

FEATURES:

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

MAXIMUM RATINGS

Ratings	Value
Peak pulse power dissipation @ 25°C	600W @ 10/1000 μ s (see fig. 1 & 2)
t_{clamping} (0 volts to $V_{\text{(BR)}}$ min):	< 100 ps theoretical for unidirectional and < 5 ns for bidirectional
Impulse repetition rate (duty factor)	0.01%
Operating and storage temperature:	-65° to +150°C
Thermal resistance:	25°C/W junction to lead, or 90°C/W junction to ambient when mounted on FR4 PC board with recommended footprint
Steady state power dissipation	5 watts at $T_L = 25^\circ\text{C}$, or 1.38 watts at $T_A = 25^\circ\text{C}$ when mounted on FR4 PC board with recommended footprint
Forward surge @ 25°C:	100 Amps peak impulse of 8.3 ms half sine wave (unidirectional only)
Solder temperatures:	260°C for 10 s (maximum)

ELECTRICAL CHARACTERISTICS

Part number	Reverse stand-off voltage	Breakdown voltage			Maximum clamping voltage @ I_{pp}	Peak pulse current	Maximum standby current @ V_{WM}
	V_{WM}	$V_{\text{(BR)}}$		@ $I_{\text{(BR)}}$		I_{pp}	I_{D}
	Volts	Volts		mA	Volts	Amps	μ A
		Min	Max				
SMBJ5.0	5.0	6.40	7.30	10	9.6	62.5	800
SMBJ5.0A	5.0	6.40	7.00	10	9.2	65.2	800
SMBJ6.0	6.0	6.67	8.15	10	11.4	52.6	800
SMBJ6.0A	6.0	6.67	7.37	10	10.3	58.3	800
SMBJ6.5	6.5	7.22	8.82	10	12.3	48.7	500
SMBJ6.5A	6.5	7.22	7.98	10	11.2	53.6	500
SMBJ7.0	7.0	7.78	9.51	10	13.3	45.1	200
SMBJ7.0A	7.0	7.78	8.60	10	12.0	50.0	200
SMBJ7.5	7.5	8.33	10.2	1	14.3	42.0	100
SMBJ7.5A	7.5	8.33	9.21	1	12.9	46.5	100
SMBJ8.0	8.0	8.89	10.9	1	15.0	40.0	50
SMBJ8.0A	8.0	8.89	9.83	1	13.6	44.1	50
SMBJ8.5	8.5	9.44	11.5	1	15.9	37.7	10
SMBJ8.5A	8.5	9.44	10.4	1	14.4	41.7	10
SMBJ9.0	9.0	10.0	12.2	1	16.9	35.5	5
SMBJ9.0A	9.0	10.0	11.1	1	15.4	39.0	5

SMBJ SERIES

TRANSIENT VOLTAGE SUPPRESSORS

ELECTRICAL CHARACTERISTICS

Part number	Reverse stand-off voltage	Breakdown voltage			Maximum clamping voltage @ I_{PP}	Peak pulse current	Maximum standby current @ V_{WM}
	V_{WM}	$V_{(BR)}$		@ $I_{(BR)}$		I_{PP}	I_D
	Volts	Volts		mA	Volts	Amps	μA
		Min	Max				
SMBJ10	10	11.1	13.6	1	18.8	31.9	5
SMBJ10A	10	11.1	12.3	1	17.0	35.3	5
SMBJ11	11	12.2	14.9	1	20.1	29.9	5
SMBJ11A	11	12.2	13.5	1	18.2	33.0	5
SMBJ12	12	13.3	16.3	1	22.0	27.3	5
SMBJ12A	12	13.3	14.7	1	19.9	30.2	5
SMBJ13	13	14.4	17.6	1	23.8	25.2	1
SMBJ13A	13	14.4	15.9	1	21.5	27.9	1
SMBJ14	14	15.6	19.1	1	25.8	23.3	1
SMBJ14A	14	15.6	17.2	1	23.2	25.8	1
SMBJ15	15	16.7	20.4	1	26.9	22.3	1
SMBJ15A	15	16.7	18.5	1	24.4	24.0	1
SMBJ16	16	17.8	21.8	1	28.8	20.8	1
SMBJ16A	16	17.8	19.7	1	26.0	23.1	1
SMBJ17	17	18.9	23.1	1	30.5	19.7	1
SMBJ17A	17	18.9	20.9	1	27.6	21.7	1
SMBJ18	18	20.0	24.4	1	32.2	18.6	1
SMBJ18A	18	20.0	22.1	1	29.2	20.5	1
SMBJ20	20	22.2	27.1	1	35.8	16.7	1
SMBJ20A	20	22.2	24.5	1	32.4	18.5	1
SMBJ22	22	24.4	29.8	1	39.4	15.2	1
SMBJ22A	22	24.4	26.9	1	35.5	16.9	1
SMBJ24	24	26.7	32.6	1	43.0	14.0	1
SMBJ24A	24	26.7	29.5	1	38.9	15.4	1
SMBJ26	26	28.9	35.3	1	46.6	12.4	1
SMBJ26A	26	28.9	31.9	1	42.1	14.2	1
SMBJ28	28	31.1	38.0	1	50.0	12.0	1
SMBJ28A	28	31.1	34.4	1	45.4	13.2	1
SMBJ30	30	33.3	40.7	1	53.5	11.2	1
SMBJ30A	30	33.3	36.8	1	48.4	12.4	1
SMBJ33	33	36.7	44.9	1	59.0	10.2	1
SMBJ33A	33	36.7	40.6	1	53.3	11.3	1

