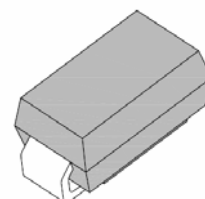


400W Surface Mount Transient Voltage Suppressor

Features

- Breakdown voltage from 6.8 to 550 volts
- Low inductance, excellent clamping capability
- Repetition rate(duty cycle): 0.01%
- Fast response time: typically less than 1.0ps from 0v to VBR
- For surface mounted applications to optimize board space
- Typical IR less than 1μA above 12V
- High temperature soldering guaranteed:250°C/10 seconds at terminals
- This series (P4SMA6.8A/CA to P4SMA440A/CA) is UL recognized under component index. File number E315008
- RoHS Compliant and Halogen Free

SMA



HALOGEN
FREE



Mechanical Data

Case:	JEDEC DO-214AC (SMA) molded plastic over glass passivated junction
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes the cathode end
Mounting position:	Any
Weight:	0.002 ounces, 0.061 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	Value	Unit	Conditions
PPPM	Peak Pulse Power Dissipation on 10/1000μs Waveform	400	W	Non-repetitive current pulse, per FIG.3 and derated above TA=25° C per FIG.2 (Note 1)
PM(AV)	Power Dissipation on infinite heat sink	3.3	W	TA=50° C
IPPM	Peak Pulse current on 10/1000μs Waveform	See Table	A	
IFSM	Peak Forward Surge Current	40	A	8.3ms Single Half Sine Wave (Note 2)
VF	Maximum Instantaneous Forward Voltage at 25A for Unidirectional	3.5V/6.5	V	Note 3

400W Surface Mount Transient Voltage Suppressor

P4SMA6.8A - P4SMA550CA

Symbol	Description	Value	Unit	Conditions
R _{θJL}	Typical Thermal Resistance Junction to Lead	30	° C/W	
R _{θJA}	Typical Thermal Resistance Junction to Ambient	120	° C/W	
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-65 to 150	° C	

- Note:**
1. Mounted on 0.2x0.2" (5.0 x 5.0mm) copper pad to each terminal.
 2. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum.
 3. V_F<3.5V for V_{BR} ≤ 200V and V_F<6.5V for V_{BR} ≥ 201V.

Electrical Characteristics (*T_{Ambient}*=25°C unless noted otherwise)

Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ I _{PPM}	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V _{WM}
					V _{BR}		I _T (mA)			
Uni-Polar	Bi-Polar	Uni	Bi	V _{WM} (V)	Min.	Max.	I _T (mA)	V _C (V)	I _{PPM} (A)	I _D (μA)
P4SMA6.8A	P4SMA6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	39.0	1000/2000
P4SMA7.5A	P4SMA7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	11.3	36.3	500/1000
P4SMA8.2A	P4SMA8.2CA	8V2A	8V2C	7.02	7.79	8.61	10	12.1	33.9	200/400
P4SMA9.1A	P4SMA9.1CA	9V1A	9V1C	7.78	8.65	9.55	1	13.4	30.6	50/100
P4SMA10A	P4SMA10CA	10A	10C	8.55	9.5	10.5	1	14.5	28.3	10/20
P4SMA11A	P4SMA11CA	11A	11C	9.4	10.5	11.6	1	15.6	26.3	5/10
P4SMA12A	P4SMA12CA	12A	12C	10.2	11.4	12.6	1	16.7	24.6	5/10
P4SMA13A	P4SMA13CA	13A	13C	11.1	12.4	13.7	1	18.2	22.5	1.0
P4SMA15A	P4SMA15CA	15A	15C	12.8	14.3	15.8	1	21.2	19.3	1.0
P4SMA16A	P4SMA16CA	16A	16C	13.6	15.2	16.8	1	22.5	18.2	1.0
P4SMA18A	P4SMA18CA	18A	18C	15.3	17.1	18.9	1	25.5	16.1	1.0
P4SMA20A	P4SMA20CA	20A	20C	17.1	19.0	21.0	1	27.7	14.8	1.0
P4SMA22A	P4SMA22CA	22A	22C	18.8	20.9	23.1	1	30.6	13.4	1.0
P4SMA24A	P4SMA24CA	24A	24C	20.5	22.8	25.2	1	33.2	12.3	1.0
P4SMA27A	P4SMA27CA	27A	27C	23.1	25.7	28.4	1	37.5	10.9	1.0
P4SMA30A	P4SMA30CA	30A	30C	25.6	28.5	31.5	1	41.4	9.9	1.0
P4SMA33A	P4SMA33CA	33A	33C	28.2	31.4	34.7	1	45.7	9.0	1.0
P4SMA36A	P4SMA36CA	36A	36C	30.8	34.2	37.8	1	49.9	8.2	1.0

