



FEATURES

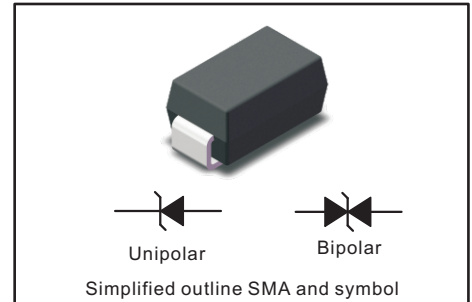
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

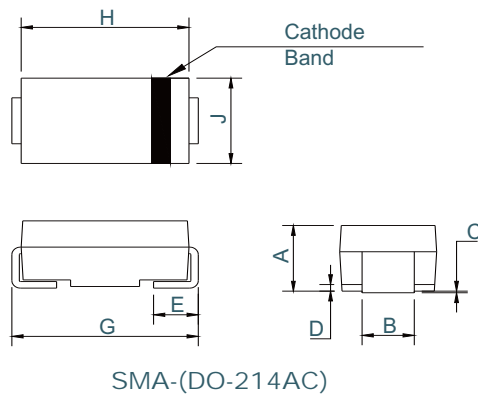
- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 202
- Approx. Weight: 0.055g / 0.002oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



PACKAGE OUTLINE



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.067	0.091	1.70	2.31	
B	0.051	0.067	1.29	1.70	
C	0.002	0.008	0.051	0.203	
D	—	0.020	—	0.51	
E	0.030	0.060	0.76	1.52	
G	0.185	0.209	4.70	5.31	
H	0.157	0.181	4.00	4.60	
J	0.086	0.110	2.18	2.79	

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 s waveform (Note1,Note2, Fig.1).	P_{PPM}	600	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3, Fig4).	I_{FSM} (UNI)	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	I_{PPM}	see Table 1	A
Typical Junction capacitance at VR=4V, f=1MHz	C_J	390	pF
ESD Voltage per IEC6100-4-2	V_{ESD1} V_{ESD2}	± 30 ± 30	kV
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	100	°C/W
Operating Junction Temperature and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. Mounted on 5 mm² (0.13mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
4. Peak pulse power waveform is 10/1000μs.