ELECTRICAL CHARACTERISTICS

Part number	Reverse stand-off voltage	Breakdown voltage			Maximum clamping voltage @ I _{pp}	Peak pulse current	Maximum standby current @ V _{WM}
	V _{WM}	V _(BR)		@I _(BR)		I _{pp}	I _b
	Volts	Volts		mA	Volts	Amps	μA
		Min	Max				
SMBJ36	36	40.0	48.9	1	64.3	9.3	1
SMBJ36A	36	40.0	44.2	1	58.1	10.3	1
SMBJ40	40	44.4	54.3	1	71.4	8.4	1
SMBJ40A	40	44.4	49.1	1	64.5	9.3	1
SMBJ43	43	47.8	58.4	1	76.7	7.8	1
SMBJ43A	43	47.8	52.8	1	69.4	8.6	1
SMBJ45	45	50.0	61.1	1	80.3	7.5	1
SMBJ45A	45	50.0	55.3	1	72.7	8.3	1
SMBJ48	48	53.3	65.1	1	85.5	7.0	1
SMBJ48A	48	53.3	58.9	1	77.4	7.7	1
SMBJ51	51	56.7	69.3	1	91.1	6.6	1
SMBJ51A	51	56.7	62.7	1	82.4	7.3	1
SMBJ54	54	60.0	73.3	1	96.3	6.2	1
SMBJ54A	54	60.0	66.3	1	87.1	6.9	1
SMBJ58	58	64.4	78.7	1	103.0	5.8	1
SMBJ58A	58	64.4	71.2	1	93.6	6.4	1
SMBJ60	60	66.7	81.5	1	107.0	5.6	1
SMBJ60A	60	66.7	73.7	1	96.8	6.2	1
SMBJ64	64	71.1	86.9	1	114.0	5.3	1
SMBJ64A	64	71.1	78.6	1	103.0	5.8	1
SMBJ70	70	77.8	95.1	1	125	4.8	1
SMBJ70A	70	77.8	86.0	1	113	5.3	1
SMBJ75	75	83.3	102.0	1	134	4.5	1
SMBJ75A	75	83.3	92.1	1	121	4.9	1
SMBJ78	78	86.7	106.0	1	139	4.3	1
SMBJ78A	78	86.7	95.8	1	126	4.7	1
SMBJ85	85	94.4	115.0	1	151	3.9	1
SMBJ85A	85	94.4	104.0	1	137	4.4	1
SMBJ90	90	100	122	1	160	3.8	1
SMBJ90A	90	100	111	1	146	4.1	1
SMBJ100	100	111	136	1	179	3.4	1
SMBJ100A	100	111	123	1	162	3.7	1

SMBJ SERIES

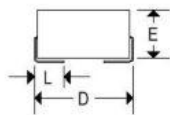
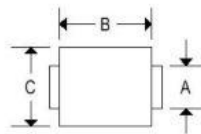
TRANSIENT VOLTAGE SUPPRESSORS

ELECTRICAL CHARACTERISTICS

Part number	Reverse stand-off voltage	Breakdown voltage			Maximum clamping voltage @ I_{PP}	Peak pulse current	Maximum standby current @ V_{WM}
	V_{WM}	$V_{(BR)}$		@ $I_{(BR)}$		I_{PP}	I_D
	Volts	Volts		mA	Volts	Amps	μA
		Min	Max				
SMBJ110	110	122	149	1	196	3.0	1
SMBJ110A	110	122	135	1	177	3.4	1
SMBJ120	120	133	163	1	214	2.8	1
SMBJ120A	120	133	147	1	193	3.1	1
SMBJ130	130	144	176	1	231	2.6	1
SMBJ130A	130	144	159	1	209	2.9	1
SMBJ150	150	167	204	1	268	2.2	1
SMBJ150A	150	167	185	1	243	2.5	1
SMBJ160	160	178	218	1	287	2.1	1
SMBJ160A	160	178	197	1	259	2.3	1
SMBJ170	170	189	231	1	304	2.0	1
SMBJ170A	170	189	209	1	275	2.2	1

MECHANICAL CHARACTERISTICS

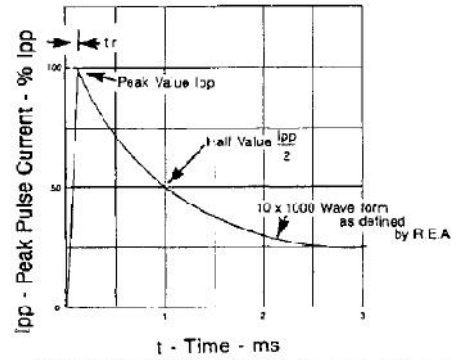
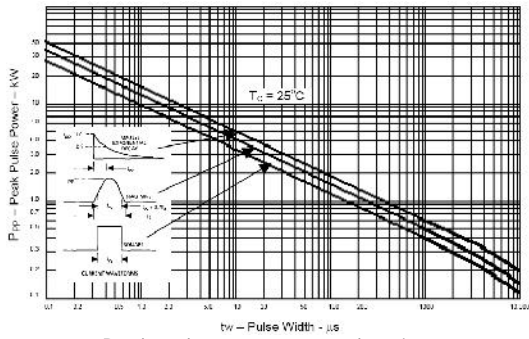
Case	DO-214AA
Marking	Alpha-numeric
Polarity	Cathode band



DO-214AA				
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.077	0.083	1.960	2.100
B	0.160	0.187	4.060	4.750
C	0.130	0.155	3.300	3.940
D	0.205	0.220	5.210	5.590
E	0.075	0.095	1.900	2.410
L	0.030	0.060	0.760	1.520

SMBJ SERIES

TRANSIENT VOLTAGE SUPPRESSORS



Test waveform parameters: $t_r = 10 \mu\text{s}$, $t_p = 1000 \mu\text{s}$
Pulse waveform for exponential surge

