

## ZENER DIODES

$V_Z$  : 3.3 - 200 Volts

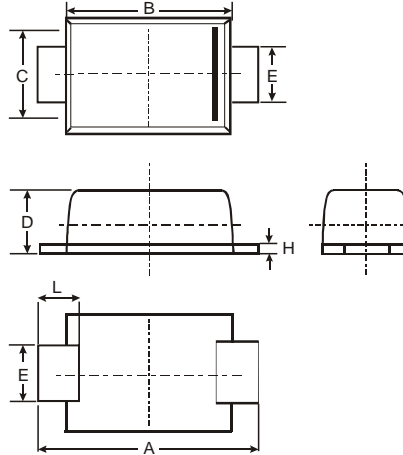
$P_D$  : 5 Watts

### Features

- Complete Voltage Range 3.3 to 200 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

### Mechanical Data

- Case:SMBF , Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces,0.05grams



SMBF			
Dim	Min	Max	Typ
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75
All Dimensions in mm			

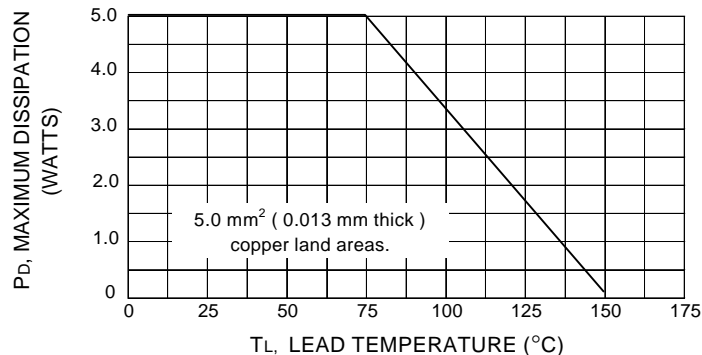
### Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Rating	Symbol	Value	Unit
Power Dissipation at $T_L = 25^\circ\text{C}$	$P_D$	5	W
Maximum Forward Voltage at $I_F = 1.0\text{ A}$	$V_F$	1.2	V
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	90	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead (Note 1)	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	- 65 to + 150	$^\circ\text{C}$

#### Note :

- (1) When mounted on FR4 PC board (1 oz Cu) with recommended footprint.

