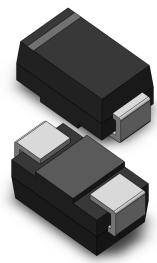
P2SMA5.0A(CA) - P2SMA220(CA)

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 5.0 - 220V
POWER: 200Watts



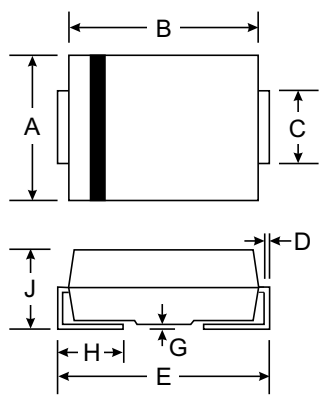
Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance, excellent clamping capability
- 200W peak pulse power capability with a10/1000μs wave from,repetition rate (dutycycle):0.01%
- High temperature soldering guaranteed:

  26 0 °C/10 seconds, at terminals

Mechanical Data

- Case : SMA (DO-214AC) Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead formed for Surface mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight: 0.064 grams (approx.)



SMA(DO-214AC)		
Dim	**Min**	**Max**
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

RoHS COMPLIANT

Maximum Ratings T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum P_{PK} Dissipation (PW - 10/1000 μs)	P_{PK}	200	W
Maximum P_{PK} Dissipation @ Ta = 25 °C (PW - 8/10 μs) (Note 2)	P_{PK}	1000	W
DC Power Dissipation @ Ta = 25 °C (Note 3)	P_D	385	mW
Derate above 25 °C		4.0	mW/°C
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\Theta JA}$	325	°C/W
Thermal Resistance, Junction to Lead (Note 3)	$R_{\Theta JL}$	26	°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Notes :

(1) Non−repetitive current pulse at Ta = 25°C, per waveform of Fig. 2.
(2) Non−repetitive current pulse at Ta = 25°C, per waveform of Fig. 5.
(3) Mounted with recommended minimum pad size, DC board FR4.

Electrical Characteristics(T =25 ℃ unless otherwise noted)

TYPE		Marking		Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Reverse Leakage @V_{RWM}	Reverse Stand-Off Voltage	Peak Pulse Current	Maximum Clamping Voltage @I_{PP}
(Uni)	(Bi)	(Uni)	(Bi)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	I_R(uA)	V_{RWM}(V)	I_{PP}(A)	V_C(V)
P2SMA5.0A	P2SMA5.0CA	FE	KE	6.40	7.00	10	400	5.0	21.74	9.2
P2SMA6.0A	P2SMA6.0CA	GF	KG	6.67	7.37	10	400	6.0	19.42	10.3
P2SMA6.5A	P2SMA6.5CA	FK	KK	7.22	7.98	10	250	6.5	17.86	11.2
P2SMA7.0A	P2SMA7.0CA	FM	KM	7.78	8.60	10	100	7.0	16.67	12.0
P2SMA7.5A	P2SMA7.5CA	FP	KP	8.33	9.21	1	50	7.5	15.50	12.9
P2SMA8.0A	P2SMA8.0CA	FR	KR	8.89	9.83	1	25	8.0	14.71	13.6
P2SMA8.5A	P2SMA8.5CA	FT	KT	9.44	10.40	1	10	8.5	13.89	14.4
P2SMA9.0A	P2SMA9.0CA	FV	KV	10.00	11.10	1	5	9.0	12.99	15.4
P2SMA10A	P2SMA10CA	FX	KX	11.10	12.30	1	2.5	10.0	11.76	17.0
P2SMA11A	P2SMA11CA	FZ	KZ	12.20	13.50	1	2.5	11.0	10.99	18.2
P2SMA12A	P2SMA12CA	HE	LE	13.30	14.70	1	2.5	12.0	10.05	19.9
P2SMA13A	P2SMA13CA	HG	LG	14.40	15.90	1	1	13.0	9.30	21.5
P2SMA14A	P2SMA14CA	HK	LK	15.60	17.20	1	1	14.0	8.62	23.2
P2SMA15A	P2SMA15CA	HM	LM	16.70	18.50	1	1	15.0	8.20	24.4
P2SMA16A	P2SMA16CA	HP	LP	17.80	19.70	1	1	16.0	7.69	26.0
P2SMA17A	P2SMA17CA	HR	LR	18.90	20.90	1	1	17.0	7.25	27.6
P2SMA18A	P2SMA18CA	HT	LT	20.00	22.10	1	1	18.0	6.85	29.2
P2SMA19A	P2SMA19CA	HB	LB	21.10	23.30	1	1	19.0	6.54	30.6
P2SMA20A	P2SMA20CA	HV	LV	22.20	24.50	1	1	20.0	6.17	32.4
P2SMA22A	P2SMA22CA	HX	LX	24.40	26.90	1	1	22.0	5.63	35.5
P2SMA24A	P2SMA24CA	HZ	LZ	26.70	29.50	1	1	24.0	5.14	38.9
P2SMA26A	P2SMA26CA	JE	ME	28.90	31.90	1	1	26.0	4.75	42.1
P2SMA28A	P2SMA28CA	JG	MG	31.10	34.40	1	1	28.0	4.41	45.4
P2SMA30A	P2SMA30CA	JK	MK	33.30	36.80	1	1	30.0	4.13	48.4
P2SMA33A	P2SMA33CA	JM	MM	36.70	40.60	1	1	33.0	3.75	53.3
P2SMA36A	P2SMA36CA	JP	MP	40.00	44.20	1	1	36.0	3.44	58.1
P2SMA40A	P2SMA40CA	JR	MR	44.40	49.10	1	1	40.0	3.10	64.5
P2SMA43A	P2SMA43CA	JT	MT	47.80	52.80	1	1	43.0	2.88	69.4
P2SMA45A	P2SMA45CA	JV	MV	50.00	55.30	1	1	45.0	2.75	72.7
P2SMA48A	P2SMA48CA	JX	MX	53.30	58.90	1	1	48.0	2.58	77.4
P2SMA51A	P2SMA51CA	JZ	MZ	56.70	62.70	1	1	51.0	2.43	82.4
P2SMA54A	P2SMA54CA	XE	NE	60.00	66.30	1	1	54.0	2.30	87.1
P2SMA58A	P2SMA58CA	XG	NG	64.40	71.20	1	1	58.0	2.14	93.6
P2SMA60A	P2SMA60CA	XK	NK	66.70	73.70	1	1	60.0	2.07	96.8
P2SMA64A	P2SMA64CA	XM	NM	71.10	78.60	1	1	64.0	1.94	103.0

