

SMA6JXX(C)A-A

600W Surface Mount Transient Voltage Suppressors

Features

- ◆ Optimized for LAN protection applications
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated junction chip
- ◆ 600w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BRmin}
- ◆ High temperature soldering guaranteed: 260°C/10S at terminals
- ◆ AEC-Q101 qualified

Mechanical Data

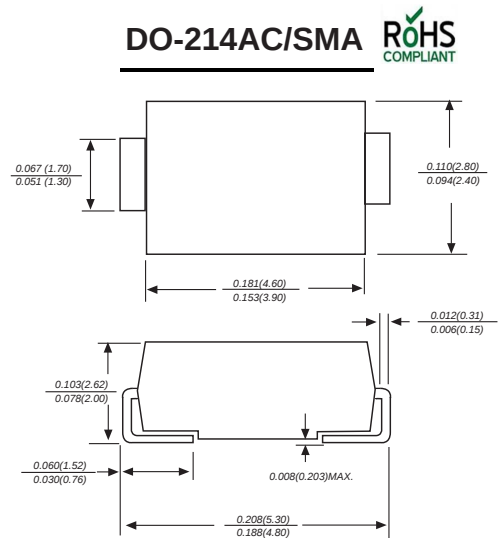
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0023 ounce, 0.07 grams



Uni-Polar

Bi-Polar



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	SYMBOLS	VALUE	UNITS
Peak pulse power dissipation with a 10/1000μs wavetorm(NOTE 1,2,4,FIG.1)	P_{PPM}	Minimum 600	Watts
Peak forward surge current (Note 3)	I_{FSM}	100.0	Amps
Peak pulse current with a 10/1000μs waveform(NOTE 1,2,5)Fig.2	I_{PPM}	See Table 1	Amps
Steady State Power Dissipation(Note 4)	$P_{M(AV)}$	5.0	Watts
Operating junction and storage temperature range	T_{STG}, T_J	-55 to + 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 5.0mm copper pads to each terminal

3.Measured on 8.3ms single half sine-wine.For uni-directional devices only.

