

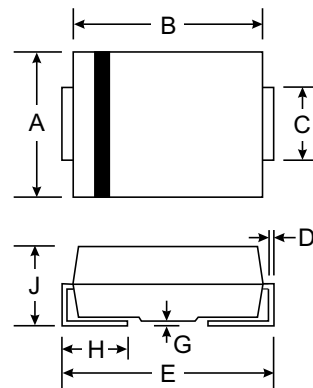
VOLTAGE RANGE: 5.0 - 440 V
POWER: 600Watts

Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material - UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: DO-214AC(SMA) Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator.)
- Marking: Date Code and Marking Code See Page 2
- 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		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above $T_A = 25^\circ\text{C}$) (Note 1)	P_{PK}	600	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I_{FSM}	100	A
Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ $V_{BR} < 100\text{V}$ (Notes 1, 2, & 3) $V_{BR} \geq 100\text{V}$	V_F	3.5 5.0	V V
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ\text{C}$

- Notes:
1. Valid provided that terminals are kept at ambient temperature.
 2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
 3. Unidirectional units only.

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMA6J5.0	SMA6J5.0C	5.0	6.40	7.55	10	9.6	62.5	800.0
SMA6J5.0A	SMA6J5.0CA	5.0	6.40	7.25	10	9.2	65.2	800.0
SMA6J6.0	SMA6J6.0C	6.0	6.67	8.45	10	11.4	52.6	800.0
SMA6J6.0A	SMA6J6.0CA	6.0	6.67	7.67	10	10.3	58.3	800.0
SMA6J6.5	SMA6J6.5C	6.5	7.22	9.14	10	12.3	48.8	500.0
SMA6J6.5A	SMA6J6.5CA	6.5	7.22	8.30	10	11.2	53.6	500.0
SMA6J7.0	SMA6J7.0C	7.0	7.78	9.86	10	13.3	45.1	200.0
SMA6J7.0A	SMA6J7.0CA	7.0	7.78	8.95	10	12.0	50.0	200.0
SMA6J7.5	SMA6J7.5C	7.5	8.33	10.67	1.0	14.3	42.0	100.0
SMA6J7.5A	SMA6J7.5CA	7.5	8.33	9.58	1.0	12.9	46.5	100.0
SMA6J8.0	SMA6J8.0C	8.0	8.89	11.3	1.0	15.0	40.0	50.0
SMA6J8.0A	SMA6J8.0CA	8.0	8.89	10.23	1.0	13.6	44.1	50.0
SMA6J8.5	SMA6J8.5C	8.5	9.44	11.92	1.0	15.9	37.7	20.0
SMA6J8.5A	SMA6J8.5CA	8.5	9.44	10.82	1.0	14.4	41.7	20.0
SMA6J9.0	SMA6J9.0C	9.0	10.0	12.6	1.0	16.9	35.5	10.0
SMA6J9.0A	SMA6J9.0CA	9.0	10.0	11.5	1.0	15.4	39.0	10.0
SMA6J10	SMA6J10C	10	11.1	14.1	1.0	18.8	31.9	5.0
SMA6J10A	SMA6J10CA	10	11.1	12.8	1.0	17.0	35.3	5.0
SMA6J11	SMA6J11C	11	12.2	15.4	1.0	20.1	29.9	5.0
SMA6J11A	SMA6J11CA	11	12.2	14.0	1.0	18.2	33.0	5.0
SMA6J12	SMA6J12C	12	13.3	16.9	1.0	22.0	27.3	5.0
SMA6J12A	SMA6J12CA	12	13.3	15.3	1.0	19.9	30.2	5.0
SMA6J13	SMA6J13C	13	14.4	18.2	1.0	23.8	25.2	5.0
SMA6J13A	SMA6J13CA	13	14.4	16.5	1.0	21.5	27.9	5.0
SMA6J14	SMA6J14C	14	15.6	19.8	1.0	25.8	23.3	5.0
SMA6J14A	SMA6J14CA	14	15.6	17.9	1.0	23.2	25.9	5.0
SMA6J15	SMA6J15C	15	16.7	21.1	1.0	26.9	22.3	5.0
SMA6J15A	SMA6J15CA	15	16.7	19.2	1.0	24.4	24.6	5.0
SMA6J16	SMA6J16C	16	17.8	22.6	1.0	28.8	20.8	5.0
SMA6J16A	SMA6J16CA	16	17.8	20.5	1.0	26.0	23.1	5.0
SMA6J17	SMA6J17C	17	18.9	23.9	1.0	30.5	19.7	5.0
SMA6J17A	SMA6J17CA	17	18.9	21.7	1.0	27.6	21.7	5.0
SMA6J18	SMA6J18C	18	20.0	25.3	1.0	32.2	18.6	5.0
SMA6J18A	SMA6J18CA	18	20.0	23.3	1.0	29.2	20.5	5.0
SMA6J20	SMA6J20C	20	22.2	28.1	1.0	35.8	16.8	5.0
