

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

SM15TXXA(CA)-MS

Product specification


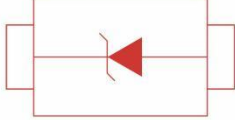

Features


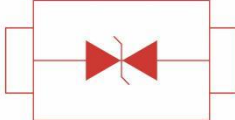

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Material: UL Flammability
- Classification Rating 94V-0

Mechanical Data

- **Case:** DO-214AB(SMC)
- **Terminals:** Lead Free Plating (Matte Tin Finish).
Solderable per MIL-STD-202, Method 208
- **Marking:** Date Code and Marking Code
See Page 2
- **Weight:** 0.21 grams (approximate)

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	1500	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	IFSM	200	A
Steady State Power Dissipation @ TL = 75°C	PM(AV)	5.0	W
Instantaneous Forward Voltage @ IPP = 100A (Notes 1 & 3)	VF	See Note 5	V
Operating Temperature Range	Tj	-55 to +150	°C
Storage Temperature Range	TSTG	-55 to +175	°C

Notes:

1. Non-repetitive current pulse ,per Fig. 3 and derated above TA=25°C per Fig. 1.
2. Thermal Resistance junction to Lead.
3. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

TYPE		Marking		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)	(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)
SM15T6.8A-MS	SM15T6.8CA-MS	SM15T6.8A	SM15T6.8CA	5.80	6.45	7.14	10	10.5	144.8	1000.0
SM15T7.5A-MS	SM15T7.5CA-MS	SM15T7.5A	SM15T7.5CA	6.40	7.13	7.88	10	11.3	134.5	500.0
SM15T8.2A-MS	SM15T8.2CA-MS	SM15T8.2A	SM15T8.2CA	7.02	7.79	8.61	10	12.1	125.6	200.0
SM15T9.1A-MS	SM15T9.1CA-MS	SM15T9.1A	SM15T9.1CA	7.78	8.65	9.55	1.0	13.4	113.4	50.0
SM15T10A-MS	SM15T10CA-MS	SM15T10A	SM15T10CA	8.55	9.50	10.5	1.0	14.5	104.8	10.0
SM15T11A-MS	SM15T11CA-MS	SM15T11A	SM15T11CA	9.40	10.5	11.6	1.0	15.6	97.4	5.0
SM15T12A-MS	SM15T12CA-MS	SM15T12A	SM15T12CA	10.2	11.4	12.6	1.0	16.7	91.0	5.0
SM15T13A-MS	SM15T13CA-MS	SM15T13A	SM15T13CA	11.1	12.4	13.7	1.0	18.2	83.5	5.0
SM15T15A-MS	SM15T15CA-MS	SM15T15A	SM15T15CA	12.8	14.3	15.8	1.0	21.2	71.7	5.0
SM15T16A-MS	SM15T16CA-MS	SM15T16A	SM15T16CA	13.6	15.2	16.8	1.0	22.5	67.6	5.0
SM15T18A-MS	SM15T18CA-MS	SM15T18A	SM15T18CA	15.3	17.1	18.9	1.0	25.2	60.3	5.0
SM15T20A-MS	SM15T20CA-MS	SM15T20A	SM15T20CA	17.1	19.0	21.0	1.0	27.7	54.9	5.0
SM15T22A-MS	SM15T22CA-MS	SM15T22A	SM15T22CA	18.8	20.9	23.1	1.0	30.6	49.7	5.0
