

## IV. Zener Diode

### SMD Zener Diode (5.0 Watt) SMBJ5333B~SMBJ5388B

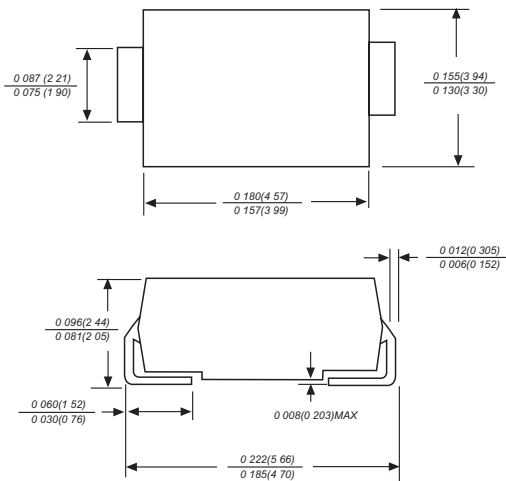
(Package: SMB (DO-214AA))

#### FEATURES

- Low profile package for surface mount (flat handling surface for accurate placement).
- Zener voltage 3.3V to 200V.
- High surge current capability.
- For surface mounted applications in order to optimize board space.
- Built-in strain relief.
- High temperature soldering guaranteed: 260 /10 seconds at terminals.

#### MECHANICAL DATA

- Standard JEDEC outlines as shown
- Terminals : Solder plated solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode
- Weight : 0.090 grams



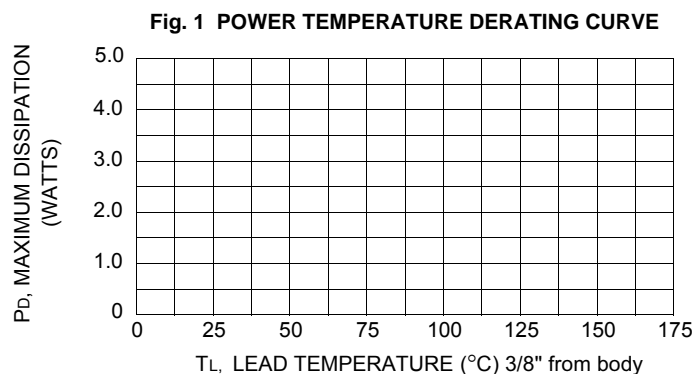
Case: SMB  
Dimensions in inches and (millimeters)

## Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.			
Rating	Symbol	Value	Units
Forward voltage at 1.0A current	$V_F$	1.2	Volts
Steady state power dissipation (Note)	$P_D$	5.0	Watts
Operating and storage temperatures	$T_j, T_{stg}$	-55 to + 150	
Thermal resistance	$R_{th-JL}$	25	/W

Note:

Lead temperature at 25 =  $T_L$  at mounting plate. Derate linearly above 25 to zero power at 150 .



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(Package: SMB (DO-214AA))

