



Breakdown Voltage: 6.8 to 600 V
Peak Pulse Power: 600 W

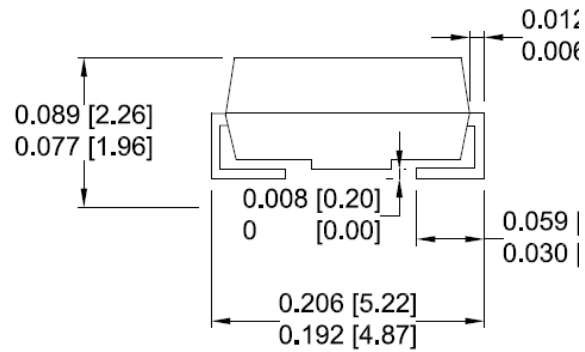
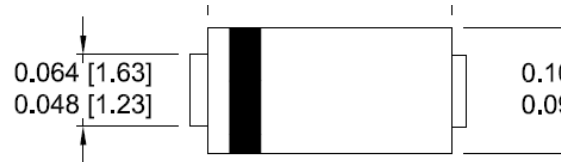
SMA/ DO-214AC

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



Dimensions: inch [mm]

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.



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

Part Number (Uni)	Part Number (Bi)	Device Marking Code		Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage I_R @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
		Uni	Bi	Min (V)	Max (V)	I_T (mA)				
P6SMA6.8A	P6SMA6.8CA	6V8A	6V8C	6.46	7.14	10	1000	5.8	57.14	10.5
P6SMA7.5A	P6SMA7.5CA	7V5A	7V5C	7.13	7.88	10	500	6.4	53.10	11.3
P6SMA8.2A	P6SMA8.2CA	8V2A	8V2C	7.79	8.61	10	200	7.0	49.59	12.1
P6SMA9.1A	P6SMA9.1CA	9V1A	9V1C	8.65	9.56	1	50	7.8	44.78	13.4
P6SMA10A	P6SMA10CA	10A	10C	9.50	10.50	1	10	8.6	41.38	14.5
P6SMA11A	P6SMA11CA	11A	11C	10.45	11.55	1	5	9.4	38.46	15.6
P6SMA12A	P6SMA12CA	12A	12C	11.40	12.60	1	5	10.2	35.93	16.7
P6SMA13A	P6SMA13CA	13A	13C	12.35	13.65	1	1	11.1	32.97	18.2
P6SMA15A	P6SMA15CA	15A	15C	14.25	15.75	1	1	12.8	28.30	21.2
P6SMA16A	P6SMA16CA	16A	16C	15.20	16.80	1	1	13.6	26.67	22.5
P6SMA18A	P6SMA18CA	18A	18C	17.10	18.90	1	1	15.3	23.81	25.2
P6SMA20A	P6SMA20CA	20A	20C	19.00	21.00	1	1	17.1	21.66	27.7
P6SMA22A	P6SMA22CA	22A	22C	20.90	23.10	1	1	18.8	19.61	30.6
P6SMA24A	P6SMA24CA	24A	24C	22.80	25.20	1	1	20.5	18.07	33.2
P6SMA27A	P6SMA27CA	27A	27C	25.65	28.35	1	1	23.1	16.00	37.5
P6SMA30A	P6SMA30CA	30A	30C	28.50	31.50	1	1	25.6	14.49	41.4
P6SMA33A	P6SMA33CA	33A	33C	31.35	34.65	1	1	28.2	13.13	45.7
P6SMA36A	P6SMA36CA	36A	36C	34.20	37.80	1	1	30.8	12.02	49.9
P6SMA39A	P6SMA39CA	39A	39C	37.05	40.95	1	1	33.3	11.13	53.9
P6SMA43A	P6SMA43CA	43A	43C	40.85	45.15	1	1	36.8	10.12	59.3
P6SMA47A	P6SMA47CA	47A	47C	44.65	49.35	1	1	40.2	9.26	64.8
P6SMA51A	P6SMA51CA	51A	51C	48.45	53.55	1	1	43.6	8.56	70.1
P6SMA56A	P6SMA56CA	56A	56C	53.20	58.80	1	1	47.8	7.79	77.0