4.Lead temperature at $75^\circ\text{C}=T_L$

5.Peak pulse power waveform is 10/1000μs

Type		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at V_R	Breakdown Voltage at I_T		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at I_{pp}
Uni-Polar	Bi-Polar	PPP	$V(R)$	IR	$V(BR)$ (V)		I_T	I_{pp}	V_c
		(W)	(V)	(μA)	Min.	Max.	(mA)	(A)	(V)
SMA6J5. 0A-A	SMA6J5. 0CA-A	600	5	800	6.4	7	10	65.3	9.2
SMA6J6. 0A-A	SMA6J6. 0CA-A	600	6	800	6.67	7.37	10	58.3	10.3
SMA6J6. 5A-A	SMA6J6. 5CA-A	600	6.5	500	7.22	7.98	10	53.6	11.2
SMA6J7. 0A-A	SMA6J7. 0CA-A	600	7	200	7.78	8.6	10	50.0	12.0
SMA6J7. 5A-A	SMA6J7. 5CA-A	600	7.5	100	8.33	9.21	1	46.6	12.9
SMA6J8. 0A-A	SMA6J8. 0CA-A	600	8	50	8.89	9.83	1	44.2	13.6
SMA6J8. 5A-A	SMA6J8. 5CA-A	600	8.5	20	9.44	10.4	1	41.7	14.4
SMA6J9. 0A-A	SMA6J9. 0CA-A	600	9	10	10	11.1	1	39.0	15.4
SMA6J10A-A	SMA6J10CA-A	600	10	5	11.1	12.3	1	35.3	17.0
SMA6J11A-A	SMA6J11CA-A	600	11	1	12.2	13.5	1	33.0	18.2
SMA6J12A-A	SMA6J12CA-A	600	12	1	13.3	14.7	1	30.2	19.9
SMA6J13A-A	SMA6J13CA-A	600	13	1	14.4	15.9	1	28.0	21.5
SMA6J14A-A	SMA6J14CA-A	600	14	1	15.6	17.2	1	25.9	23.2
SMA6J15A-A	SMA6J15CA-A	600	15	1	16.7	18.5	1	24.6	24.4
SMA6J16A-A	SMA6J16CA-A	600	16	1	17.8	19.7	1	23.1	26.0
SMA6J17A-A	SMA6J17CA-A	600	17	1	18.9	20.9	1	21.8	27.6
SMA6J18A-A	SMA6J18CA-A	600	18	1	20	22.1	1	20.6	29.2
SMA6J20A-A	SMA6J20CA-A	600	20	1	22.2	24.5	1	18.6	32.4
SMA6J22A-A	SMA6J22CA-A	600	22	1	24.4	26.9	1	16.9	35.5
SMA6J24A-A	SMA6J24CA-A	600	24	1	26.7	29.5	1	15.5	38.9
SMA6J26A-A	SMA6J26CA-A	600	26	1	28.9	31.9	1	14.3	42.1
SMA6J28A-A	SMA6J28CA-A	600	28	1	31.1	34.4	1	13.3	45.4
SMA6J30A-A	SMA6J30CA-A	600	30	1	33.3	36.8	1	12.4	48.4
SMA6J33A-A	SMA6J33CA-A	600	33	1	36.7	40.6	1	11.3	53.3
SMA6J36A-A	SMA6J36CA-A	600	36	1	40	44.2	1	10.4	58.1
SMA6J40A-A	SMA6J40CA-A	600	40	1	44.4	49.1	1	9.3	64.5
SMA6J43A-A	SMA6J43CA-A	600	43	1	47.8	52.8	1	8.7	69.4
SMA6J45A-A	SMA6J45CA-A	600	45	1	50	55.3	1	8.3	72.7
SMA6J48A-A	SMA6J48CA-A	600	48	1	53.3	58.9	1	7.8	77.4
SMA6J51A-A	SMA6J51CA-A	600	51	1	56.7	62.7	1	7.3	82.4
SMA6J54A-A	SMA6J54CA-A	600	54	1	60	66.3	1	6.9	87.1
SMA6J58A-A	SMA6J58CA-A	600	58	1	64.4	71.2	1	6.5	93.6
SMA6J60A-A	SMA6J60CA-A	600	60	1	66.7	73.7	1	6.2	96.8
SMA6J64A-A	SMA6J64CA-A	600	64	1	71.1	78.6	1	5.9	103
SMA6J70A-A	SMA6J70CA-A	600	70	1	77.8	86	1	5.3	113
SMA6J75A-A	SMA6J75CA-A	600	75	1	83.3	92.1	1	5.0	121
SMA6J78A-A	SMA6J78CA-A	600	78	1	86.7	95.8	1	4.8	126
SMA6J85A-A	SMA6J85CA-A	600	85	1	94.4	104	1	4.4	137
SMA6J90A-A	SMA6J90CA-A	600	90	1	100	111	1	4.1	146
SMA6J100A-A	SMA6J100CA-A	600	100	1	111	123	1	3.7	162

Type		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at V_R	Breakdown Voltage at I_T		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at I_{pp}
Uni-Polar	Bi-Polar	PPP	$V(R)$	IR	$V(BR) (V)$		I_T	I_{pp}	V_c
		(W)	(V)	(uA)	Min.	Max.	(mA)	(A)	(V)
SMA6J110A-A	SMA6J110CA-A	600	110	1	122	135	1	3.4	177
SMA6J120A-A	SMA6J120CA-A	600	120	1	133	147	1	3.1	193
SMA6J130A-A	SMA6J130CA-A	600	130	1	144	159	1	2.9	209
SMA6J150A-A	SMA6J150CA-A	600	150	1	167	185	1	2.5	243
SMA6J160A-A	SMA6J160CA-A	600	160	1	178	197	1	2.3	259
SMA6J170A-A	SMA6J170CA-A	600	170	1	189	209	1	2.2	275
SMA6J180A-A	SMA6J180CA-A	600	180	1	201	222	1	2.1	292
SMA6J188A-A	SMA6J188CA-A	600	188	1	209	231	1	2.0	304
SMA6J200A-A	SMA6J200CA-A	600	200	1	224	247	1	1.9	324
SMA6J220A-A	SMA6J220CA-A	600	220	1	246	272	1	1.7	356
SMA6J250A-A	SMA6J250CA-A	600	250	1	279	309	1	1.5	405
SMA6J300A-A	SMA6J300CA-A	600	300	1	335	371	1	1.3	486
SMA6J350A-A	SMA6J350CA-A	600	350	1	391	432	1	1.1	567
SMA6J400A-A	SMA6J400CA-A	600	400	1	447	494	1	0.9	648
SMA6J440A-A	SMA6J440CA-A	600	440	1	492	543	1	0.9	713

