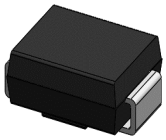
600W, 7 - 220V Transient Voltage Suppressors

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
- 600 W peak pulse power capability with a 10/1000 μs waveform
- AEC-Q101 qualified

RoHS COMPLIANT



SMB (DO-214AA)

Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (TA=25°C unless otherwise noted)			
Parameter	**Symbol**	**Ratings**	**Unit**
Peak power dissipation with a 10/1000us waveform	P_{PPM}	600	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	3.75	W
Peak forward surge current, 8.3ms single half-sine wave	I_{FSM}	100	A
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	85	℃/W
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	15	℃/W
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	20	℃/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					
ASMBJ7.0A	ASMBJ7.0CA	AKM	AAM	7.78	8.60	10	7.0	200	50.0	12.0
ASMBJ7.5A	ASMBJ7.5CA	AKP	AAP	8.33	9.21	1.0	7.5	100	46.5	12.9
ASMBJ8.0A	ASMBJ8.0CA	AKR	AAR	8.89	9.83	1.0	8.0	50	44.1	13.6
ASMBJ8.5A	ASMBJ8.5CA	AKT	AAT	9.44	10.4	1.0	8.5	20	41.7	14.4
ASMBJ9.0A	ASMBJ9.0CA	AKV	AAV	10.0	11.1	1.0	9.0	10.0	39.0	15.4
ASMBJ10A	ASMBJ10CA	AKX	AAX	11.1	12.3	1.0	10.0	5.0	35.3	17.0
ASMBJ11A	ASMBJ11CA	AKZ	AAZ	12.2	13.5	1.0	11.0	5.0	33.0	18.2
ASMBJ12A	ASMBJ12CA	ALE	ABE	13.3	14.7	1.0	12.0	5.0	30.2	19.9
ASMBJ13A	ASMBJ13CA	ALG	ABG	14.4	15.9	1.0	13	1.0	27.9	21.5
ASMBJ14A	ASMBJ14CA	ALK	ABK	15.6	17.2	1.0	14	1.0	25.9	23.2
ASMBJ15A	ASMBJ15CA	ALM	ABM	16.7	18.5	1.0	15	1.0	24.6	24.4
ASMBJ16A	ASMBJ16CA	ALP	ABP	17.8	19.7	1.0	16	1.0	23.1	26.0
ASMBJ17A	ASMBJ17CA	ALR	ABR	18.9	20.9	1.0	17	1.0	21.7	27.6
ASMBJ18A	ASMBJ18CA	ALT	ABT	20.0	22.1	1.0	18	1.0	20.5	29.2
ASMBJ20A	ASMBJ20CA	ALV	ABV	22.2	24.5	1.0	20	1.0	18.5	32.4
ASMBJ22A	ASMBJ22CA	ALX	ABX	24.4	26.9	1.0	22	1.0	16.9	35.5
ASMBJ24A	ASMBJ24CA	ALZ	ABZ	26.7	29.5	1.0	24	1.0	15.4	38.9
ASMBJ26A	ASMBJ26CA	AME	ACE	28.9	31.9	1.0	26	1.0	14.3	42.1
ASMBJ28A	ASMBJ28CA	AMG	ACG	31.1	34.4	1.0	28	1.0	13.2	45.4
ASMBJ30A	ASMBJ30CA	AMK	ACK	33.3	36.8	1.0	30	1.0	12.4	48.4
ASMBJ33A	ASMBJ33CA	AMM	ACM	36.7	40.6	1.0	33	1.0	11.3	53.3
ASMBJ36A	ASMBJ36CA	AMP	ACP	40.0	44.4	1.0	36	1.0	10.3	58.1
ASMBJ40A	ASMBJ40CA	AMR	ACR	44.4	49.1	1.0	40	1.0	9.3	64.5
ASMBJ43A	ASMBJ43CA	AMT	ACT	47.8	52.8	1.0	43	1.0	8.6	69.4
ASMBJ45A	ASMBJ45CA	AMV	ACV	50.0	55.3	1.0	45	1.0	8.3	72.7
ASMBJ48A	ASMBJ48CA	AMX	ACX	53.3	58.9	1.0	48	1.0	7.8	77.4
ASMBJ51A	ASMBJ51CA	AMZ	ACZ	56.7	62.7	1.0	51	1.0	7.3	82.4
ASMBJ54A	ASMBJ54CA	ANE	ADE	60.0	66.3	1.0	54	1.0	6.9	87.1
ASMBJ58A	ASMBJ58CA	ANG	ADG	64.4	71.2	1.0	58	1.0	6.4	93.6
ASMBJ60A	ASMBJ60CA	ANK	ADK	66.7	73.7	1.0	60	1.0	6.2	96.8
ASMBJ64A	ASMBJ64CA	ANM	ADM	71.1	78.6	1.0	64	1.0	5.8	103
ASMBJ70A	ASMBJ70CA	ANP	ADP	77.8	86.0	1.0	70	1.0	5.3	113
ASMBJ75A	ASMBJ75CA	ANR	ADR	83.3	92.1	1.0	75	1.0	5.0	121
ASMBJ78A	ASMBJ78CA	ANT	ADT	86.7	95.8	1.0	78	1.0	4.8	126

