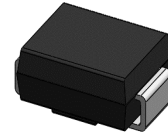


600W, 10 - 220V Transient Voltage Suppressors

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 μ s waveform



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°C	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 _{θJA}	85	°C/W
Typical Thermal Resistance , Junction to Case	R _{θJC}	15	°C/W
Typical Thermal Resistance , Junction to Lead	R _{θJL}	20	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

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

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (Volts)		Test Current I _r (mA)	Stand off Voltage V _{WM} (Volts)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)
		UNI	BI	Min	Max					
SMBJ10A	SMBJ10CA	KX	AX	11.1	12.3	1.0	10.0	5.0	35.3	17.0
SMBJ11A	SMBJ11CA	KZ	AZ	12.2	13.5	1.0	11.0	5.0	33.0	18.2
SMBJ12A	SMBJ12CA	LE	BE	13.3	14.7	1.0	12.0	5.0	30.2	19.9
SMBJ13A	SMBJ13CA	LG	BG	14.4	15.9	1.0	13	1.0	27.9	21.5
SMBJ14A	SMBJ14CA	LK	BK	15.6	17.2	1.0	14	1.0	25.9	23.2
SMBJ15A	SMBJ15CA	LM	BM	16.7	18.5	1.0	15	1.0	24.6	24.4
SMBJ16A	SMBJ16CA	LP	BP	17.8	19.7	1.0	16	1.0	23.1	26.0
SMBJ17A	SMBJ17CA	LR	BR	18.9	20.9	1.0	17	1.0	21.7	27.6
SMBJ18A	SMBJ18CA	LT	BT	20.0	22.1	1.0	18	1.0	20.5	29.2
SMBJ20A	SMBJ20CA	LV	BV	22.2	24.5	1.0	20	1.0	18.5	32.4
SMBJ22A	SMBJ22CA	LX	BX	24.4	26.9	1.0	22	1.0	16.9	35.5
SMBJ24A	SMBJ24CA	LZ	BZ	26.7	29.5	1.0	24	1.0	15.4	38.9
SMBJ26A	SMBJ26CA	ME	CE	28.9	31.9	1.0	26	1.0	14.3	42.1
SMBJ28A	SMBJ28CA	MG	CG	31.1	34.4	1.0	28	1.0	13.2	45.4
SMBJ30A	SMBJ30CA	MK	CK	33.3	36.8	1.0	30	1.0	12.4	48.4
SMBJ33A	SMBJ33CA	MM	CM	36.7	40.6	1.0	33	1.0	11.3	53.3
SMBJ36A	SMBJ36CA	MP	CP	40.0	44.4	1.0	36	1.0	10.3	58.1
SMBJ40A	SMBJ40CA	MR	CR	44.4	49.1	1.0	40	1.0	9.3	64.5
SMBJ43A	SMBJ43CA	MT	CT	47.8	52.8	1.0	43	1.0	8.6	69.4
SMBJ45A	SMBJ45CA	MV	CV	50.0	55.3	1.0	45	1.0	8.3	72.7
SMBJ48A	SMBJ48CA	MX	CX	53.3	58.9	1.0	48	1.0	7.8	77.4
SMBJ51A	SMBJ51CA	MZ	CZ	56.7	62.7	1.0	51	1.0	7.3	82.4
SMBJ54A	SMBJ54CA	NE	DE	60.0	66.3	1.0	54	1.0	6.9	87.1
SMBJ58A	SMBJ58CA	NG	DG	64.4	71.2	1.0	58	1.0	6.4	93.6
SMBJ60A	SMBJ60CA	NK	DK	66.7	73.7	1.0	60	1.0	6.2	96.8
SMBJ64A	SMBJ64CA	NM	DM	71.1	78.6	1.0	64	1.0	5.8	103
SMBJ70A	SMBJ70CA	NP	DP	77.8	86.0	1.0	70	1.0	5.3	113
SMBJ75A	SMBJ75CA	NR	DR	83.3	92.1	1.0	75	1.0	5.0	121
SMBJ78A	SMBJ78CA	NT	DT	86.7	95.8	1.0	78	1.0	4.8	126
SMBJ85A	SMBJ85CA	NV	DV	94.4	104	1.0	85	1.0	4.4	137
SMBJ90A	SMBJ90CA	NX	DX	100	111	1.0	90	1.0	4.1	146
SMBJ100A	SMBJ100CA	NZ	DZ	111	123	1.0	100	1.0	3.7	162
SMBJ110A	SMBJ110CA	PE	FE	122	135	1.0	110	1.0	3.4	177
SMBJ120A	SMBJ120CA	PG	FG	133	147	1.0	120	1.0	3.1	193