Note:

1. The available parts are "A" type only,the parts without A(V_{BR} is ±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

TYPE		Marking		Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Reverse Leakage @V_{RWM}	Reverse Stand-Off Voltage	Peak Pulse Current	Maximum Clamping Voltage @I_{PP}
(Uni)	(Bi)	(Uni)	(Bi)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	I_R(uA)	V_{RWM}(V)	I_{PP}(A)	V_C(V)
P2SMA70A	P2SMA70CA	XP	NP	77.80	86.00	1	1	70.0	1.77	113.0
P2SMA75A	P2SMA75CA	XR	NR	83.30	92.10	1	1	75.0	1.65	121.0
P2SMA78A	P2SMA78CA	XT	NT	86.70	95.80	1	1	78.0	1.59	126.0
P2SMA80A	P2SMA80CA	XB	NB	88.80	97.60	1	1	80.0	1.55	129.0
P2SMA85A	P2SMA85CA	XV	NV	94.40	104.00	1	1	85.0	1.46	137.0
P2SMA90A	P2SMA90CA	XX	NX	100.00	111.00	1	1	90.0	1.37	146.0
P2SMA100A	P2SMA100CA	XZ	NZ	111.00	123.00	1	1	100.0	1.23	162.0
P2SMA110A	P2SMA110CA	TE	PE	122.00	135.00	1	1	110.0	1.13	177.0
P2SMA120A	P2SMA120CA	TG	PG	133.00	147.00	1	1	120.0	1.04	193.0
P2SMA130A	P2SMA130CA	TK	PK	144.00	159.00	1	1	130.0	0.96	209.0
P2SMA140A	P2SMA140CA	TB	PB	155.00	171.00	1	1	140.0	0.89	224.0
P2SMA150A	P2SMA150CA	TM	PM	167.00	185.00	1	1	150.0	0.82	243.0
P2SMA160A	P2SMA160CA	TP	PP	178.00	197.00	1	1	160.0	0.77	259.0
P2SMA170A	P2SMA170CA	TR	PR	189.00	209.00	1	1	170.0	0.73	275.0
P2SMA180A	P2SMA180CA	TT	PT	200.00	220.00	1	1	180.0	0.68	292.0
P2SMA190A	P2SMA190CA	TV	PV	211.00	232.00	1	1	190.0	0.65	308.0
P2SMA200A	P2SMA200CA	TX	PX	224.00	247.00	1	1	200.0	0.62	324.0
P2SMA220A	P2SMA220CA	TZ	PZ	246.00	272.00	1	1	220.0	0.56	356.0

RATING AND CHARACTERISTIC CURVES (P2SMA5.0A(CA) - P2SMA220A(CA))