Type number	Nominal Zener Voltage ( $V_Z$ ) @ $I_{ZT}$	Test Current ( $I_{ZT}$ )	Maximum Dynamic Impedance ( $Z_{ZT}$ )	Maximum Dynamic Knee Impedance ( $Z_{ZK}$ ) @ 1.0mA	Maximum Reverse Current ( $I_R$ ) @ $V_R$	$I_R$ Test Voltage ( $V_R$ )	Maximum Surge Current ( $I_{ZSM}$ )	Maximum Voltage Regulation ( $V_Z$ )	Maximum Regulator Current ( $I_{ZM}$ )
	Volts	mA			$\mu A$	Volts	Amps	Volts	mA
SMBJ5333B	3.3	380	3.0	400	300	1.0	20.0	0.85	1440
SMBJ5334B	3.6	350	2.5	500	150	1.0	18.7	0.80	1320
SMBJ5335B	3.9	320	2.0	500	50	1.0	17.6	0.54	1220
SMBJ5336B	4.3	290	2.0	500	10	1.0	16.4	0.49	1100
SMBJ5337B	4.7	260	2.0	450	5.0	1.0	15.3	0.44	1010
SMBJ5338B	5.1	240	1.5	400	1.0	1.0	14.4	0.39	930
SMBJ5339B	5.6	220	1.0	400	1.0	2.0	13.4	0.25	865
SMBJ5340B	6.0	200	1.0	300	1.0	3.0	12.7	0.19	790
SMBJ5341B	6.2	200	1.0	200	1.0	3.0	12.4	0.10	765
SMBJ5342B	6.8	175	1.0	200	10	5.2	11.5	0.15	700
SMBJ5343B	7.5	175	1.5	200	10	5.7	10.7	0.15	630
SMBJ5344B	8.2	150	1.5	200	10	6.2	10.0	0.20	580
SMBJ5345B	8.7	150	2.0	200	10	6.6	9.5	0.20	545
SMBJ5346B	9.1	150	2.0	150	7.5	6.9	9.2	0.22	520
SMBJ5347B	10	125	2.0	125	5.0	7.6	8.6	0.22	475
SMBJ5348B	11	125	2.5	125	5.0	8.4	8.0	0.25	430
SMBJ5349B	12	100	2.5	125	2.0	9.1	7.5	0.25	395
SMBJ5350B	13	100	2.5	100	1.0	9.9	7.0	0.25	365
SMBJ5351B	14	100	2.5	75	1.0	10.6	6.7	0.25	340
SMBJ5352B	15	75	2.5	75	1.0	11.5	6.3	0.25	315
SMBJ5353B	16	75	2.5	75	1.0	12.2	6.0	0.30	295
SMBJ5354B	17	70	2.5	75	0.5	12.9	5.8	0.35	280
SMBJ5355B	18	65	2.5	75	0.5	13.7	5.5	0.40	264
SMBJ5356B	19	65	3.0	75	0.5	14.4	5.3	0.40	250
SMBJ5357B	20	65	3.0	75	0.5	15.2	5.1	0.40	237
SMBJ5358B	22	50	3.5	75	0.5	16.7	4.7	0.45	216
SMBJ5359B	24	50	3.5	100	0.5	18.2	4.4	0.55	198
SMBJ5360B	25	50	4.0	110	0.5	19.0	4.3	0.55	190
SMBJ5361B	27	50	5.0	120	0.5	20.6	4.1	0.60	176
SMBJ5362B	28	50	6.0	130	0.5	21.2	3.9	0.60	170
SMBJ5363B	30	40	8.0	140	0.5	22.8	3.7	0.60	158
SMBJ5364B	33	40	10	150	0.5	25.1	3.5	0.63	144
SMBJ5365B	36	30	11	160	0.5	27.4	3.3	0.65	132
SMBJ5366B	39	30	14	170	0.5	29.7	3.1	0.65	122
SMBJ5367B	43	30	20	190	0.5	32.7	2.8	0.70	110
SMBJ5368B	47	25	25	210	0.5	35.8	2.7	0.80	100
SMBJ5369B	51	25	27	230	0.5	38.8	2.5	0.90	93.0
SMBJ5370B	56	20	35	280	0.5	42.5	2.3	1.00	86.0
SMBJ5371B	60	20	40	350	0.5	45.5	2.2	1.20	79.0
SMBJ5372B	62	20	42	400	0.5	47.1	2.1	1.35	76.0
SMBJ5373B	68	20	44	500	0.5	51.7	2.0	1.50	70.0
SMBJ5374B	75	20	45	620	0.5	56.0	1.9	1.60	63.0
SMBJ5375B	82	15	65	720	0.5	62.2	1.8	1.80	58.0
SMBJ5376B	87	15	75	760	0.5	66.0	1.7	2.00	54.5
SMBJ5377B	91	15	75	760	0.5	69.2	1.6	2.20	52.5
SMBJ5378B	100	12	90	800	0.5	76.0	1.5	2.30	47.5
SMBJ5379B	110	12	125	1000	0.5	83.6	1.4	2.50	43.0
SMBJ5380B	120	10	170	1150	0.5	91.2	1.3	2.50	39.5
SMBJ5381B	130	10	190	1250	0.5	98.8	1.2	2.50	36.6
SMBJ5382B	140	8.0	230	1500	0.5	106	1.2	2.50	34.0
SMBJ5383B	150	8.0	330	1500	0.5	114	1.1	3.00	31.5
SMBJ5384B	160	8.0	350	1660	0.5	122	1.1	3.00	29.4
SMBJ5385B	170	8.0	380	1750	0.5	129	1.0	3.00	28.0
SMBJ5386B	180	5.0	430	1750	0.5	137	1.0	4.00	26.4
SMBJ5387B	190	5.0	450	1850	0.5	144	0.9	5.00	25.0
SMBJ5388B	200	5.0	480	1850	0.5	152	0.9	5.00	23.6