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 V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{PPM} (A)	Maximum Clamping Voltage at I _{PPM} V _C (Volts)
		UNI	BI	Min	Max					
SMBJ130A	SMBJ130CA	PK	FK	144	159	1.0	130	1.0	2.9	209
SMBJ150A	SMBJ150CA	PM	FM	167	185	1.0	150	1.0	2.5	243
SMBJ160A	SMBJ160CA	PP	FP	178	197	1.0	160	1.0	2.3	259
SMBJ170A	SMBJ170CA	PR	FR	189	209	1.0	170	1.0	2.2	275
SMBJ180A	SMBJ180CA	PT	FT	201	222	1.0	180	1.0	2.1	292
SMBJ200A	SMBJ200CA	PV	FV	224	247	1.0	200	1.0	1.9	324
SMBJ220A	SMBJ220CA	PX	FX	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

($T_A = 25^\circ\text{C}$ unless otherwise noted)

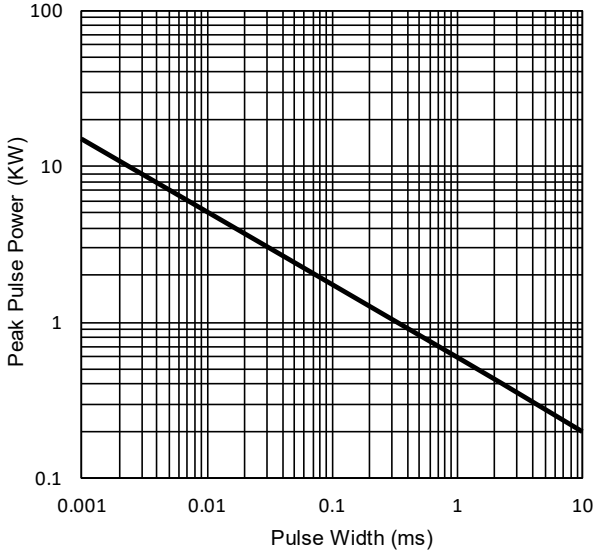


Fig.1 - Peak Pulse Power Derating Curve

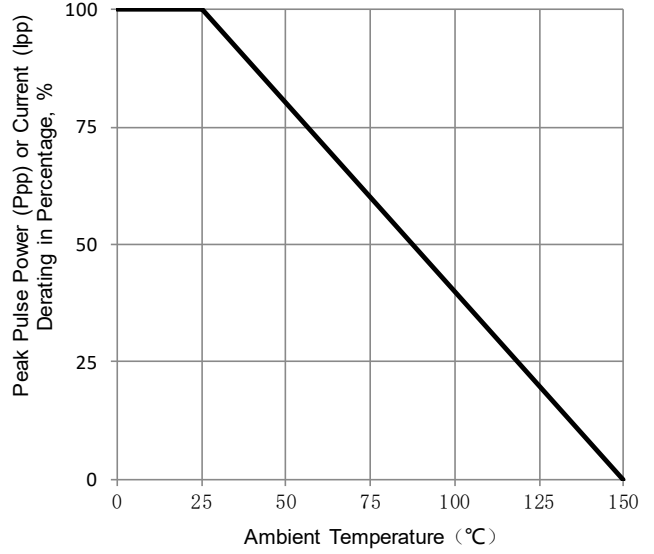


Fig.2 - Maximum Non-Repetitive Surge Current

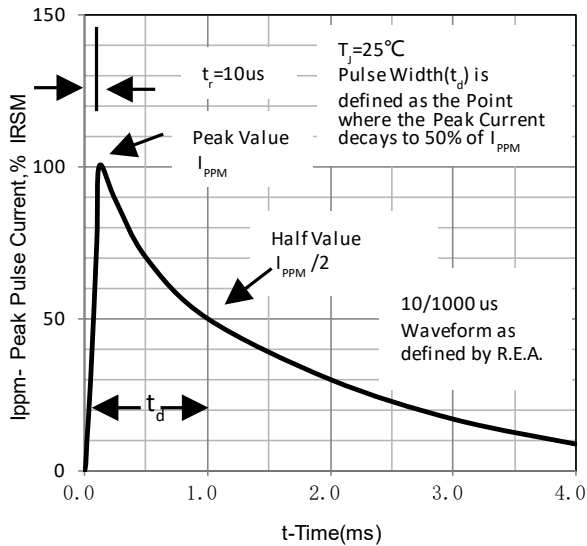


Fig.3 - Typical Forward Voltage Characteristics

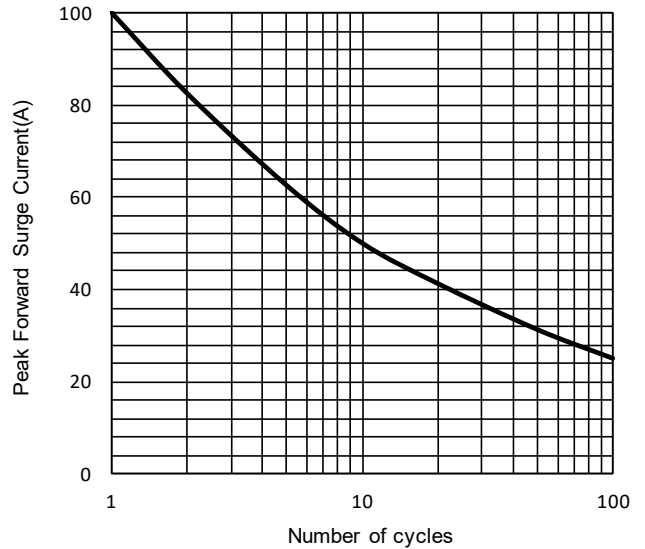
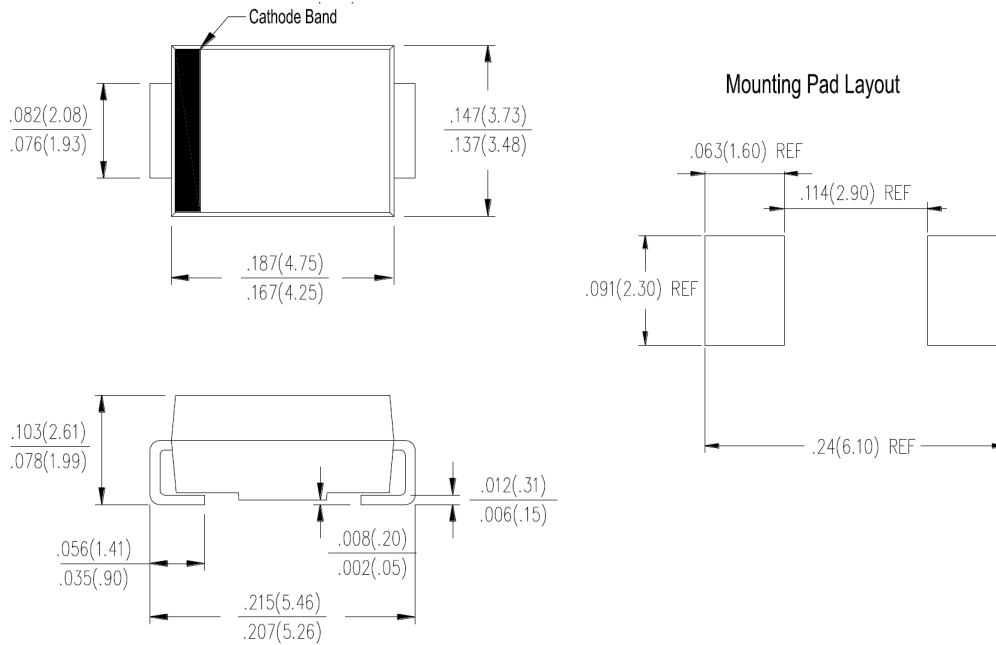


Fig.4 - Typical Reverse Current Characteristics

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	2023.10.20	Modify document format
Rev.C	2023.12.18	Update product range

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