400W Surface Mount Transient Voltage Suppressor

P4SMA6.8A - P4SMA550CA

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

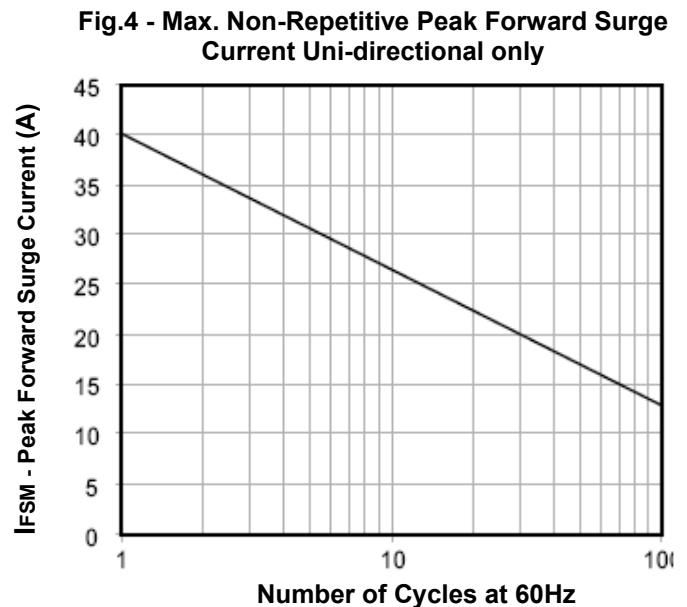
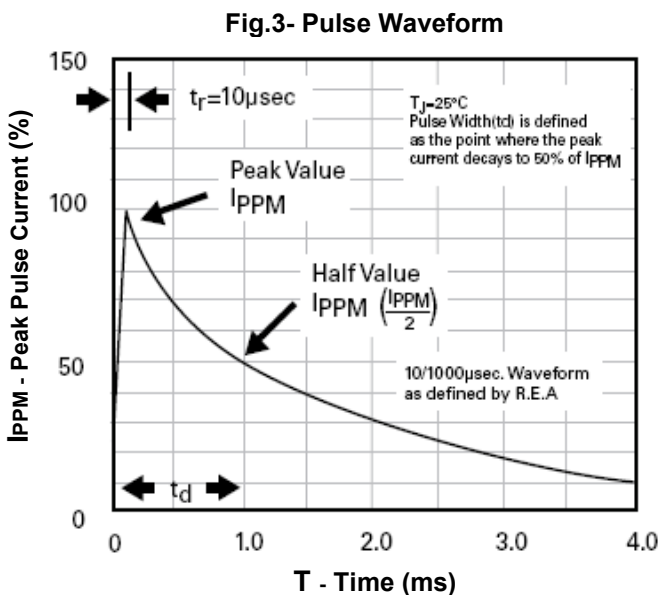
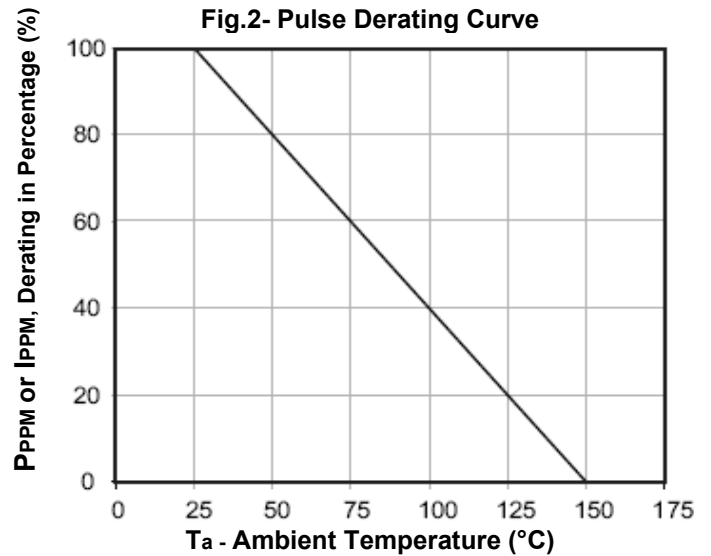
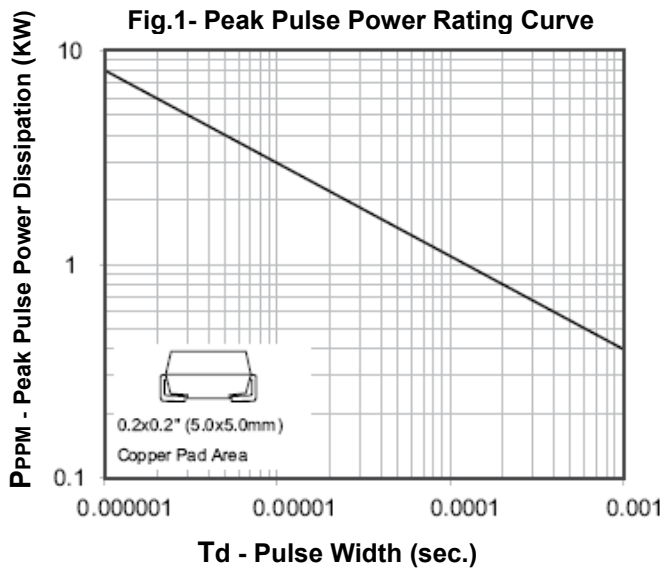
Part NO.		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage @ Test Current.			Max. Clamping Voltage @ IPPM	Max. Peak Pulse Current	Max. Reverse Leakage Current @ V_{WM}
					V_{BR}		I_T (mA)			
Uni-Polar	Bi-Polar	Uni	Bi	V_{WM} (V)	Min.	Max.		V_C (V)	IPPM (A)	ID (μ A)
P4SMA39A	P4SMA39CA	39A	39C	33.3	37.1	41	1	53.9	7.6	1.0
P4SMA43A	P4SMA43CA	43A	43C	36.8	40.9	45.2	1	59.3	6.9	1.0
P4SMA47A	P4SMA47CA	47A	47C	40.2	44.7	49.4	1	64.8	6.3	1.0
P4SMA51A	P4SMA51CA	51A	51C	43.6	48.5	53.6	1	70.1	5.8	1.0
P4SMA56A	P4SMA56CA	56A	56C	47.8	53.2	58.8	1	77	5.3	1.0
P4SMA62A	P4SMA62CA	62A	62C	53	58.9	65.1	1	85	4.8	1.0
P4SMA68A	P4SMA68CA	68A	68C	58.1	64.6	71.4	1	92	4.5	1.0
P4SMA75A	P4SMA75CA	75A	75C	64.1	71.3	78.8	1	103	4.0	1.0
P4SMA82A	P4SMA82CA	82A	82C	70.1	77.9	86.1	1	113	3.6	1.0
P4SMA91A	P4SMA91CA	91A	91C	77.8	86.5	95.5	1	125	3.3	1.0
P4SMA100A	P4SMA100CA	100A	100C	85.5	95	105	1	137	3.0	1.0
