

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

SM4TXXA(CA)-MS

Product specification

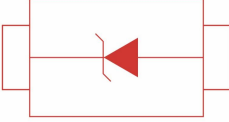
Features

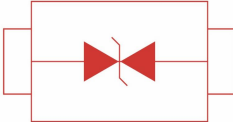
- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material: UL Flammability Classification Rating 94V-0

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.)

Reference News

PACKAGE OUTLINE	Unipolar	Marking Information
		

PACKAGE OUTLINE	Bipolar	Marking Information
		

Maximum Ratings @ TA = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above TA = 25°C) (Note 1)	PPK	400	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	IFSM	40	A
Instantaneous Forward Voltage @ IPP = 35A (Notes 1, 2, & 3)	VF	3.5	V
Operating and Storage Temperature Range	Tj, TSTG	-55 to +150	°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		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I _r	Breakdown Voltage Max. @ I _r	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @ V _{RWM}
(Uni)	(Bi)	(Uni)	(Bi)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _r (mA)	V _c (V)	I _{PP} (A)	I _R (uA)
SM4T6.8A-MS	SM4T6.8CA-MS	SM4T6.8A	SM4T6.8CA	5.80	6.45	7.14	10	10.5	40.0	1000.0
SM4T7.5A-MS	SM4T7.5CA-MS	SM4T7.5A	SM4T7.5CA	6.40	7.13	7.88	10	11.3	37.0	500.0
SM4T8.2A-MS	SM4T8.2CA-MS	SM4T8.2A	SM4T8.2CA	7.02	7.79	8.61	10	12.1	35.0	200.0
SM4T9.1A-MS	SM4T9.1CA-MS	SM4T9.1A	SM4T9.1CA	7.78	8.65	9.55	1.0	13.4	31.0	50.0
SM4T10A-MS	SM4T10CA-MS	SM4T10A	SM4T10CA	8.55	9.50	10.5	1.0	14.5	29.0	10.0
SM4T11A-MS	SM4T11CA-MS	SM4T11A	SM4T11CA	9.40	10.5	11.6	1.0	15.6	27.0	5.0
SM4T12A-MS	SM4T12CA-MS	SM4T12A	SM4T12CA	10.2	11.4	12.6	1.0	16.7	25.0	5.0
SM4T13A-MS	SM4T13CA-MS	SM4T13A	SM4T13CA	11.1	12.4	13.7	1.0	18.2	23.0	5.0
SM4T15A-MS	SM4T15CA-MS	SM4T15A	SM4T15CA	12.8	14.3	15.8	1.0	21.2	20.0	5.0
SM4T16A-MS	SM4T16CA-MS	SM4T16A	SM4T16CA	13.6	15.2	16.8	1.0	22.5	19.0	5.0
SM4T18A-MS	SM4T18CA-MS	SM4T18A	SM4T18CA	15.3	17.1	18.9	1.0	25.2	17.0	5.0
SM4T20A-MS	SM4T20CA-MS	SM4T20A	SM4T20CA	17.1	19.0	21.0	1.0	27.7	15.0	5.0
SM4T22A-MS	SM4T22CA-MS	SM4T22A	SM4T22CA	18.8	20.9	23.1	1.0	30.6	14.0	5.0
SM4T24A-MS	SM4T24CA-MS	SM4T24A	SM4T24CA	20.5	22.8	25.2	1.0	33.2	13.0	5.0