P6SMA62A	P6SMA62CA	62A	62C	58.90	65.10	1	1	53.0	7.06	85.0
P6SMA68A	P6SMA68CA	68A	68C	64.60	71.40	1	1	58.1	6.52	92.0
P6SMA75A	P6SMA75CA	75A	75C	71.25	78.75	1	1	64.1	5.83	103.0
P6SMA82A	P6SMA82CA	82A	82C	77.90	86.10	1	1	70.1	5.31	113.0
P6SMA91A	P6SMA91CA	91A	91C	86.45	95.55	1	1	77.8	4.80	125.0
P6SMA100A	P6SMA100CA	100A	100C	95.00	105.00	1	1	85.5	4.38	137.0
P6SMA110A	P6SMA110CA	110A	110C	104.50	115.50	1	1	94.0	3.95	152.0
P6SMA120A	P6SMA120CA	120A	120C	114.00	126.00	1	1	102.0	3.64	165.0
P6SMA130A	P6SMA130CA	130A	130C	123.50	136.50	1	1	111.0	3.35	179.0
P6SMA150A	P6SMA150CA	150A	150C	142.50	157.50	1	1	128.0	2.90	207.0
P6SMA160A	P6SMA160CA	160A	160C	152.00	168.00	1	1	136.0	2.74	219.0
P6SMA170A	P6SMA170CA	170A	170C	161.50	178.50	1	1	145.0	2.56	234.0
P6SMA180A	P6SMA180CA	180A	180C	171.00	189.00	1	1	154.0	2.44	246.0
P6SMA200A	P6SMA200CA	200A	200C	190.00	210.00	1	1	171.0	2.19	274.0
P6SMA220A	P6SMA220CA	220A	220C	209.00	231.00	1	1	185.0	1.83	328.0
P6SMA250A	P6SMA250CA	250A	250C	237.50	262.50	1	1	214.0	1.74	344.0
P6SMA300A	P6SMA300CA	300A	300C	285.00	315.00	1	1	256.0	1.45	414.0
P6SMA350A	P6SMA350CA	350A	350C	332.50	367.50	1	1	299.3	1.24	482.0
P6SMA380A	P6SMA380CA	380A	380C	361.00	399.00	1	1	324.9	1.14	524.4
P6SMA400A	P6SMA400CA	400A	400C	380.00	420.00	1	1	342.0	1.09	548.0
P6SMA440A	P6SMA440CA	440A	440C	418.00	462.00	1	1	376.2	0.99	607.2
P6SMA500A	P6SMA500CA	500A	500C	475.00	525.00	1	1	427.5	0.87	690.0
P6SMA520A	P6SMA520CA	520A	520C	494.00	546.00	1	1	444.6	0.84	717.6
P6SMA550A	P6SMA550CA	550A	550C	522.50	577.50	1	1	470.3	0.79	759.0
P6SMA600A	P6SMA600CA	600A	600C	570.00	630.00	1	1	513.0	0.72	828.0

Note:

1. The available parts are "A" type only, the parts without A (V_{BR} is $\pm 10\%$) is not available
2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
3. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double



Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Figure 1 - Peak Pulse Power Rating Curve