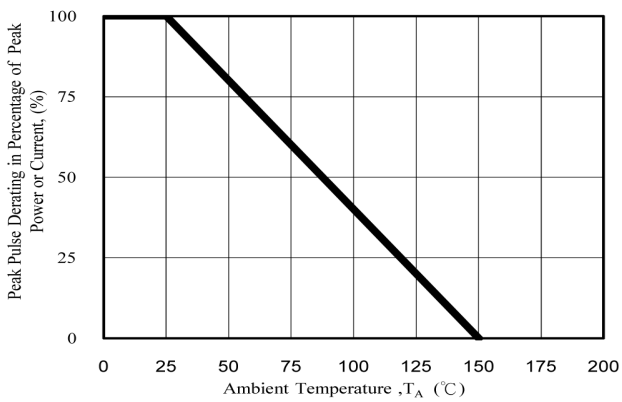


Fig. 1 - Pulse Derating Curve

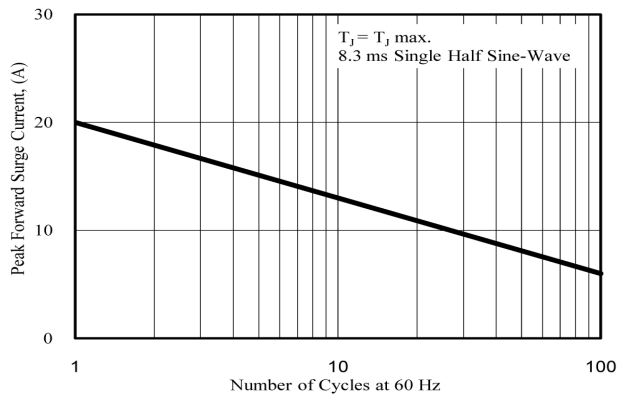


Fig. 2 - Maximum Non-Repetitive Surge Current

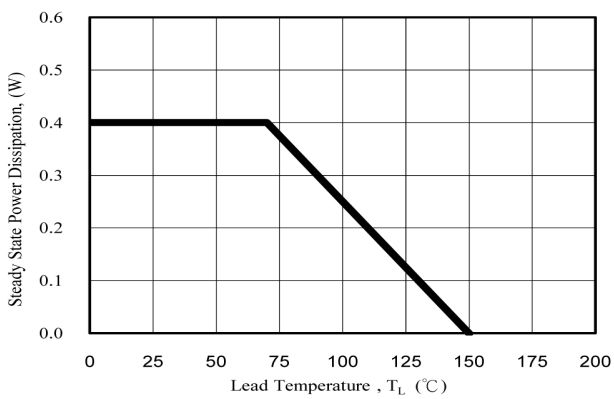


Fig. 3 - Steady State Power Derating Curve

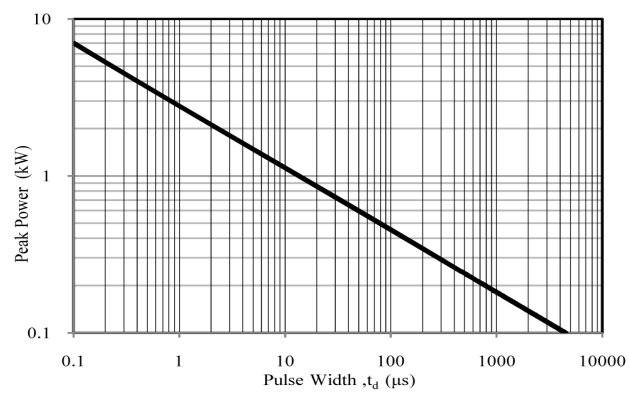


Fig. 4 - Peak Pulse Power Rating Curve

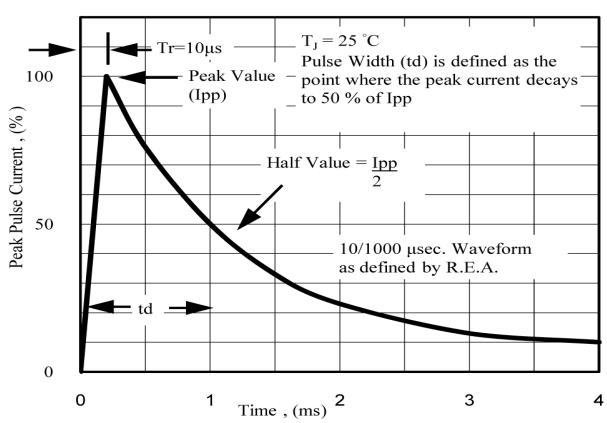


Fig. 5 - Pulse Waveform

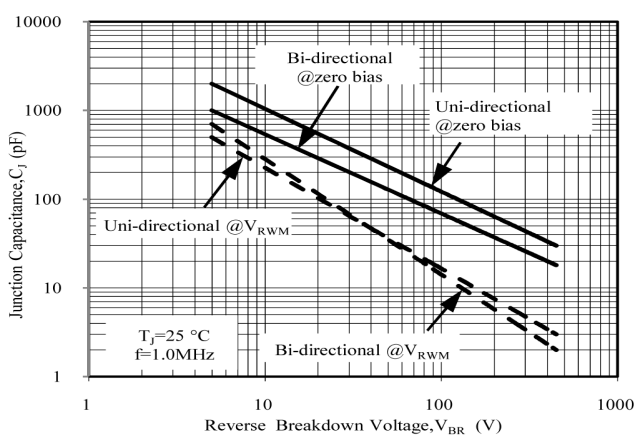


Fig. 6 - Typical Junction Capacitance