

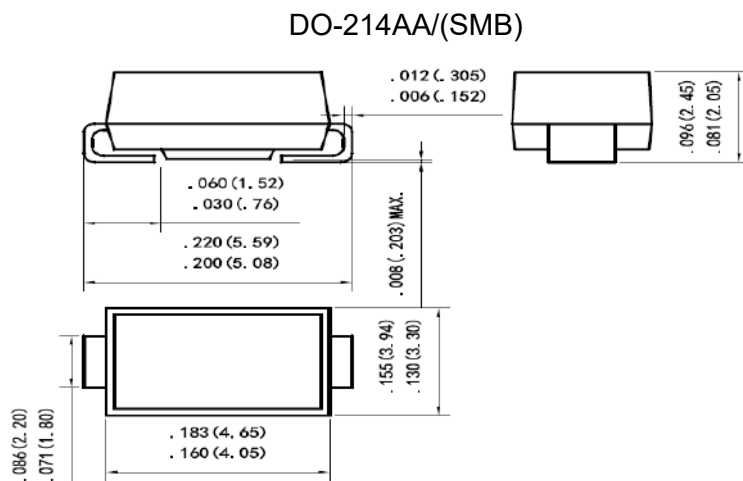
Surface Mount Transient Voltage Suppressor Rectifiers

Features:

- Glass passivated chip
- 600 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard
- High temperature soldering guaranteed:
260°C/10seconds

Mechanical Data:

- Case: DO-214AA/(SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- System: Accreditation through IATF16949 System
- Mounting position: Any



Unit: inch (mm)

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	600	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sine wave unidirectional only ⁽²⁾	I _{FSM}	100	A
Maximum instantaneous forward voltage at 50 A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C

Note:

- 1) Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1;
- 2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum;
- 3) VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V.

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C,MAX}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMBJ36A	SMBJ36CA	MP	CP	36.0	40.00	44.20	1	58.1	10.4	1
SMBJ40A	SMBJ40CA	MR	CR	40.0	44.40	49.10	1	64.5	9.3	1
SMBJ43A	SMBJ43CA	MT	CT	43.0	47.80	52.80	1	69.4	8.7	1
SMBJ45A	SMBJ45CA	MV	CV	45.0	50.00	55.30	1	72.7	8.3	1
SMBJ48A	SMBJ48CA	MX	CX	48.0	53.30	58.90	1	77.4	7.8	1
SMBJ51A	SMBJ51CA	MZ	CZ	51.0	56.70	62.70	1	82.4	7.3	1
SMBJ54A	SMBJ54CA	NE	DE	54.0	60.00	66.30	1	87.1	6.9	1
SMBJ58A	SMBJ58CA	NG	DG	58.0	64.40	71.20	1	93.6	6.5	1
SMBJ60A	SMBJ60CA	NK	DK	60.0	66.70	73.70	1	96.8	6.2	1
SMBJ64A	SMBJ64CA	NM	DM	64.0	71.10	78.60	1	103.0	5.9	1
SMBJ70A	SMBJ70CA	NP	DP	70.0	77.80	86.00	1	113.0	5.3	1
SMBJ75A	SMBJ75CA	NR	DR	75.0	83.30	92.10	1	121.0	5.0	1
SMBJ78A	SMBJ78CA	NT	DT	78.0	86.70	95.80	1	126.0	4.8	1
SMBJ85A	SMBJ85CA	NV	DV	85.0	94.4	104.0	1	137.0	4.4	1
SMBJ90A	SMBJ90CA	NX	DX	90.0	100.0	111.0	1	146.0	4.1	1
SMBJ100A	SMBJ100CA	NZ	DZ	100.0	111.0	123.0	1	162.0	3.7	1
SMBJ110A	SMBJ110CA	PE	EE	110.0	122.0	135.0	1	177.0	3.4	1
SMBJ120A	SMBJ120CA	PG	EG	120.0	133.0	147.0	1	193.0	3.1	1
SMBJ130A	SMBJ130CA	PK	EK	130.0	144.0	159.0	1	209.0	2.9	1
SMBJ150A	SMBJ150CA	PM	EM	150.0	167.0	185.0	1	243.0	2.5	1
SMBJ160A	SMBJ160CA	PP	EP	160.0	178.0	197.0	1	259.0	2.3	1
SMBJ170A	SMBJ170CA	PR	ER	170.0	189.0	209.0	1	275.0	2.2	1

