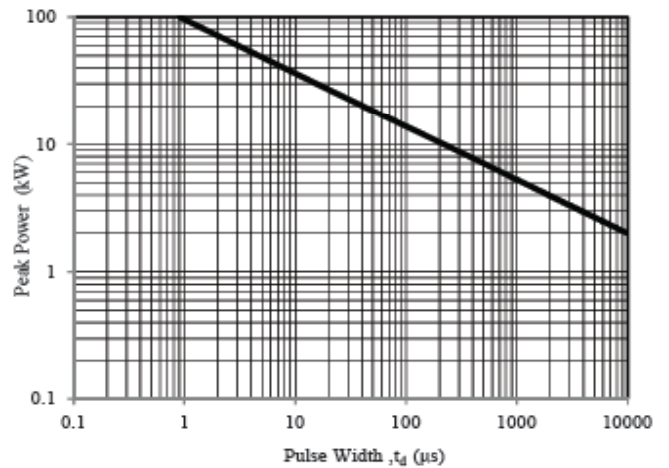


Fig. 4 - Peak Pulse Power Rating Curve

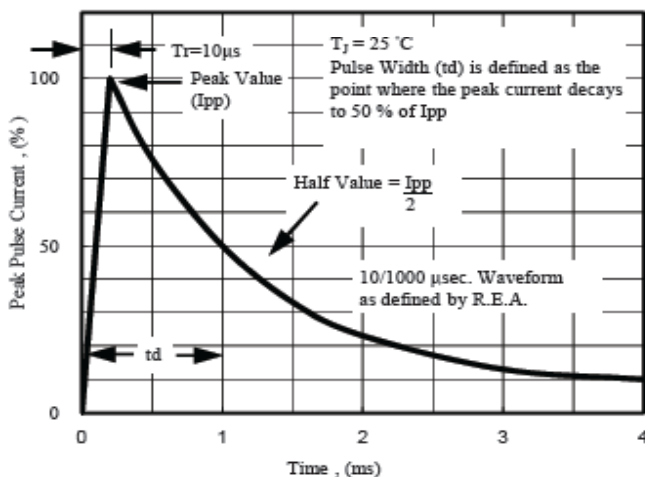


Fig. 5 - Pulse Waveform

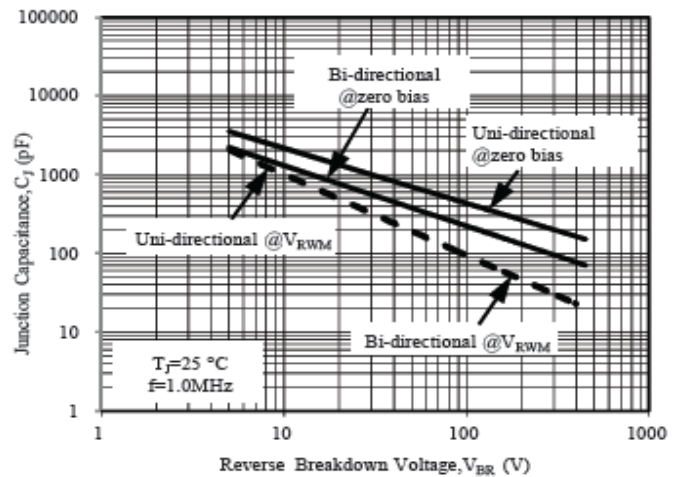
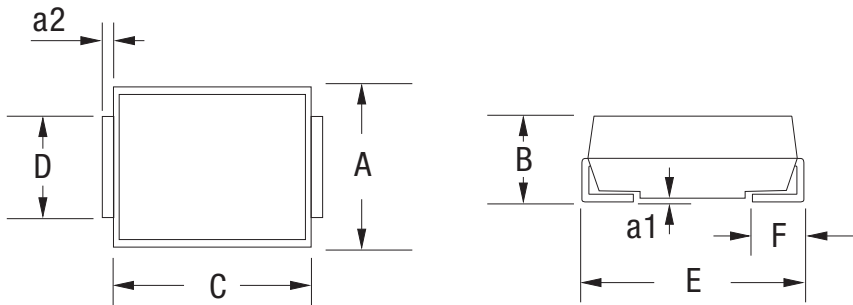


Fig. 6 - Typical Junction Capacitance

**400Watts**  
**Transient Voltage Suppressor**  
**SMAJ5.0(C)A - SMAJ550(C)A**

**Dimension** (Unit: mm)



A		B		C		D		E		F		a1		a2	
Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
2.500	2.800	1.900	2.450	3.900	4.600	1.400	1.800	4.800	5.300	0.760	1.520	-	0.203	0.145	0.255

**Packaging: 5,000/Tape & Reel**

**Part Marking System**