P4SMA110A	P4SMA110CA	110A	110C	94	105	116	1	152	2.7	1.0
P4SMA120A	P4SMA120CA	120A	120C	102	114	126	1	165	2.5	1.0
P4SMA130A	P4SMA130CA	130A	130C	111	124	137	1	179	2.3	1.0
P4SMA150A	P4SMA150CA	150A	150C	128	143	158	1	207	2.0	1.0
P4SMA160A	P4SMA160CA	160A	160C	136	152	168	1	219	1.9	1.0
P4SMA170A	P4SMA170CA	170A	170C	145	162	179	1	234	1.8	1.0
P4SMA180A	P4SMA180CA	180A	180C	154	171	189	1	246	1.7	1.0
P4SMA200A	P4SMA200CA	200A	200C	171	190	210	1	274	1.5	1.0
P4SMA220A	P4SMA220CA	220A	220C	185	209	231	1	328	1.3	1.0
P4SMA250A	P4SMA250CA	250A	250C	214	237	263	1	344	1.2	1.0
P4SMA300A	P4SMA300CA	300A	300C	256	285	315	1	414	1.0	1.0
P4SMA350A	P4SMA350CA	350A	350C	300	332	368	1	482	0.9	1.0
P4SMA400A	P4SMA400CA	400A	400C	342	380	420	1	548	0.8	1.0
P4SMA440A	P4SMA440CA	440A	440C	376	418	462	1	602	0.7	1.0
P4SMA480A	P4SMA480CA	480A	480C	408	456	504	1	658	0.6	1.0
P4SMA510A	P4SMA510CA	510A	510C	434	485	535	1	698	0.6	1.0
P4SMA530A	P4SMA530CA	530A	530C	477	503.5	556.5	1	725	0.6	1.0
P4SMA540A	P4SMA540CA	540A	540C	486	513	567	1	740	0.5	1.0
P4SMA550A	P4SMA550CA	550A	550C	495	522.5	577.5	1	760	0.5	1.0

Note: For bi-directional type having V_R of 10V and less, the I_R limit is double.

