SMAJ Seires
Surface Mount TVS

Revision:B

Features

- For surface mounted application in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Fast response time: typically less than 1.0ps from 0 Vllts to V_{BR} for unidirectional types
- Typical I_R less than 1 μ A above 10V
-

Mechanical Data

Case: JESEC DO214AC. Molded plastic over glass passivated junction

Polarity: Color band denoted positive end (cathode) except Bidirectional

Absolute Maximum Ratings @ 25°C Unless Otherwise Specified

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000 μ s waveform (Note 1,2, FIG,1)	P_{PPM}	400	W
Peak Pulse Current of on 101000 μ s waveform (Note 1, FIG,3)	$P_{M(AV)}$	See Table 1	A
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method)(Note 2,3)	I_{FSM}	40	A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above TA=25℃ per Fig.2.

2. Mounted on 5.0mm x 5.0mm (0.03mm thick) Copper Pads to each terminal.

3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulse per minutes maximum.

Electrical Characteristics Per Line @ 25°C Unless Otherwise Specified								
PART NUMBER		V_{RWM} (V)	$V_{(BR)}@I_T$		I_T (mA)	$V_C@ I_{PP}$ (V)	I_{PP} (A)	$I_R@ V_{RWM}$ (μA)
			min (V)	max (V)				
UNI-POLAR	BI-POLAR							
SMAJ5.0A	SMAJ5.0CA	5.0	6.40	7.25	10	9.2	43.5	800
SMAJ6.0A	SMAJ6.0CA	6.0	6.67	7.67	10	10.3	38.8	800
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	11.2	35.7	500
SMAJ7.0A	SMAJ7.0CA	7.0	7.78	8.95	10	12.0	33.3	200
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.58	1	12.9	31.0	100
SMAJ8.0A	SMAJ8.0CA	8.0	8.89	10.23	1	13.6	29.4	50
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.82	1	14.4	27.7	20
SMAJ9.0A	SMAJ9.0CA	9.0	10.00	11.50	1	15.4	26.0	10
SMAJ10A	SMAJ10CA	10	11.10	12.80	1	17.0	23.5	5
SMAJ11A	SMAJ11CA	11	12.20	14.00	1	18.2	22.0	5
SMAJ12A	SMAJ12CA	12	13.30	15.30	1	19.9	20.1	5
SMAJ13A	SMAJ13CA	13	14.40	16.50	1	21.5	18.6	5
SMAJ14A	SMAJ14CA	14	15.60	17.90	1	23.2	17.2	5
SMAJ15A	SMAJ15CA	15	16.70	18.50	1.0	24.4	16.4	5
SMAJ16A	SMAJ16CA	16	17.80	19.70	1.0	26.0	15.4	5
SMAJ17A	SMAJ17CA	17	18.90	20.90	1.0	27.6	14.5	5
SMAJ18A	SMAJ18CA	18	20.00	22.10	1.0	29.2	13.7	5
SMAJ20A	SMAJ20CA	20	22.20	24.50	1.0	32.4	12.3	5
SMAJ22A	SMAJ22CA	22	24.40	26.90	1.0	35.5	11.3	5
SMAJ24A	SMAJ24CA	24	26.70	29.50	1.0	38.9	10.3	5
SMAJ26A	SMAJ26CA	26	28.90	31.90	1.0	42.1	9.5	5
SMAJ28A	SMAJ28CA	28	31.10	34.40	1.0	45.4	8.8	5
SMAJ30A	SMAJ30CA	30	33.30	36.80	1.0	48.4	8.3	5
SMAJ33A	SMAJ33CA	33	36.70	40.60	1.0	53.3	7.5	5
SMAJ36A	SMAJ36CA	36	40.00	44.20	1.0	58.1	6.9	5
SMAJ40A	SMAJ40CA	40	44.40	49.10	1.0	64.5	6.2	5
SMAJ43A	SMAJ43CA	43	47.80	52.80	1.0	69.4	5.8	5
SMAJ45A	SMAJ45CA	45	50.00	55.30	1.0	72.7	5.5	5
SMAJ48A	SMAJ48CA	48	53.30	58.90	1.0	77.4	5.2	5
SMAJ51A	SMAJ51CA	51	56.70	62.70	1.0	82.4	4.9	5
SMAJ54A	SMAJ54CA	54	60.00	66.30	1.0	87.1	4.6	5
SMAJ58A	SMAJ58CA	58	64.40	71.20	1.0	93.6	4.3	5
SMAJ60A	SMAJ60CA	60	66.70	73.70	1.0	96.8	4.1	5
SMAJ64A	SMAJ64CA	64	71.10	78.60	1.0	103	3.9	5
SMAJ70A	SMAJ70CA	70	77.80	86.00	1.0	113	3.5	5
SMAJ75A	SMAJ75CA	75	83.30	92.10	1.0	121	3.3	5
SMAJ78A	SMAJ78CA	78	86.70	95.80	1.0	126	3.2	5
SMAJ85A	SMAJ85CA	85	94	104	1.0	137	2.9	5
SMAJ90A	SMAJ90CA	90	100	111	1.0	146	2.7	5
SMAJ100A	SMAJ100CA	100	111	123	1.0	162	2.5	5
SMAJ110A	SMAJ110CA	110	122	135	1.0	177	2.3	5
SMAJ120A	SMAJ120CA	120	133	147	1.0	193	2.0	5