SMA6J20A	SMA6J20CA	20	22.2	25.5	1.0	32.4	18.5	5.0
SMA6J22	SMA6J22C	22	24.4	30.9	1.0	39.4	15.2	5.0
SMA6J22A	SMA6J22CA	22	24.4	28.0	1.0	35.5	16.9	5.0
SMA6J24	SMA6J24C	24	26.7	33.8	1.0	43.0	14.0	5.0
SMA6J24A	SMA6J24CA	24	26.7	30.7	1.0	38.9	15.4	5.0
SMA6J26	SMA6J26C	26	28.9	36.6	1.0	46.6	12.9	5.0
SMA6J26A	SMA6J26CA	26	28.9	33.2	1.0	42.1	14.3	5.0
SMA6J28	SMA6J28C	28	31.1	39.4	1.0	50.0	12.0	5.0
SMA6J28A	SMA6J28CA	28	31.1	35.8	1.0	45.4	13.2	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(Uni)	(Bi)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMA6J30	SMA6J30C	30	33.3	42.2	1.0	53.5	11.2	5.0
SMA6J30A	SMA6J30CA	30	33.3	38.3	1.0	48.4	12.4	5.0
SMA6J33	SMA6J33C	33	36.7	46.5	1.0	59.0	10.2	5.0
SMA6J33A	SMA6J33CA	33	36.7	42.2	1.0	53.3	11.3	5.0
SMA6J36	SMA6J36C	36	40.0	50.7	1.0	64.3	9.3	5.0
SMA6J36A	SMA6J36CA	36	40.0	46.0	1.0	58.1	10.3	5.0
SMA6J40	SMA6J40C	40	44.4	56.3	1.0	71.4	8.4	5.0
SMA6J40A	SMA6J40CA	40	44.4	51.1	1.0	64.5	9.3	5.0
SMA6J43	SMA6J43C	43	47.8	60.5	1.0	76.7	7.8	5.0
SMA6J43A	SMA6J43CA	43	47.8	54.9	1.0	69.4	8.6	5.0
SMA6J45	SMA6J45C	45	50.0	63.3	1.0	80.3	7.5	5.0
SMA6J45A	SMA6J45CA	45	50.0	57.5	1.0	72.7	8.3	5.0
SMA6J48	SMA6J48C	48	53.3	67.5	1.0	85.5	7.0	5.0
SMA6J48A	SMA6J48CA	48	53.3	61.3	1.0	77.4	7.8	5.0
SMA6J51	SMA6J51C	51	56.7	71.8	1.0	91.1	6.6	5.0
SMA6J51A	SMA6J51CA	51	56.7	65.2	1.0	82.4	7.3	5.0
SMA6J54	SMA6J54C	54	60.0	76.0	1.0	96.3	6.2	5.0
SMA6J54A	SMA6J54CA	54	60.0	69.0	1.0	87.1	6.9	5.0
SMA6J58	SMA6J58C	58	64.4	81.6	1.0	103	5.8	5.0
SMA6J58A	SMA6J58CA	58	64.4	74.1	1.0	93.6	6.4	5.0
SMA6J60	SMA6J60C	60	66.7	84.5	1.0	107	5.6	5.0
SMA6J60A	SMA6J60CA	60	66.7	76.7	1.0	96.8	6.2	5.0
SMA6J64	SMA6J64C	64	71.1	90.1	1.0	114	5.3	5.0
SMA6J64A	SMA6J64CA	64	71.1	81.8	1.0	103	5.8	5.0
SMA6J70	SMA6J70C	70	77.8	98.6	1.0	125	4.8	5.0
SMA6J70A	SMA6J70CA	70	77.8	89.5	1.0	113	5.3	5.0
SMA6J75	SMA6J75C	75	83.0	105.7	1.0	134	4.5	5.0
SMA6J75A	SMA6J75CA	75	83.0	95.8	1.0	121	5.0	5.0
SMA6J78	SMA6J78C	78	86.0	109.8	1.0	139	4.3	5.0
SMA6J78A	SMA6J78CA	78	86.0	99.7	1.0	126	4.8	5.0
SMA6J85	SMA6J85C	85	94.0	119.2	1.0	151	4.0	5.0
SMA6J85A	SMA6J85CA	85	94.0	108.2	1.0	137	4.4	5.0
SMA6J90	SMA6J90C	90	100	126.5	1.0	160	3.8	5.0
SMA6J90A	SMA6J90CA	90	100	115.5	1.0	146	4.1	5.0
SMA6J100	SMA6J100C	100	111	141.0	1.0	179	3.4	5.0
SMA6J100A	SMA6J100CA	100	111	128.0	1.0	162	3.7	5.0
SMA6J110	SMA6J110C	110	122	154.5	1.0	196	3.1	5.0
SMA6J110A	SMA6J110CA	110	122	140.5	1.0	177	3.4	5.0
SMA6J120	SMA6J120C	120	133	169.0	1.0	214	2.8	5.0
SMA6J120A	SMA6J120CA	120	133	153.0	1.0	193	3.1	5.0
SMA6J130	SMA6J130C	130	144	182.5	1.0	231	2.6	5.0
SMA6J130A	SMA6J130CA	130	144	165.5	1.0	209	2.9	5.0
SMA6J150	SMA6J150C	150	167	211.5	1.0	268	2.2	5.0
SMA6J150A	SMA6J150CA	150	167	192.5	1.0	243	2.5	5.0
SMA6J160	SMA6J160C	160	178	226.0	1.0	287	2.1	5.0
SMA6J160A	SMA6J160CA	160	178	205.0	1.0	259	2.3	5.0

