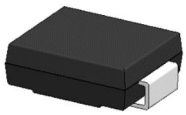
5000W,10 - 200V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Available in unidirectional and bidirectional
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 5000 W peak pulse power capability with a 10/1000 μs waveform

RoHS COMPLIANT



SMC (DO-214AB)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000us waveform	P_{PPM}	5000	W
Peak pulse current with a 10/1000us waveform	I_{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T_L=75℃	P_D	5	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	300	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	65	℃/W
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	10	℃/W
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	15	℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current I_T (mA)	Stand off Voltage V_{WM} (Volts)	Maximum reverse leakage at VWM I_D (μA)	Maximum Peak Pulse Current I_{PPM} (A)	Maximum Clamping Voltage at I_{PPM} V_C(Volts)
		UNI	BI	Min	Max					
5.0SMCJ10A	5.0SMCJ10CA	JDX	KDX	11.1	12.3	10.0	10	5.0	294	17.0
5.0SMCJ11A	5.0SMCJ11CA	JDZ	KDZ	12.2	13.5	10.0	11	5.0	274	18.2
5.0SMCJ12A	5.0SMCJ12CA	JEE	KEE	13.3	14.7	10.0	12	5.0	252	19.9
5.0SMCJ13A	5.0SMCJ13CA	JEG	KEG	14.4	15.9	10.0	13	5.0	233	21.5
5.0SMCJ14A	5.0SMCJ14CA	JEK	KEK	15.6	17.2	10.0	14	5.0	216	23.2
5.0SMCJ15A	5.0SMCJ15CA	JEM	KEM	16.7	18.5	1.0	15	5.0	205	24.4
5.0SMCJ16A	5.0SMCJ16CA	JEP	KEP	17.8	19.7	1.0	16	5.0	193	26.0
5.0SMCJ17A	5.0SMCJ17CA	JER	KER	18.9	20.9	1.0	17	5.0	181	27.6
5.0SMCJ18A	5.0SMCJ18CA	JET	KET	20.0	22.1	1.0	18	5.0	172	29.2
5.0SMCJ20A	5.0SMCJ20CA	JEV	KEV	22.2	24.5	1.0	20	5.0	155	32.4
5.0SMCJ22A	5.0SMCJ22CA	JEX	KEX	24.4	26.9	1.0	22	5.0	141	35.5
5.0SMCJ24A	5.0SMCJ24CA	JEZ	KEZ	26.7	29.5	1.0	24	5.0	129	38.9
5.0SMCJ26A	5.0SMCJ26CA	JFE	KFE	28.9	31.9	1.0	26	5.0	119	42.1
5.0SMCJ28A	5.0SMCJ28CA	JFG	KFG	31.1	34.4	1.0	28	5.0	110	45.4
5.0SMCJ30A	5.0SMCJ30CA	JFK	KFK	33.3	36.8	1.0	30	5.0	103	48.4
5.0SMCJ33A	5.0SMCJ33CA	JFM	KFM	36.7	40.6	1.0	33	5.0	93.9	53.3
5.0SMCJ36A	5.0SMCJ36CA	JFP	KFP	40.0	44.4	1.0	36	5.0	86.1	58.1
5.0SMCJ40A	5.0SMCJ40CA	JFR	KFR	44.4	49.1	1.0	40	5.0	77.6	64.5
5.0SMCJ43A	5.0SMCJ43CA	JFT	KFT	47.8	52.8	1.0	43	5.0	72.1	69.4
5.0SMCJ45A	5.0SMCJ45CA	JFV	KFV	50.0	55.3	1.0	45	5.0	68.8	72.7
5.0SMCJ48A	5.0SMCJ48CA	JFX	KFX	53.3	58.9	1.0	48	5.0	64.6	77.4
5.0SMCJ51A	5.0SMCJ51CA	JFZ	KFZ	56.7	62.7	1.0	51	5.0	60.7	82.4
5.0SMCJ54A	5.0SMCJ54CA	JGE	KGE	60.0	66.3	1.0	54	5.0	57.4	87.1
5.0SMCJ58A	5.0SMCJ58CA	JGG	KGG	64.4	71.2	1.0	58	5.0	53.5	93.6
5.0SMCJ60A	5.0SMCJ60CA	JGK	KGK	66.7	73.7	1.0	60	5.0	51.7	96.8
5.0SMCJ64A	5.0SMCJ64CA	JGM	KGM	71.1	78.6	1.0	64	5.0	48.6	103
5.0SMCJ70A	5.0SMCJ70CA	JGP	KGB	77.8	86.0	1.0	70	5.0	44.3	113
5.0SMCJ75A	5.0SMCJ75CA	JGR	KGR	83.3	92.1	1.0	75	5.0	41.4	121
5.0SMCJ78A	5.0SMCJ78CA	JGT	KGT	86.7	95.8	1.0	78	5.0	39.7	126
5.0SMCJ85A	5.0SMCJ85CA	JGV	KGV	94.4	104	1.0	85	5.0	36.5	137
5.0SMCJ90A	5.0SMCJ90CA	JGX	KGX	100	111	1.0	90	5.0	34.3	146
5.0SMCJ100A	5.0SMCJ100CA	JGZ	KGZ	111	123	1.0	100	5.0	30.9	162
5.0SMCJ110A	5.0SMCJ110CA	JHE	KHE	122	135	1.0	110	5.0	28.3	177
5.0SMCJ120A	5.0SMCJ120CA	JHG	KHG	133	147	1.0	120	5.0	26.0	193
5.0SMCJ130A	5.0SMCJ130CA	JHK	KHK	144	159	1.0	130	5.0	24.0	209
5.0SMCJ140A	5.0SMCJ140CA	JHL	KHL	156	172	1.0	140	5.0	22.2	226