P6SMA Series

Surface Mount Transient Voltage Suppressor Power 600W

Characteristics at Ta = 25°C

Table 1

Part Number		Marking		Reverse Stand off Voltage VR (Volts)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ Ipp (V)	Maximum Peak Pulse Current Ipp (A)	Maximum Reverse Leakage IR@ VR (µA)
(Uni)	(Bi)	UNI	BI		MIN	MAX				
P6SMA6.8A	P6SMA6.8CA	6V8A	6V8C	5.8	6.45	7.14	10	10.5	58.1	1000
P6SMA7.5A	P6SMA7.5CA	7V5A	7V5C	6.4	7.13	7.88	10	11.3	54.0	500
P6SMA8.2A	P6SMA8.2CA	8V2A	8V2C	7.0	7.79	8.61	10	12.1	50.4	200
P6SMA9.1A	P6SMA9.1CA	9V1A	9V1C	7.8	8.65	9.55	1	13.4	45.5	50
P6SMA10A	P6SMA10CA	10A	10C	8.6	9.50	10.50	1	14.5	42.1	10
P6SMA11A	P6SMA11CA	11A	11C	9.4	10.50	11.60	1	15.6	39.1	5
P6SMA12A	P6SMA12CA	12A	12C	10.2	11.40	12.60	1	16.7	36.5	5
P6SMA13A	P6SMA13CA	13A	13C	11.1	12.40	13.70	1	18.2	33.5	1
P6SMA15A	P6SMA15CA	15A	15C	12.8	14.30	15.80	1	21.2	28.8	1
P6SMA16A	P6SMA16CA	16A	16C	13.6	15.20	16.80	1	22.5	27.1	1
P6SMA18A	P6SMA18CA	18A	18C	15.3	17.10	18.90	1	25.5	24.2	1
P6SMA20A	P6SMA20CA	20A	20C	17.1	19.00	21.00	1	27.7	22.0	1
P6SMA22A	P6SMA22CA	22A	22C	18.8	20.90	23.10	1	30.6	19.9	1
P6SMA24A	P6SMA24CA	24A	24C	20.5	22.80	25.20	1	33.2	18.4	1
P6SMA27A	P6SMA27CA	27A	27C	23.1	25.70	28.40	1	37.5	16.3	1
P6SMA30A	P6SMA30CA	30A	30C	25.6	28.50	31.50	1	41.4	14.7	1
P6SMA33A	P6SMA33CA	33A	33C	28.2	31.40	34.70	1	45.7	13.3	1
P6SMA36A	P6SMA36CA	36A	36C	30.8	34.20	37.80	1	49.9	12.2	1
P6SMA39A	P6SMA39CA	39A	39C	33.3	37.10	41.00	1	53.9	11.3	1
P6SMA43A	P6SMA43CA	43A	43C	36.8	40.90	45.20	1	59.3	10.3	1
P6SMA47A	P6SMA47CA	47A	47C	40.2	44.70	49.40	1	64.8	9.4	1
P6SMA51A	P6SMA51CA	51A	51C	43.6	48.50	53.60	1	70.1	8.7	1
P6SMA56A	P6SMA56CA	56A	56C	47.8	53.20	58.80	1	77.0	7.9	1
P6SMA62A	P6SMA62CA	62A	62C	53.0	58.90	65.10	1	85.0	7.2	1
P6SMA68A	P6SMA68CA	68A	68C	58.1	64.60	71.40	1	92.0	6.6	1
P6SMA75A	P6SMA75CA	75A	75C	64.1	71.30	78.80	1	103.0	5.9	1
P6SMA82A	P6SMA82CA	82A	82C	70.1	77.90	86.10	1	113.0	5.4	1
P6SMA91A	P6SMA91CA	91A	91C	77.8	86.50	95.50	1	125.0	4.9	1
P6SMA100A	P6SMA100CA	100A	100C	85.5	95.00	105.00	1	137.0	4.5	1
P6SMA110A	P6SMA110CA	110A	110C	94.0	105.00	116.00	1	152.0	4.0	1
P6SMA120A	P6SMA120CA	120A	120C	102.0	114.00	126.00	1	165.0	3.7	1
P6SMA130A	P6SMA130CA	130A	130C	111.0	124.00	137.00	1	179.0	3.4	1
P6SMA150A	P6SMA150CA	150A	150C	128.0	143.00	158.00	1	207.0	2.9	1
P6SMA160A	P6SMA160CA	160A	160C	136.0	152.00	168.00	1	219.0	2.8	1
P6SMA170A	P6SMA170CA	170A	170C	145.0	162.00	179.00	1	234.0	2.6	1
P6SMA180A	P6SMA180CA	180A	180C	154.0	171.00	189.00	1	246.0	2.5	1
P6SMA200A	P6SMA200CA	200A	200C	171.0	190.00	210.00	1	274.0	2.2	1
P6SMA220A	P6SMA220CA	220A	220C	185.0	209.00	231.00	1	328.0	1.9	1
P6SMA250A	P6SMA250CA	250A	250C	214.0	237.00	263.00	1	344.0	1.8	1
P6SMA300A	P6SMA300CA	300A	300C	256.0	285.00	315.00	1	414.0	1.5	1
P6SMA350A	P6SMA350CA	350A	350C	300.0	332.00	368.00	1	482.0	1.3	1
P6SMA400A	P6SMA400CA	400A	400C	342.0	380.00	420.00	1	548.0	1.1	1
P6SMA440A	P6SMA440CA	440A	440C	376.0	418.00	462.00	1	602.0	1.0	1
P6SMA480A	P6SMA480CA	480A	480C	408.0	456.00	504.00	1	658.0	0.9	1
P6SMA510A	P6SMA510CA	510A	510C	434.0	485.00	535.00	1	698.0	0.9	1
P6SMA530A	P6SMA530CA	530A	530C	477.0	503.50	556.50	1	725.0	0.8	1
P6SMA540A	P6SMA540CA	540A	540C	486.0	513.00	567.00	1	740.0	0.8	1
P6SMA550A	P6SMA550CA	550A	550C	495.0	522.50	577.50	1	760.0	0.8	1

For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.

For parts without A (VBR is $\pm 10\%$ and VC is 5% higher than with A parts).