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

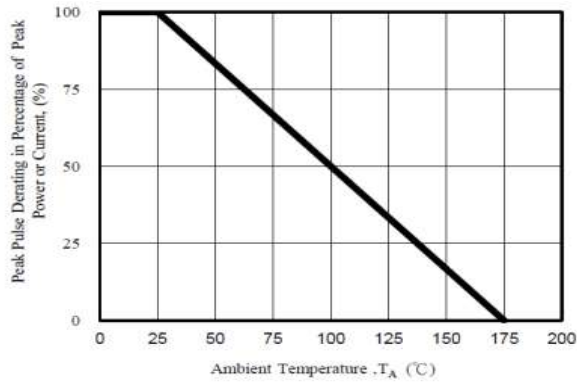


Fig. 1 - Pulse Derating Curve

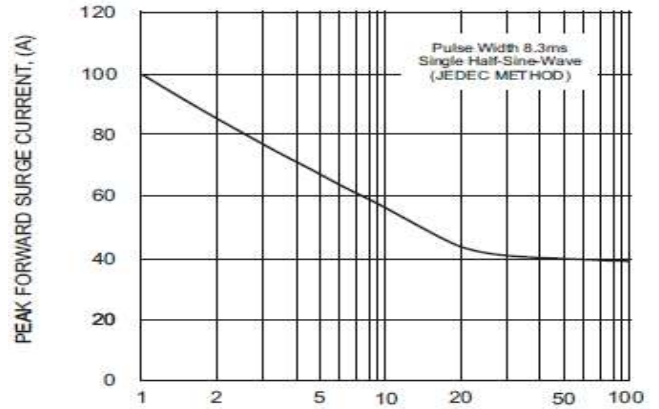


Fig. 2 - Maximum Non-Repetitive Surge Current

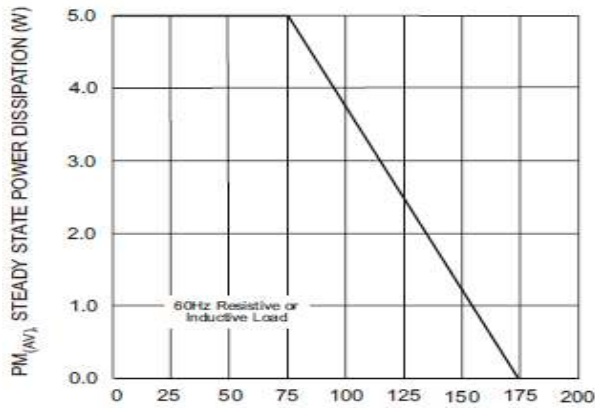


Fig. 3 - Steady State Power Derating Curve

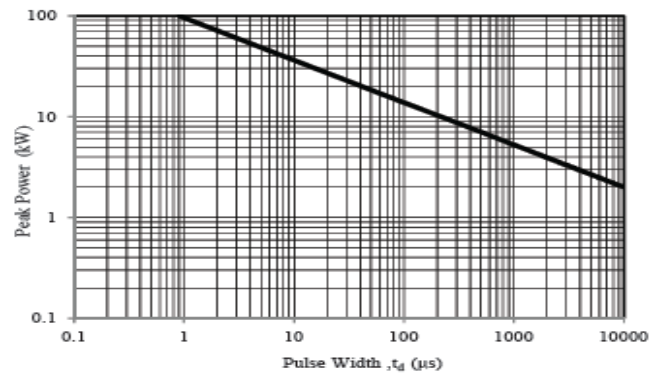


Fig. 4 - Peak Pulse Power Rating Curve

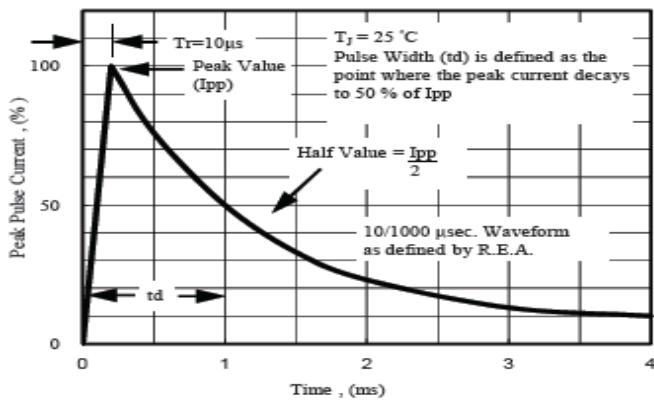


Fig. 5 - Pulse Waveform

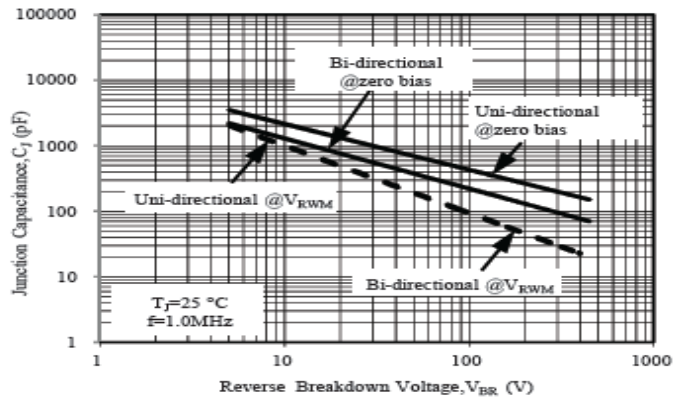


Fig. 6 - Typical Junction Capacitance