5.0SMCJ150A	5.0SMCJ150CA	JHM	KHM	167	185	1.0	150	5.0	20.6	243
5.0SMCJ160A	5.0SMCJ160CA	JHP	KHB	178	197	1.0	160	5.0	19.3	259
5.0SMCJ170A	5.0SMCJ170CA	JHR	KHR	189	209	1.0	170	5.0	18.2	275
5.0SMCJ180A	5.0SMCJ180CA	JHT	KHT	200	221	1.0	180	5.0	17.5	292
5.0SMCJ200A	5.0SMCJ200CA	JHV	KHV	224	247	1.0	200	5.0	15.4	325

Note：

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 8×8mm copper pads

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

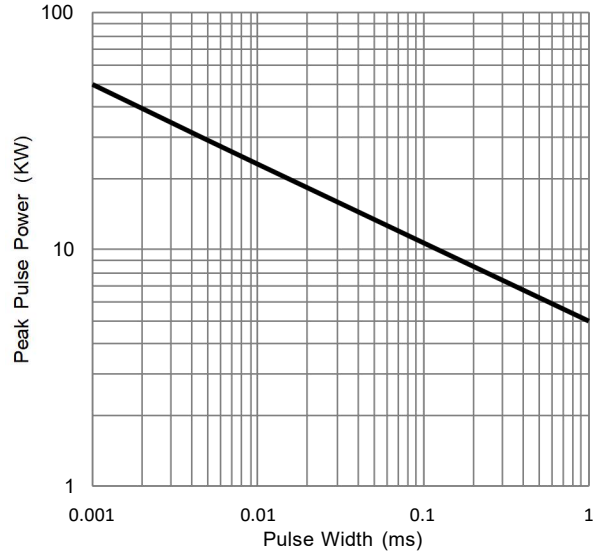


Fig.1 –Peak Pulse Power Derating Curve