400W Surface Mount Transient Voltage Suppressor

P4SMA6.8A - P4SMA550CA

Typical Characteristics Curves



400W Surface Mount Transient Voltage Suppressor

P4SMA6.8A - P4SMA550CA

Fig.5- Steady State Power Derating Curve

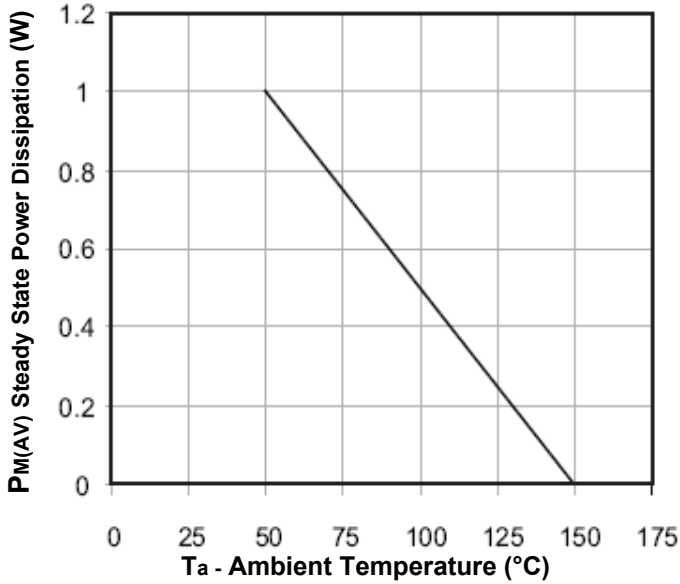
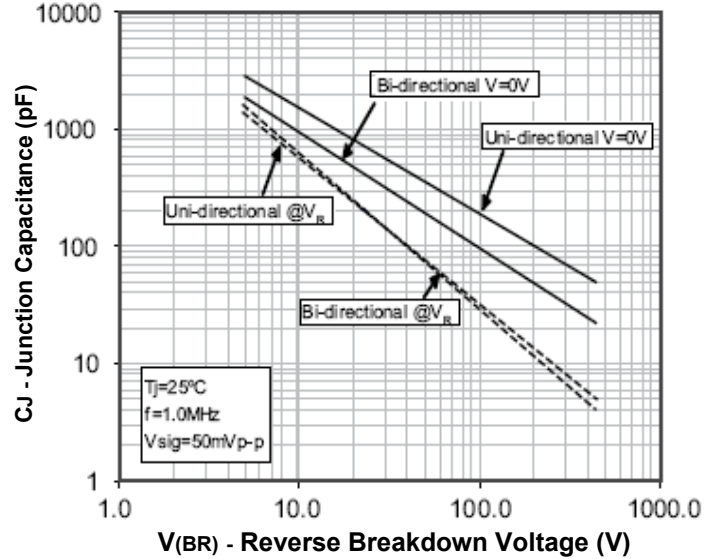
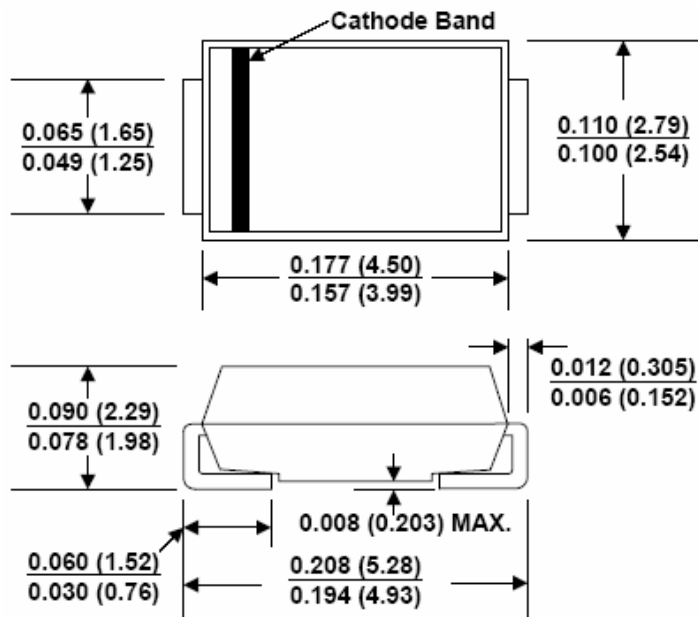


Fig.6- Typical Junction Capacitance



Dimensions in inches (mm)



SMA

TAITRON
components incorporated

Rev. E/AH

400W Surface Mount Transient Voltage Suppressor

P4SMA6.8A - P4SMA550CA

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