Ratings And Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

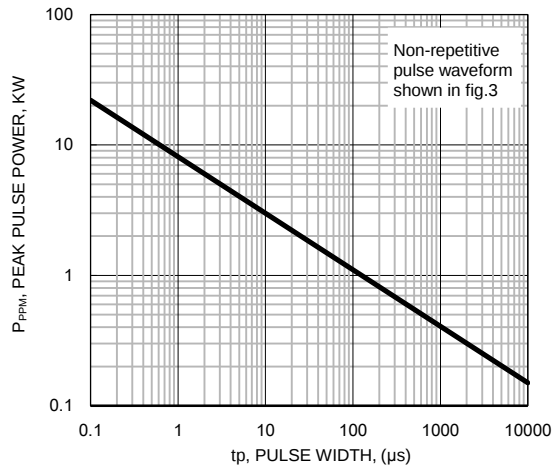


Fig.2 Pulse Derating Curve

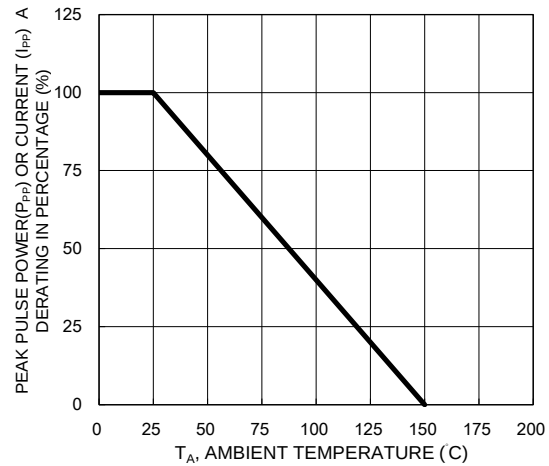


Fig.3 Claming Power Pulse Waveform

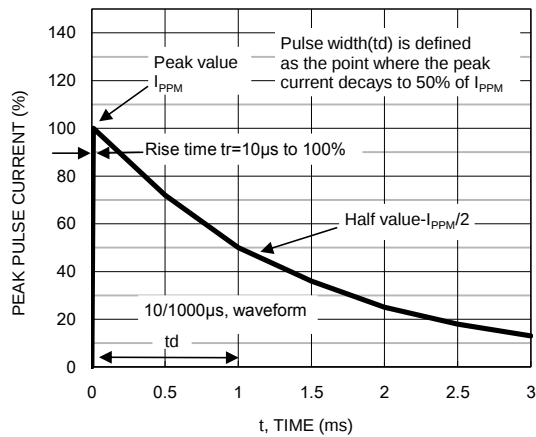


Fig.4 Maximum Non-repetitive Forward Surge Current

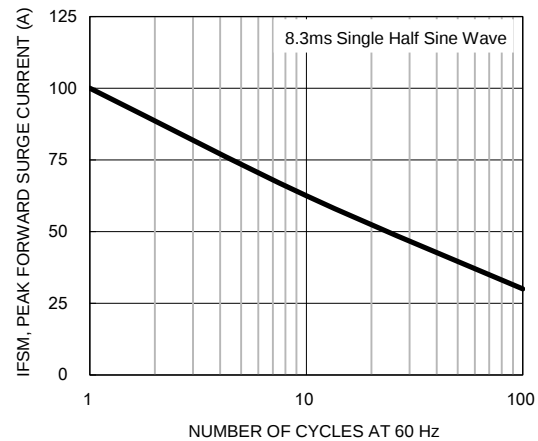


Fig.5 Typical Junction Capacitance