Rating And Characteristic Curves@ 25°C Unless Otherwise Specified

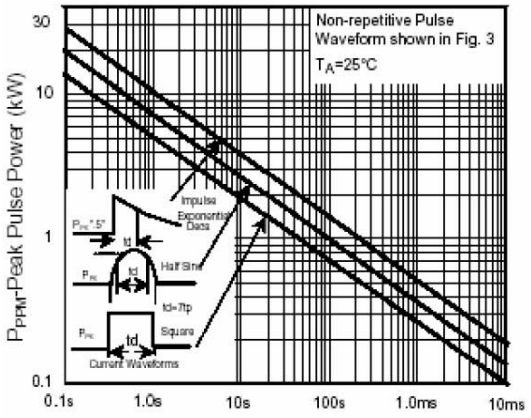


Fig.1 Peak Pulse Power Rating Curve

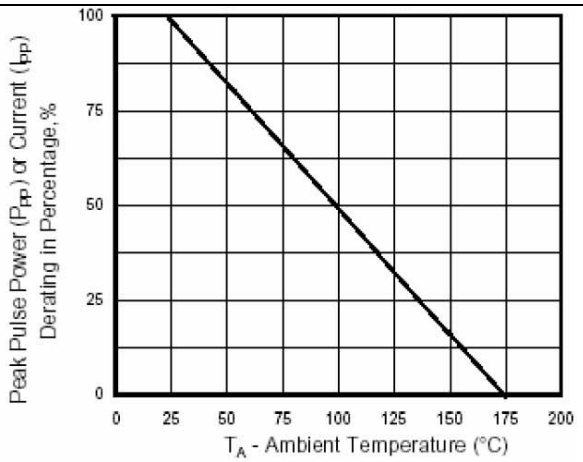


Fig.2 Power Derating Curve

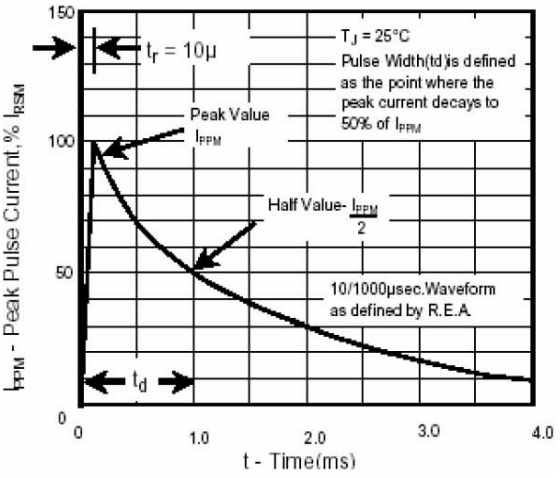


Fig.3 Pulse Waveform

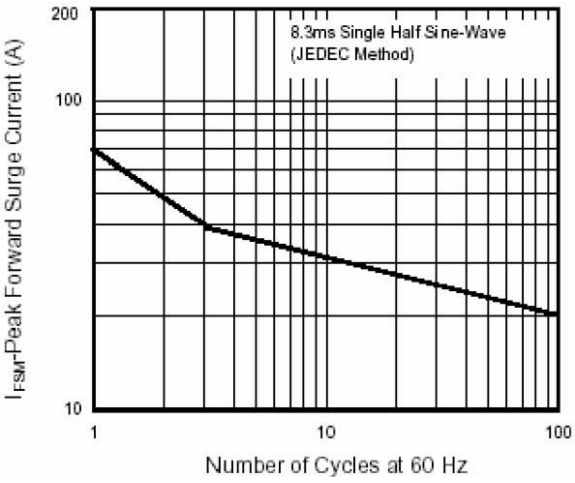


Fig.4 Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

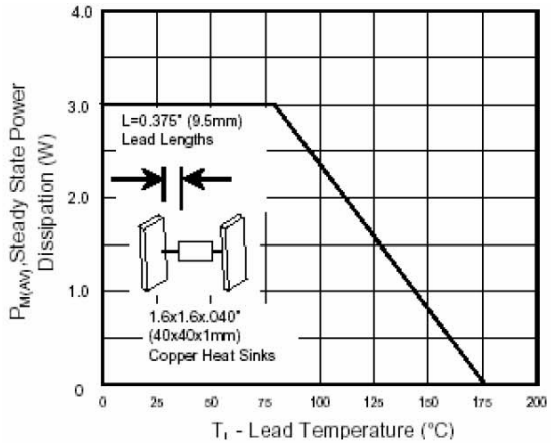


Fig.5 Steady State Power Derating Curve

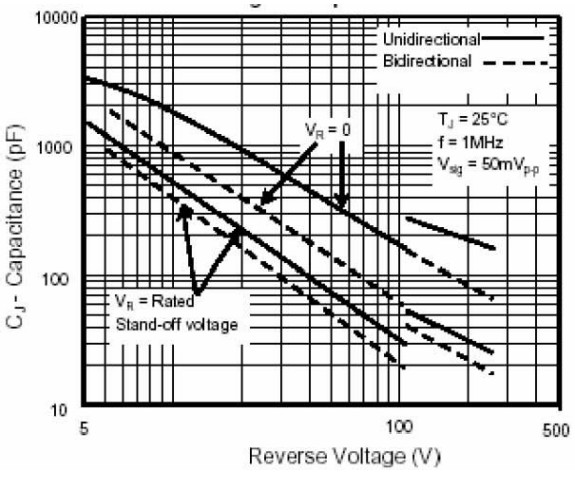
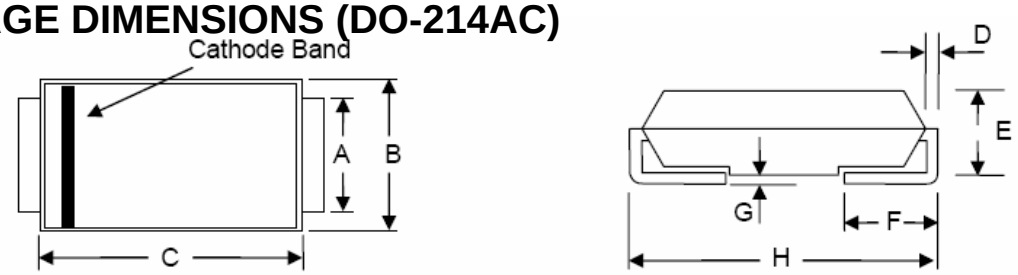


Fig.6 Capacitance

PACKAGE DIMENSIONS (DO-214AC)



Item DO-214AC(SMA)	Inches		Millimeters	
	MIN.	MAX.	MIN.	MAX.
A	0.049	0.065	1.250	1.650
B	0.100	0.110	2.540	2.790
C	0.157	0.177	3.990	4.500
D	0.006	0.012	0.152	0.305
E	0.078	0.090	1.980	2.290
F	0.030	0.060	0.760	1.520
G	-	0.008	-	0.203
H	0.194	0.208	4.930	5.280

The SINO-IC logo is a registered trademark of ShangHai Sino-IC Microelectronics Co., Ltd.

© 2005 SINO-IC – Printed in China – All rights reserved.

SHANGHAI SINO-IC MICROELECTRONICS CO., LTD

Add: Building 3, Room 3401-03, No.200 Zhangheng Road, ZhangJiang Hi-Tech Park, Pudong, Shanghai 201203, China

Phone: +86-0755-26063310

Fax: +86-0755-26063304

Email: szrxw002@126.com

Website: http://www.sino-ic.net