TYPE		Reverse Stand-Off Voltage	Breakdown Voltage Min. @ I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current	Reverse Leakage @ V_{RWM}
(Uni)	(Bi)	$V_{RWM}(V)$	$V_{BR MIN}(V)$	$V_{BR MAX}(V)$	$I_T (mA)$	$V_C(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMA6J170	SMA6J170C	170	189	239.5	1.0	304	2.0	5.0
SMA6J170A	SMA6J170CA	170	189	217.5	1.0	275	2.2	5.0
SMA6J180	SMA6J180C	180	200	253.8	1.0	321	1.9	5.0
SMA6J180A	SMA6J180CA	180	200	230.4	1.0	290	2.1	5.0
SMA6J190	SMA6J190C	190	211	267.9	1.0	339	1.8	5.0
SMA6J190A	SMA6J190CA	190	211	243.2	1.0	306	2.0	5.0
SMA6J200	SMA6J200C	200	222	282.0	1.0	356	1.7	5.0
SMA6J200A	SMA6J200CA	200	222	256.0	1.0	322	1.9	5.0
SMA6J220	SMA6J220C	220	244	310.2	1.0	392	1.5	5.0
SMA6J220A	SMA6J220CA	220	244	281.6	1.0	355	1.7	5.0
SMA6J250	SMA6J250C	250	278	342.5	1.0	447	1.3	5.0
SMA6J250A	SMA6J250CA	250	278	309.0	1.0	403	1.5	5.0
SMA6J300	SMA6J300C	300	333	411.0	1.0	535	1.1	5.0
SMA6J300A	SMA6J300CA	300	333	371.0	1.0	484	1.2	5.0
SMA6J350	SMA6J350C	350	389	479.5	1.0	624	1.0	5.0
SMA6J350A	SMA6J350CA	350	389	432.0	1.0	565	1.1	5.0
SMA6J400	SMA6J400C	400	444	548.0	1.0	687	0.9	5.0
SMA6J400A	SMA6J400CA	400	444	494.0	1.0	645	0.9	5.0
SMA6J440	SMA6J440C	440	489	602.8	1.0	786	0.8	5.0
SMA6J440A	SMA6J440CA	440	489	543.0	1.0	710	0.8	5.0