Figure 1 - Peak Pulse Power Rating Curve

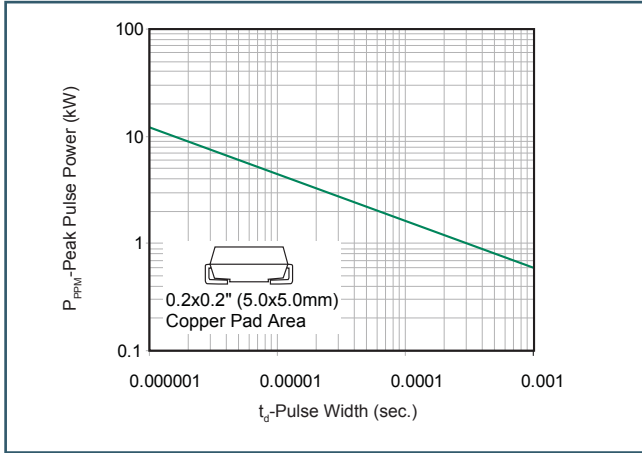


Figure 2 - Pulse Derating Curve

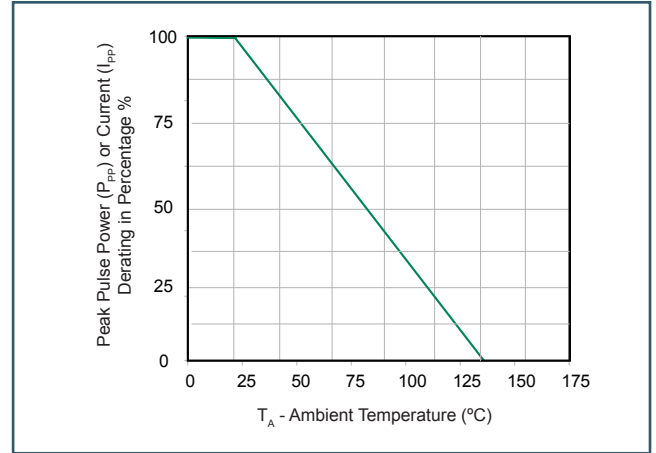


Figure 3 - Pulse Waveform

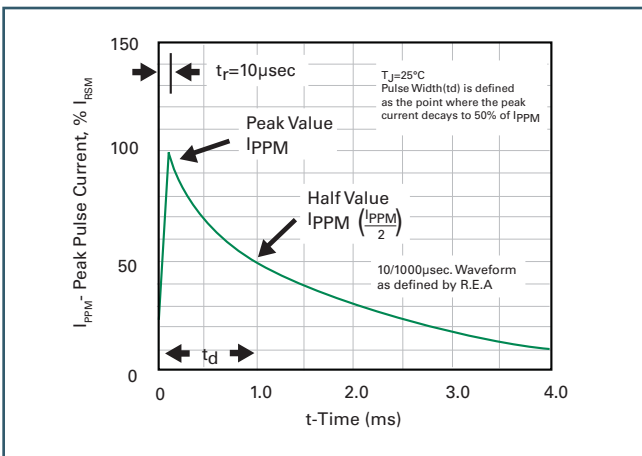


Figure 4 - Typical Junction Capacitance

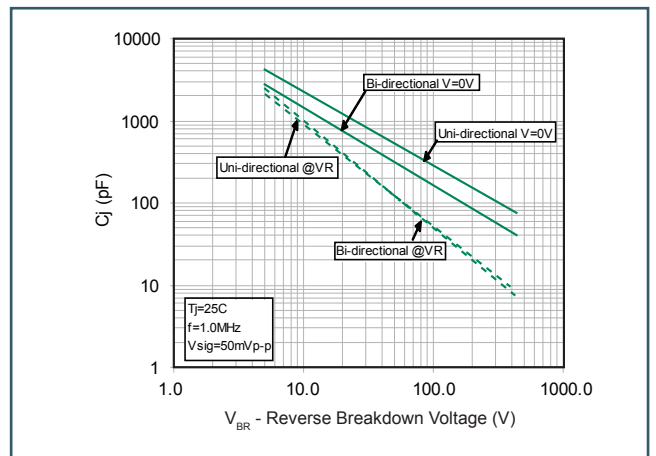


Figure 5 - Steady State Power Dissipation Derating Curve

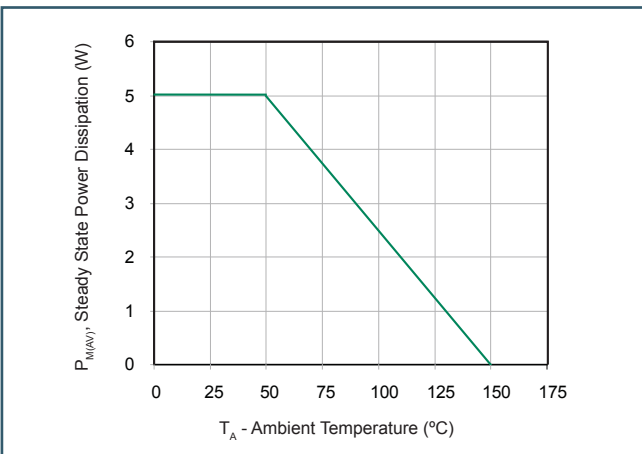


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