**Fig. 1 POWER TEMPERATURE DERATING CURVE**



## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

TYPE	Regulator Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum Zener Current	Maximum Surge Current	Maximum Voltage
	$V_Z @ I_{ZT}$	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R @ V_R$		$I_{ZM}$	$I_{ZSM}$	Regulator
	(V)	(mA)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu$ A)	(V)	(mA)	(A)	$\Delta V_Z$
SMBF5333B	3.3	380	3.0	400	1.0	300	1.0	1440	20.0	0.85
SMBF5334B	3.6	350	2.5	500	1.0	150	1.0	1320	18.7	0.80
SMBF5335B	3.9	320	2.0	500	1.0	50	1.0	1220	17.6	0.54
SMBF5336B	4.3	290	2.0	500	1.0	10	1.0	1100	16.4	0.49
SMBF5337B	4.7	260	2.0	450	1.0	5.0	1.0	1010	15.3	0.44
SMBF5338B	5.1	240	1.5	400	1.0	1.0	1.0	930	14.4	0.39
SMBF5339B	5.6	220	1.0	400	1.0	1.0	2.0	856	13.4	0.25
SMBF5340B	6.0	200	1.0	300	1.0	1.0	3.0	790	12.7	0.19
SMBF5341B	6.2	200	1.0	200	1.0	1.0	3.0	765	12.4	0.10
SMBF5342B	6.8	175	1.0	200	1.0	10	5.2	700	11.5	0.15
SMBF5343B	7.5	175	1.5	200	1.0	10	5.7	630	10.7	0.15
SMBF5344B	8.2	150	1.5	200	1.0	10	6.2	580	10.0	0.20
SMBF5345B	8.7	150	2.0	200	1.0	10	6.6	545	9.5	0.20
SMBF5346B	9.1	150	2.0	150	1.0	7.5	6.9	520	9.2	0.22
SMBF5347B	10	125	2.0	125	1.0	5.0	7.6	475	8.6	0.22
SMBF5348B	11	125	2.5	125	1.0	5.0	8.4	430	8.0	0.25
SMBF5349B	12	100	2.5	125	1.0	2.0	9.1	395	7.5	0.25
SMBF5350B	13	100	2.5	100	1.0	1.0	9.9	365	7.0	0.25
SMBF5351B	14	100	2.5	75	1.0	1.0	10.6	340	6.7	0.25
SMBF5352B	15	75	2.5	75	1.0	1.0	11.5	315	6.3	0.25
SMBF5353B	16	75	2.5	75	1.0	1.0	12.2	295	6.0	0.30
SMBF5354B	17	70	2.5	75	1.0	0.5	12.9	280	5.8	0.35
SMBF5355B	18	65	2.5	75	1.0	0.5	13.7	265	5.5	0.40
SMBF5356B	19	65	3.0	75	1.0	0.5	14.4	250	5.3	0.40
SMBF5357B	20	65	3.0	75	1.0	0.5	15.2	237	5.1	0.40
SMBF5358B	22	50	3.5	75	1.0	0.5	16.7	216	4.7	0.45
SMBF5359B	24	50	3.5	100	1.0	0.5	18.2	198	4.4	0.55
SMBF5360B	25	50	4.0	110	1.0	0.5	19.0	190	4.3	0.55
SMBF5361B	27	50	5.0	120	1.0	0.5	20.6	176	4.1	0.60
SMBF5362B	28	50	6.0	130	1.0	0.5	21.2	170	3.9	0.60
SMBF5363B	30	40	8.0	140	1.0	0.5	22.8	158	3.7	0.60
SMBF5364B	33	40	10	150	1.0	0.5	25.1	144	3.5	0.60
SMBF5365B	36	30	11	160	1.0	0.5	27.4	132	3.3	0.65
SMBF5366B	39	30	14	170	1.0	0.5	29.7	122	3.1	0.65
SMBF5367B	43	30	20	190	1.0	0.5	32.7	110	2.8	0.70
SMBF5368B	47	25	25	210	1.0	0.5	35.8	100	2.7	0.80
SMBF5369B	51	25	27	230	1.0	0.5	38.8	93.0	2.5	0.90
SMBF5370B	56	20	35	280	1.0	0.5	42.6	86.0	2.3	1.00
SMBF5371B	60	20	40	350	1.0	0.5	45.5	79.0	2.2	1.20
SMBF5372B	62	20	42	400	1.0	0.5	47.1	76.0	2.1	1.35
SMBF5373B	68	20	44	500	1.0	0.5	51.7	70.0	2.0	1.50
SMBF5374B	75	20	45	620	1.0	0.5	56.0	63.0	1.9	1.60
SMBF5375B	82	15	65	720	1.0	0.5	62.2	58.0	1.8	1.80
SMBF5376B	87	15	75	760	1.0	0.5	66.0	54.5	1.7	2.00
SMBF5377B	91	15	75	760	1.0	0.5	69.2	52.5	1.6	2.20
SMBF5378B	100	12	90	800	1.0	0.5	76.0	47.5	1.5	2.30
SMBF5379B	110	12	125	1000	1.0	0.5	83.6	43.0	1.4	2.50
SMBF5380B	120	10	170	1150	1.0	0.5	91.2	39.5	1.3	2.50
SMBF5381B	130	10	190	1250	1.0	0.5	98.8	36.6	1.2	2.50
SMBF5382B	140	8.0	230	1500	1.0	0.5	106	34.0	1.2	2.50
SMBF5383B	150	8.0	330	1500	1.0	0.5	114	31.6	1.1	3.00
SMBF5384B	160	8.0	350	1650	1.0	0.5	122	29.4	1.1	3.00
SMBF5385B	170	8.0	380	1750	1.0	0.5	129	28.0	1.0	3.00
SMBF5386B	180	5.0	430	1750	1.0	0.5	137	26.4	1.0	4.00
SMBF5387B	190	5.0	450	1850	1.0	0.5	144	25.0	0.9	5.00
SMBF5388B	200	5.0	480	1850	1.0	0.5	152	23.6	0.9	5.00

- Notes : (1) Suffix " B " indicates  $\pm 5\%$  tolerance, suffix " A " indicates  $\pm 10\%$  tolerance.  
 (2) The surge current ( $I_{ZSM}$ ) is specified as the maximum peak of a non- recurrent half-sin wave of 8.3 ms duration.  
 (3) Voltage regulation ( $V_Z$ ) is the difference between the voltage measured at 10% and 50% of I