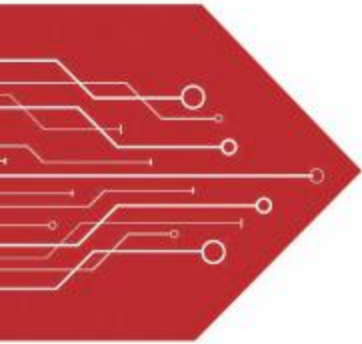


MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

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SMA

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: SMA/DO-214AC, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)

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}	400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I_{FSM}	40	A
Instantaneous Forward Voltage @ $I_{PP} = 35\text{A}$ (Notes 1, 2, & 3)	V_F	3.5	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.

P/N		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)
SMAJ5.0A	SMAJ5.0CA	5.0	6.40	7.25	10.0	9.2	43.5	800.0
SMAJ6.0A	SMAJ6.0CA	6.0	6.67	7.67	10.0	10.3	38.8	800.0
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	8.30	10.0	11.2	35.7	500.0
SMAJ7.0A	SMAJ7.0CA	7.0	7.78	8.95	10.0	12.0	33.3	200.0
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.58	1.0	12.9	31.0	100.0
SMAJ8.0A	SMAJ8.0CA	8.0	8.89	10.23	1.0	13.6	29.4	50.0
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.82	1.0	14.4	27.8	20.0
SMAJ9.0A	SMAJ9.0CA	9.0	10.0	11.5	1.0	15.4	26.0	10.0
SMAJ10A	SMAJ10CA	10	11.1	12.8	1.0	17.0	23.5	5.0
SMAJ11A	SMAJ11CA	11	12.2	14.0	1.0	18.2	22.0	5.0
SMAJ12A	SMAJ12CA	12	13.3	15.3	1.0	19.9	20.1	5.0
SMAJ13A	SMAJ13CA	13	14.4	16.5	1.0	21.5	18.6	5.0
SMAJ14A	SMAJ14CA	14	15.6	17.9	1.0	23.2	17.2	5.0
SMAJ15A	SMAJ15CA	15	16.7	19.2	1.0	24.4	16.4	5.0
SMAJ16A	SMAJ16CA	16	17.8	20.5	1.0	26.0	15.4	5.0
SMAJ17A	SMAJ17CA	17	18.9	21.7	1.0	27.6	14.5	5.0
SMAJ18A	SMAJ18CA	18	20.0	23.3	1.0	29.2	13.7	5.0
SMAJ20A	SMAJ20CA	20	22.2	25.5	1.0	32.4	12.3	5.0
SMAJ22A	SMAJ22CA	22	24.4	28.0	1.0	35.5	11.3	5.0
SMAJ24A	SMAJ24CA	24	26.7	30.7	1.0	38.9	10.3	5.0
SMAJ26A	SMAJ26CA	26	28.9	33.2	1.0	42.1	9.5	5.0
SMAJ28A	SMAJ28CA	28	31.1	35.8	1.0	45.4	8.8	5.0
SMAJ30A	SMAJ30CA	30	33.3	38.3	1.0	48.4	8.3	5.0
SMAJ33A	SMAJ33CA	33	36.7	42.2	1.0	53.3	7.5	5.0
SMAJ36A	SMAJ36CA	36	40.0	46.0	1.0	58.1	6.9	5.0
SMAJ36A	SMAJ36CA	36	40.0	46.0	1.0	58.1	6.9	5.0
SMAJ43A	SMAJ43CA	43	47.8	54.9	1.0	69.4	5.8	5.0
SMAJ45A	SMAJ45CA	45	50.0	57.5	1.0	72.7	5.5	5.0
SMAJ48A	SMAJ48CA	48	53.3	61.3	1.0	77.4	5.2	5.0
SMAJ51A	SMAJ51CA	51	56.7	65.2	1.0	82.4	4.9	5.0

Note:

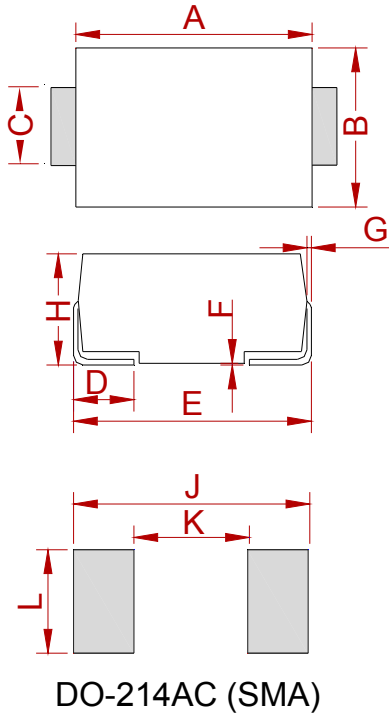
- (1) V_{BR} measured after I_T applied for 300 μs., I_T = square wave pulse or equivalent.
- (2) Surge Current Waveform per Figure 5 and Derate per Figure 1
- (3) A Transient suppressor is normally selected according to the reverse "Stand-off Voltage" (V_{WM}) which should be equal to or greater than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

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)
SMAJ54A	SMAJ54CA	54	60.0	69.0	1.0	87.1	4.6	5.0
SMAJ58A	SMAJ58CA	58	64.4	74.1	1.0	93.6	4.3	5.0
SMAJ60A	SMAJ60CA	60	66.7	76.7	1.0	96.8	4.1	5.0
SMAJ64A	SMAJ64CA	64	71.1	81.8	1.0	103	3.9	5.0
SMAJ70A	SMAJ70CA	70	77.8	89.5	1.0	113	3.5	5.0
SMAJ75A	SMAJ75CA	75	83.0	95.8	1.0	121	3.3	5.0
SMAJ78A	SMAJ78CA	78	86.0	99.7	1.0	126	3.2	5.0
SMAJ85A	SMAJ85CA	85	94.0	108.2	1.0	137	2.9	5.0
SMAJ90A	SMAJ90CA	90	100	115.5	1.0	146	2.7	5.0
SMAJ100A	SMAJ100CA	100	111	128.0	1.0	162	2.5	5.0
SMAJ110A	SMAJ110CA	110	122	140.5	1.0	177	2.3	5.0
SMAJ120A	SMAJ120CA	120	133	153.0	1.0	193	2.1	5.0
SMAJ130A	SMAJ130CA	130	144	165.5	1.0	209	1.9	5.0
SMAJ150A	SMAJ150CA	150	167	192.5	1.0	243	1.6	5.0
SMAJ160A	SMAJ160CA	160	178	205.0	1.0	259	1.5	5.0
SMAJ170A	SMAJ170CA	170	189	217.5	1.0	275	1.5	5.0
SMAJ180A	SMAJ180CA	180	200	230.4	1.0	290	1.4	5.0
SMAJ190A	SMAJ190CA	190	211	243.2	1.0	306	1.3	5.0
SMAJ200A	SMAJ200CA	200	222	256.0	1.0	322	1.2	5.0
SMAJ210A	SMAJ210CA	210	233	268.8	1.0	339	1.2	5.0
SMAJ220A	SMAJ220CA	220	244	281.6	1.0	355	1.1	5.0
SMAJ250A	SMAJ250CA	250	278	309.0	1.0	403	1.0	5.0
SMAJ300A	SMAJ300CA	300	333	371.0	1.0	484	0.8	5.0
SMAJ350A	SMAJ350CA	350	389	432.0	1.0	565	0.7	5.0
SMAJ400A	SMAJ400CA	400	444	494.0	1.0	645	0.6	5.0
SMAJ440A	SMAJ440CA	440	489	543.0	1.0	710	0.6	5.0

Note:

- (1) V_{BR} measured after I_T applied for 300 μs., I_T = 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.

PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.50		0.256	
K		2.30		0.090
L	1.70		0.067	

REEL SPECIFICATION

P/N	PKG	QTY
SMAJXXXA(CA)	SMA	2000

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