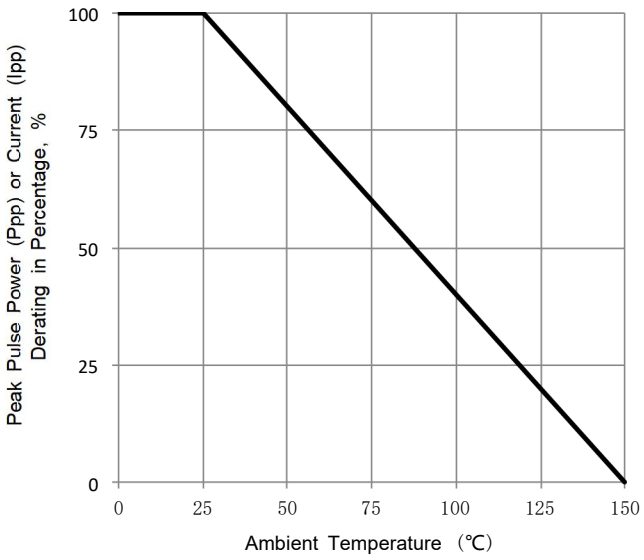


Fig.2 – Pulse Power vs Ambient Temperature

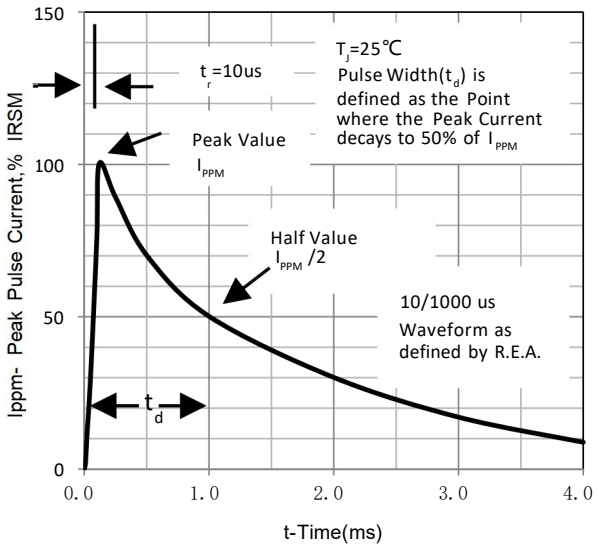


Fig.3 – Pulse Waveform

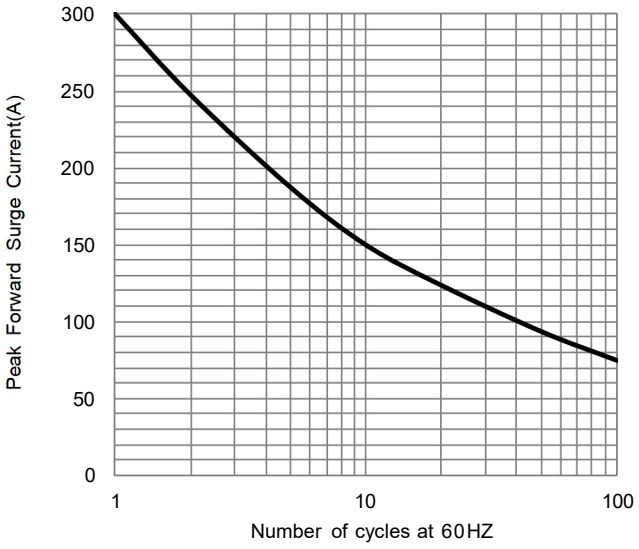
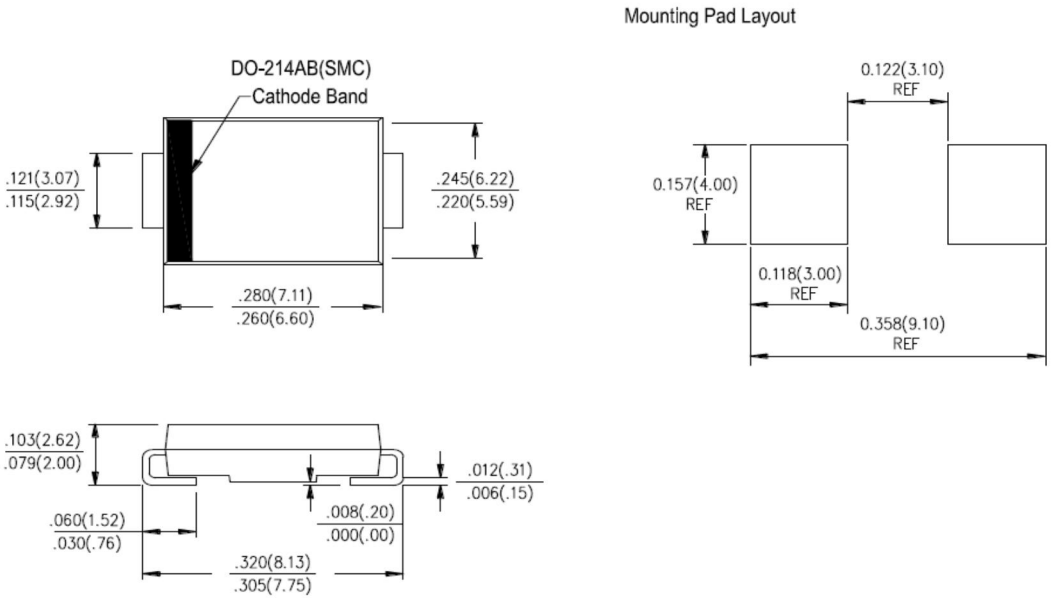


Fig.4 – Maximum Non-Repetitive Surge Current

Package Outline Dimensions

in inches (millimeters)

SMC (DO-214AB)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format
Rev.C	2023.12.18	Update product range
Rev.D	2025.08.05	Update product range (60V-200V)

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