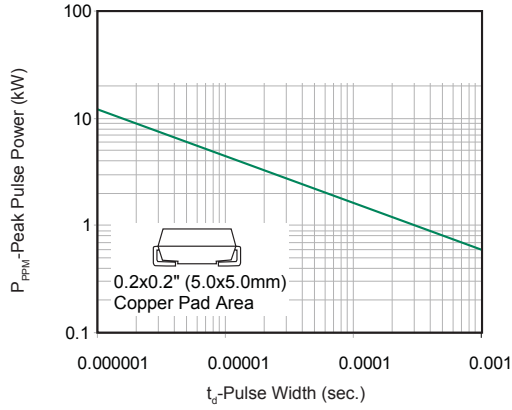


Figure 2 - Pulse Derating Curve

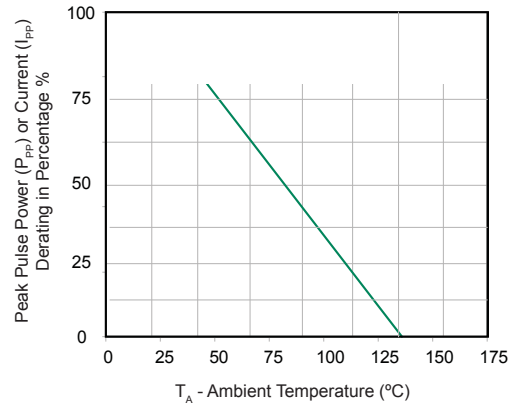


Figure 3 - Pulse Waveform

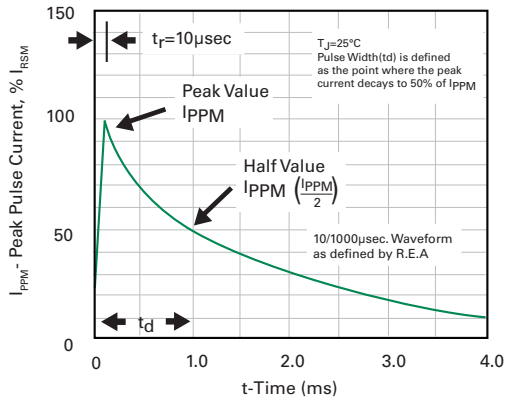


Figure 4 - Typical Junction Capacitance

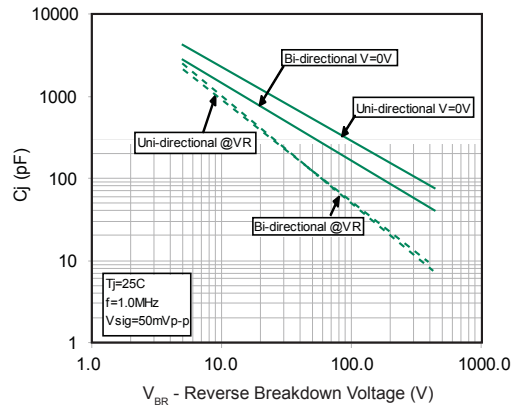


Figure 5 - Steady State Power Dissipation Derating Curve

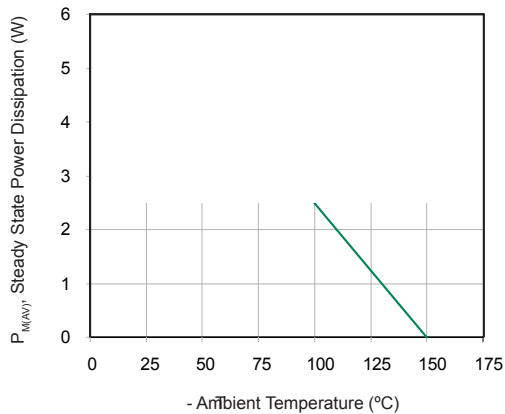
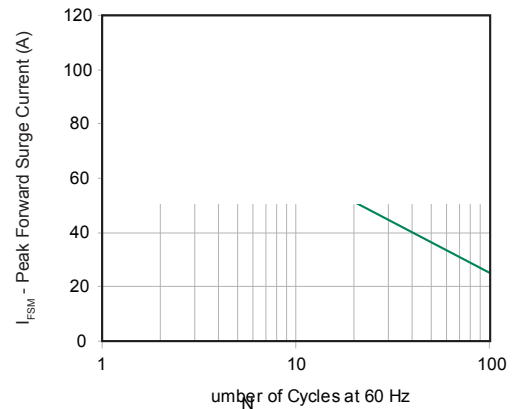


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00