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					
ASMBJ85A	ASMBJ85CA	ANV	ADV	94.4	104	1.0	85	1.0	4.4	137
ASMBJ90A	ASMBJ90CA	ANX	ADX	100	111	1.0	90	1.0	4.1	146
ASMBJ100A	ASMBJ100CA	ANZ	ADZ	111	123	1.0	100	1.0	3.7	162
ASMBJ110A	ASMBJ110CA	APE	AFE	122	135	1.0	110	1.0	3.4	177
ASMBJ120A	ASMBJ120CA	APG	AFG	133	147	1.0	120	1.0	3.1	193
ASMBJ130A	ASMBJ130CA	APK	AFK	144	159	1.0	130	1.0	2.9	209
ASMBJ150A	ASMBJ150CA	APM	AFM	167	185	1.0	150	1.0	2.5	243
ASMBJ160A	ASMBJ160CA	APP	AFP	178	197	1.0	160	1.0	2.3	259
ASMBJ170A	ASMBJ170CA	APR	AFR	189	209	1.0	170	1.0	2.2	275
ASMBJ180A	ASMBJ180CA	APT	AFT	201	222	1.0	180	1.0	2.1	292
ASMBJ200A	ASMBJ220CA	APV	AFV	224	247	1.0	200	1.0	1.9	324
ASMBJ220A	ASMBJ220CA	APX	AFX	246	272	1.0	220	1.0	1.7	356