SM15T24A-MS	SM15T24CA-MS	SM15T24A	SM15T24CA	20.5	22.8	25.2	1.0	33.2	45.8	5.0
SM15T27A-MS	SM15T27CA-MS	SM15T27A	SM15T27CA	23.1	25.7	28.4	1.0	37.5	40.5	5.0
SM15T30A-MS	SM15T30CA-MS	SM15T30A	SM15T30CA	25.6	28.5	31.5	1.0	41.4	36.7	5.0
SM15T33A-MS	SM15T33CA-MS	SM15T33A	SM15T33CA	28.2	31.4	34.7	1.0	45.7	33.3	5.0
SM15T36A-MS	SM15T36CA-MS	SM15T36A	SM15T36CA	30.8	34.2	37.8	1.0	49.9	30.5	5.0
SM15T39A-MS	SM15T39CA-MS	SM15T39A	SM15T39CA	33.3	37.1	41.0	1.0	53.9	28.2	5.0
SM15T43A-MS	SM15T43CA-MS	SM15T43A	SM15T43CA	36.8	40.9	45.2	1.0	59.3	25.6	5.0
SM15T47A-MS	SM15T47CA-MS	SM15T47A	SM15T47CA	40.2	44.7	49.4	1.0	64.8	23.5	5.0
SM15T51A-MS	SM15T51CA-MS	SM15T51A	SM15T51CA	43.6	48.5	53.6	1.0	70.1	21.7	5.0
SM15T56A-MS	SM15T56CA-MS	SM15T56A	SM15T56CA	47.8	53.2	58.8	1.0	77.0	19.7	5.0
SM15T62A-MS	SM15T62CA-MS	SM15T62A	SM15T62CA	53.0	58.9	65.1	1.0	85.0	17.9	5.0
SM15T68A-MS	SM15T68CA-MS	SM15T68A	SM15T68CA	58.1	64.6	71.4	1.0	92.0	16.5	5.0
SM15T75A-MS	SM15T75CA-MS	SM15T75A	SM15T75CA	64.1	71.3	78.8	1.0	103	14.8	5.0
SM15T82A-MS	SM15T82CA-MS	SM15T82A	SM15T82CA	70.1	77.9	86.1	1.0	113	13.5	5.0
SM15T91A-MS	SM15T91CA-MS	SM15T91A	SM15T91CA	77.8	86.5	95.5	1.0	125	12.2	5.0
SM15T100A-MS	SM15T100CA-MS	SM15T100A	SM15T100CA	85.5	95.0	105	1.0	137	11.1	5.0
SM15T110A-MS	SM15T110CA-MS	SM15T110A	SM15T110CA	94.0	105	116	1.0	152	10.0	5.0
SM15T120A-MS	SM15T120CA-MS	SM15T120A	SM15T120CA	102	114	126	1.0	165	9.2	5.0
SM15T130A-MS	SM15T130CA-MS	SM15T130A	SM15T130CA	111	124	137	1.0	179	8.5	5.0
SM15T150A-MS	SM15T150CA-MS	SM15T150A	SM15T150CA	128	143	158	1.0	207	7.3	5.0
SM15T170A-MS	SM15T170CA-MS	SM15T170A	SM15T170CA	145	162	179	1.0	234	6.5	5.0
SM15T180A-MS	SM15T180CA-MS	SM15T180A	SM15T180CA	154	171	189	1.0	246	6.2	5.0
SM15T200A-MS	SM15T200CA-MS	SM15T200A	SM15T200CA	171	190	210	1.0	274	5.5	5.0
SM15T220A-MS	SM15T220CA-MS	SM15T220A	SM15T220CA	185	209	231	1.0	328	4.6	5.0
SM15T250A-MS	SM15T250CA-MS	SM15T250A	SM15T250CA	214	237	263	1.0	344	4.4	5.0
SM15T300A-MS	SM15T300CA-MS	SM15T300A	SM15T300CA	256	285	315	1.0	414	3.7	5.0
SM15T350A-MS	SM15T350CA-MS	SM15T350A	SM15T350CA	300	333	368	1.0	482	3.2	5.0
SM15T400A-MS	SM15T400CA-MS	SM15T400A	SM15T400CA	342	380	420	1.0	548	2.8	5.0
SM15T440A-MS	SM15T440CA-MS	SM15T440A	SM15T440CA	376	418	462	1.0	600	2.5	5.0