SM4T27A-MS	SM4T27CA-MS	SM4T27A	SM4T27CA	23.1	25.7	28.4	1.0	37.5	11.2	5.0
SM4T30A-MS	SM4T30CA-MS	SM4T30A	SM4T30CA	25.6	28.5	31.5	1.0	41.4	10.0	5.0
SM4T33A-MS	SM4T33CA-MS	SM4T33A	SM4T33CA	28.2	31.4	34.7	1.0	45.7	9.0	5.0
SM4T36A-MS	SM4T36CA-MS	SM4T36A	SM4T36CA	30.8	34.2	37.8	1.0	49.9	8.4	5.0
SM4T39A-MS	SM4T39CA-MS	SM4T39A	SM4T39CA	33.3	37.1	41.0	1.0	53.9	7.8	5.0
SM4T43A-MS	SM4T43CA-MS	SM4T43A	SM4T43CA	36.8	40.9	45.2	1.0	59.3	7.1	5.0
SM4T47A-MS	SM4T47CA-MS	SM4T47A	SM4T47CA	40.8	44.7	49.4	1.0	64.8	5.0	5.0
SM4T51A-MS	SM4T51CA-MS	SM4T51A	SM4T51CA	43.6	48.5	53.6	1.0	70.1	6.0	5.0
SM4T56A-MS	SM4T56CA-MS	SM4T56A	SM4T56CA	47.8	53.2	58.8	1.0	77.0	5.5	5.0
SM4T62A-MS	SM4T62CA-MS	SM4T62A	SM4T62CA	53.0	58.9	65.1	1.0	85.0	5.0	5.0
SM4T68A-MS	SM4T68CA-MS	SM4T68A	SM4T68CA	58.1	64.6	71.4	1.0	92.0	4.6	5.0
SM4T75A-MS	SM4T75CA-MS	SM4T75A	SM4T75CA	64.1	71.3	78.8	1.0	103	4.1	5.0
SM4T82A-MS	SM4T82CA-MS	SM4T82A	SM4T82CA	70.4	77.9	86.1	1.0	113	3.7	5.0
SM4T91A-MS	SM4T91CA-MS	SM4T91A	SM4T91CA	77.8	86.5	95.5	1.0	125	3.4	5.0
SM4T100A-MS	SM4T100CA-MS	SM4T100A	SM4T100CA	85.5	95.0	105	1.0	137	3.1	5.0
SM4T110A-MS	SM4T110CA-MS	SM4T110A	SM4T110CA	94.0	105	116	1.0	152	2.8	5.0
SM4T120A-MS	SM4T120CA-MS	SM4T120A	SM4T120CA	102	114	126	1.0	165	2.5	5.0
SM4T130A-MS	SM4T130CA-MS	SM4T130A	SM4T130CA	111	124	137	1.0	179	2.3	5.0
SM4T150A-MS	SM4T150CA-MS	SM4T150A	SM4T150CA	128	143	158	1.0	207	2.0	5.0
SM4T160A-MS	SM4T160CA-MS	SM4T160A	SM4T160CA	136	152	168	1.0	219	1.9	5.0
SM4T170A-MS	SM4T170CA-MS	SM4T170A	SM4T170CA	145	162	179	1.0	234	1.8	5.0
SM4T180A-MS	SM4T180CA-MS	SM4T180A	SM4T180CA	154	171	189	1.0	246	1.7	5.0
SM4T200A-MS	SM4T200CA-MS	SM4T200A	SM4T200CA	171	190	210	1.0	274	1.53	5.0
SM4T220A-MS	SM4T220CA-MS	SM4T220A	SM4T220CA	185	209	231	1.0	328	1.22	5.0
SM4T250A-MS	SM4T250CA-MS	SM4T250A	SM4T250CA	214	237	263	1.0	344	1.16	5.0
SM4T300A-MS	SM4T300CA-MS	SM4T300A	SM4T300CA	256	285	315	1.0	414	0.97	5.0
SM4T350A-MS	SM4T350CA-MS	SM4T350A	SM4T350CA	300	333	368	1.0	482	0.83	5.0
SM4T400A-MS	SM4T400CA-MS	SM4T400A	SM4T400CA	342	380	420	1.0	548	0.73	5.0
SM4T440A-MS	SM4T440CA-MS	SM4T440A	SM4T440CA	376	418	462	1.0	602	0.65	5.0