Note:

- (1) V_{BR} measured after I_T applied for 300 = square wave pulse or equivalent.
- (2) Surge Current Waveform per Figure 5 and Derate per Figure 1
- (3) A Transient suppressor is normally selected according to the reverse " Stand-off Voltage " (V_{WM}) which should be equal to or greater then the D.C. or continuous peak operating voltage level.

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

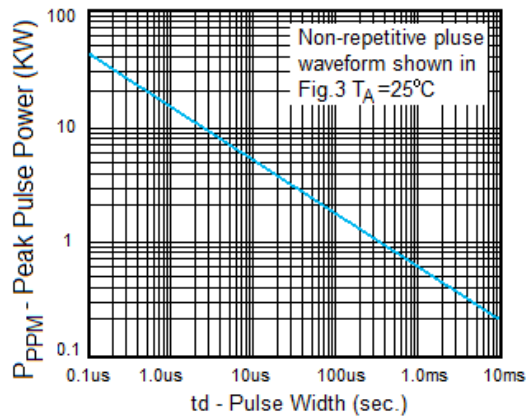


Fig. 1 Peak Pulse Power Rating

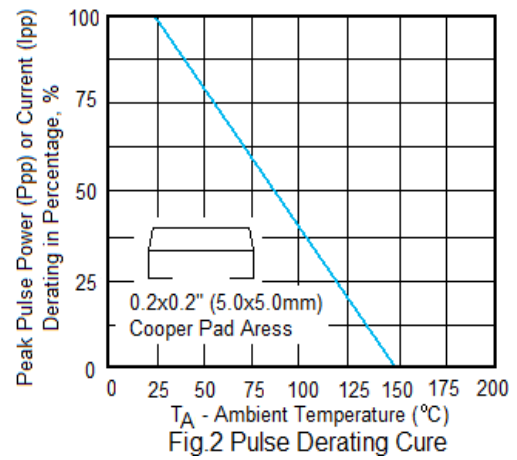


Fig. 2 Pulse Derating Curve

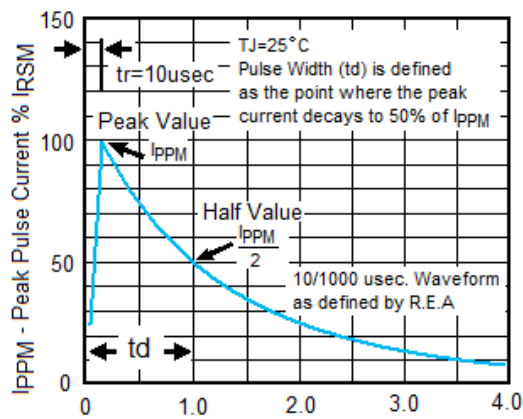


Fig. 3 Pulse Waveform

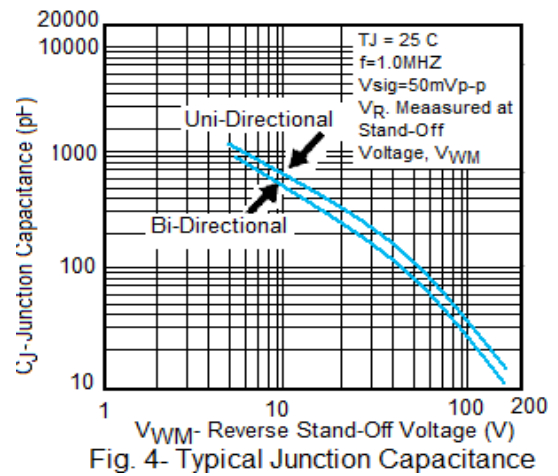


Fig. 4- Typical Junction Capacitance