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

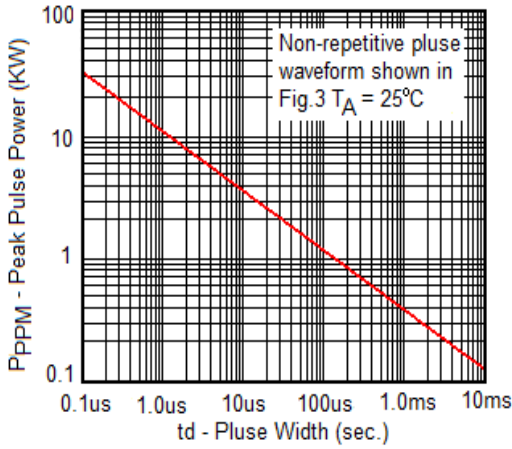


Fig. 1 Peak Pulse Power Rating

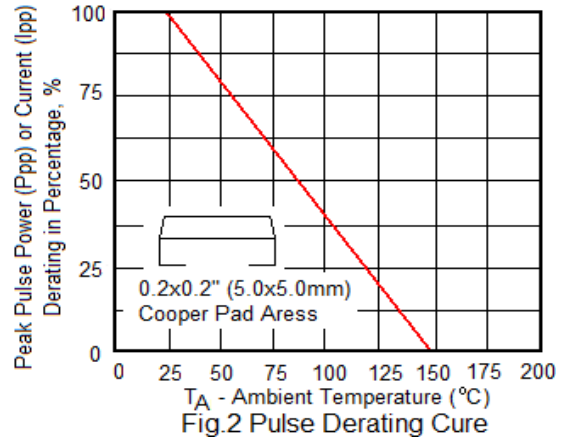


Fig.2 Pulse Derating Curve

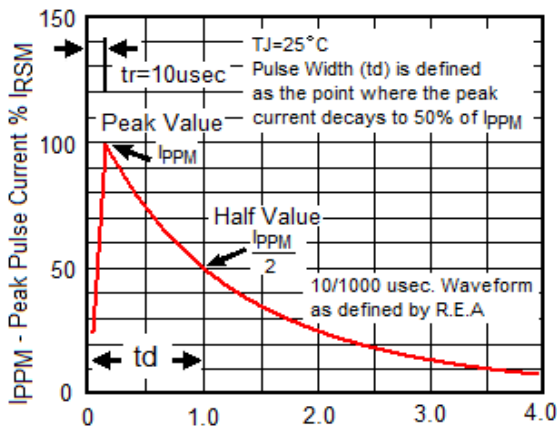


Fig.3 Pulse Waveform

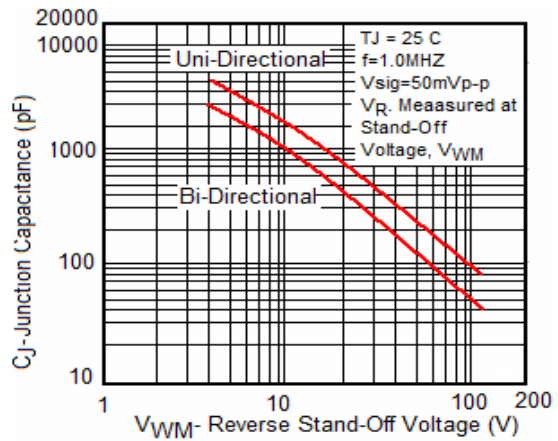
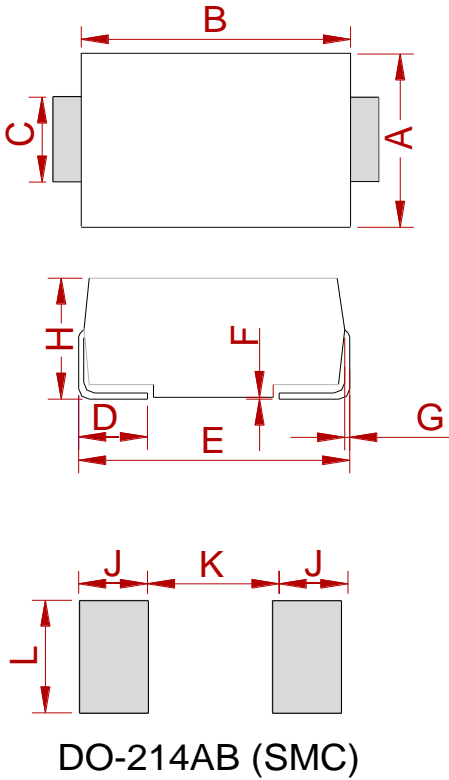


Fig. 4- Typical Junction Capacitance

PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.75	6.25	0.226	0.246
B	6.90	7.40	0.272	0.291
C	2.75	3.25	0.108	0.128
D	0.95	1.52	0.037	0.060
E	7.70	8.20	0.303	0.323
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.15	2.62	0.085	0.103
J	2.40		0.094	
K		4.20		0.165
L	3.30		0.130	

REEL SPECIFICATION

P/N	PKG	QTY
SM15TXXXA(CA)-MS	SMC	3000

Attention

- Any and all MSKSEMI Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your MSKSEMI Semiconductor representative nearest you before using any MSKSEMI Semiconductor products described or contained herein in such applications.
- MSKSEMI Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all MSKSEMI Semiconductor products described or contained herein.
- Specifications of any and all MSKSEMI Semiconductor products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- MSKSEMI Semiconductor strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all MSKSEMI Semiconductor products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of MSKSEMI Semiconductor.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. MSKSEMI Semiconductor believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the MSKSEMI Semiconductor product that you intend to use.