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

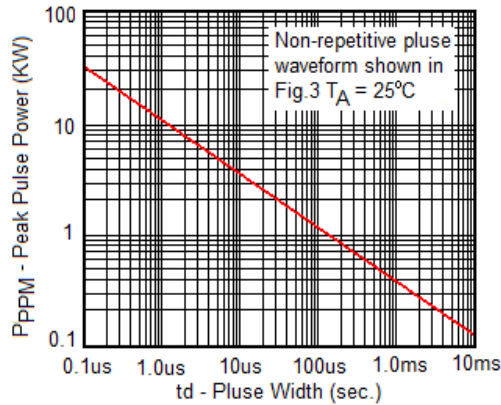


Fig. 1 Peak Pulse Power Rating

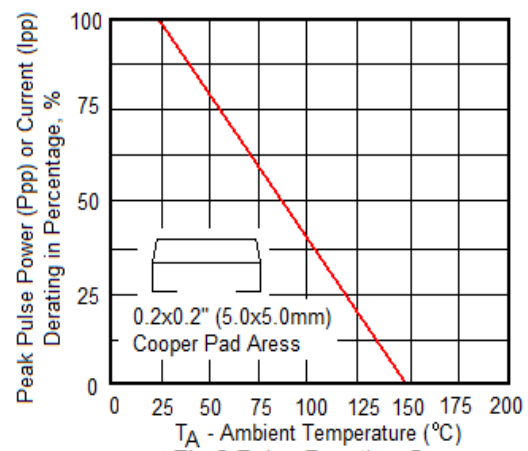


Fig. 2 Pulse Derating Cure

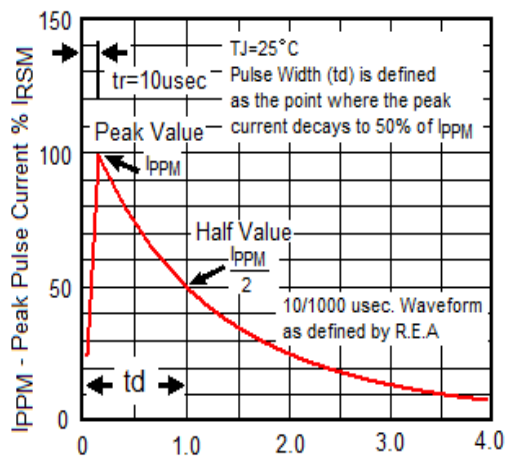


Fig. 3 Pulse Waveform

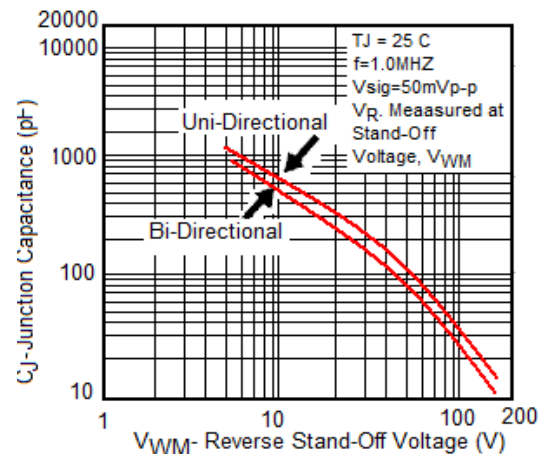
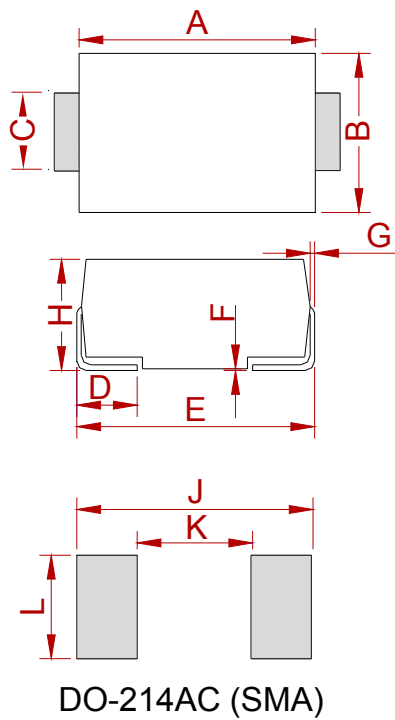


Fig. 4- Typical Junction Capacitance

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
SM4TXXA(CA)-MS	SMA	2000

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