Note：

1. Mounted on copper pad area of 0.2x0.2” (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

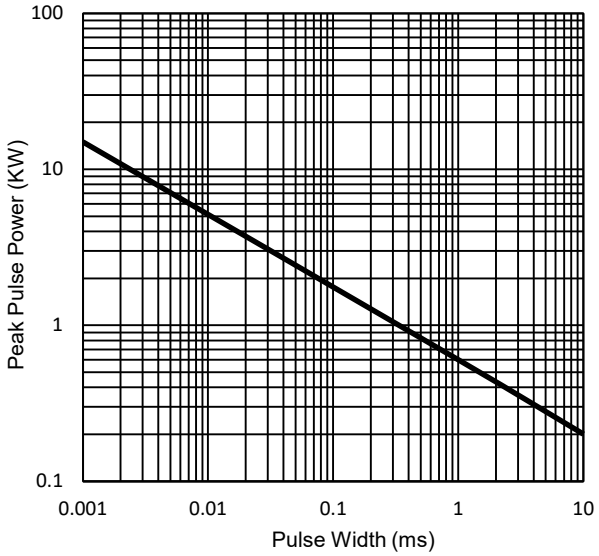


Fig.1 –Peak Pulse Power Derating Curve

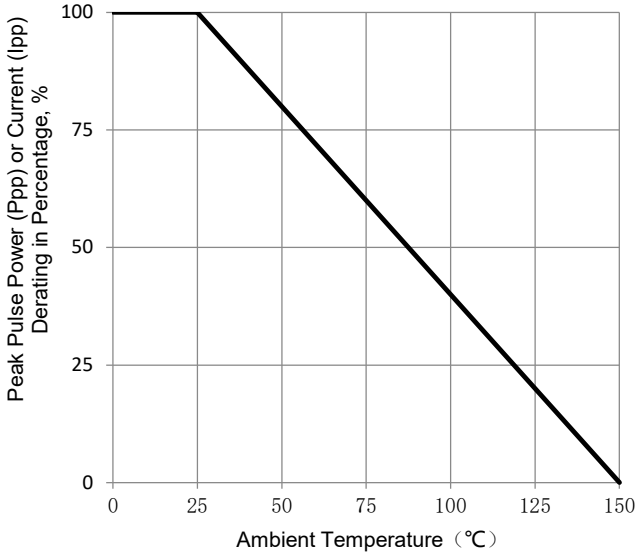


Fig.2 – Maximum Non-Repetitive Surge Current

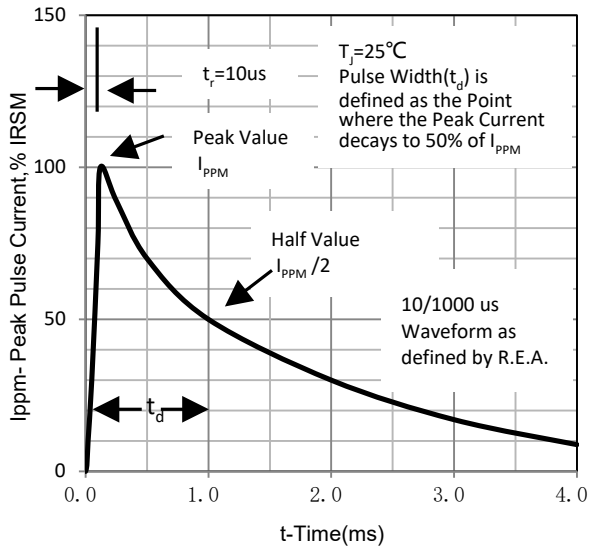


Fig.3 – Typical Forward Voltage Characteristics

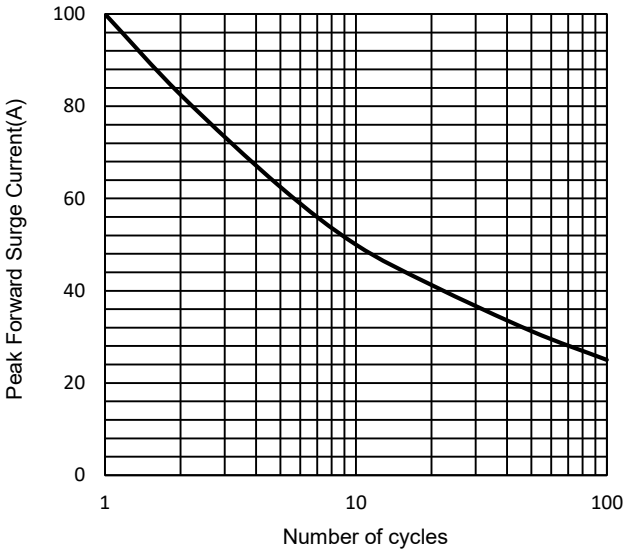
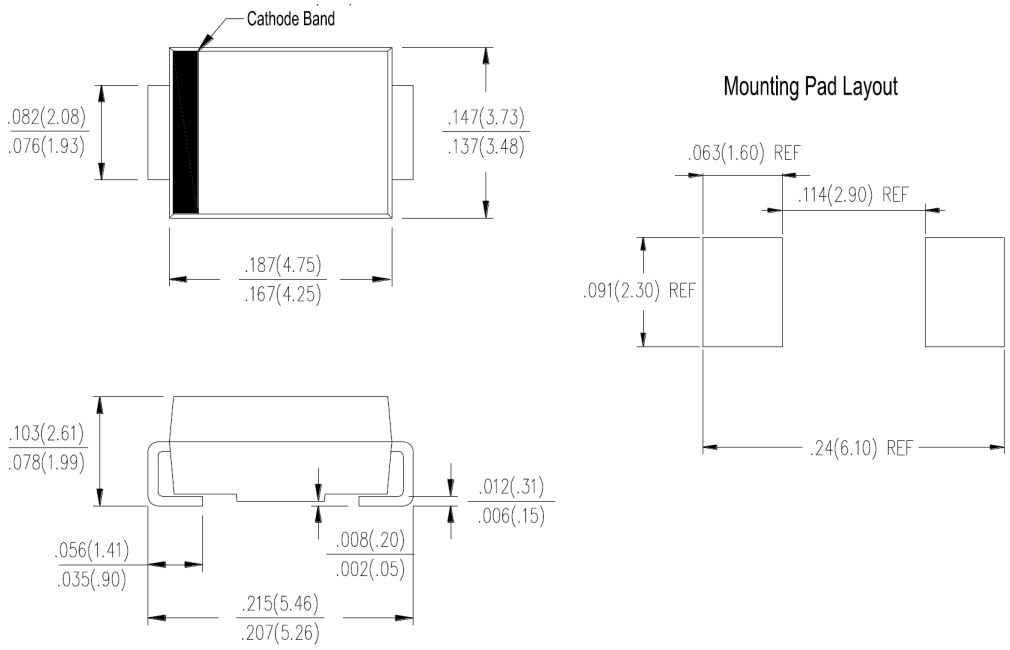


Fig.4 – Typical Reverse Current Characteristics

Package Outline Dimensions

in inches (millimeters)

SMB (DO-214AA)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.24	Modify document format
Rev.C	2024.04.24	Update product range

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