

■ Features

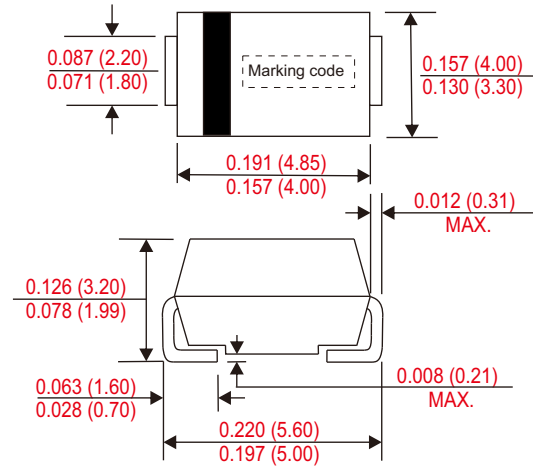
- Glass passivated chip.
- 5.0W Power Dissipation
- 3.3V – 220V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Low Inductance

■ Mechanical data

- Epoxy:UL94V-0 rated flame retardant
- Case : Molded plastic, DO-214AA / SMB
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.093 grams(approx)

■ Outline

SMB(DO-214AA)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	Value	UNIT
DC power dissipation	$T_c = 75\text{ }^\circ\text{C}$ (1)	P_D	5.0	W
Forward voltage	$I_F = 1.0\text{A}$	V_F	1.2	V
Thermal resistance	Junction to ambient(2)	$R_{\theta JA}$	90	°C/W
	Junction to lead (1)	$R_{\theta JL}$	25	
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating Junction temperature		T_J	-55 ~ +150	°C

Note : 1.Mounted on FR-4 PCB with 25.4 x 25.4mm copper pads.
2.Mounted on Ceramic substrate with minimum recommended pad layout.

■Electrical characteristics								
P/N (Note 1)	Marking Code	Nominal Zener Voltage (Note 2)	Test Current	Max. Zener Impedance (Note 3)			Max. Leakage Current	
		$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$	
		(V)	(mA)	Ω	Ω	(mA)	(μA)	(V)
SMB5333B	333B	3.3	380	3.0	400	1.0	300	1.0
SMB5334B	334B	3.6	350	2.5	500	1.0	150	1.0
SMB5335B	335B	3.9	320	2.0	500	1.0	50	1.0
SMB5336B	336B	4.3	290	2.0	500	1.0	10	1.0
SMB5337B	337B	4.7	260	2.0	450	1.0	5.0	1.0
SMB5338B	338B	5.1	240	1.5	400	1.0	1.0	1.0
SMB5339B	339B	5.6	220	1.0	400	1.0	1.0	2.0
SMB5340B	340B	6.0	200	1.0	300	1.0	1.0	3.0
SMB5341B	341B	6.2	200	1.0	200	1.0	1.0	3.0
SMB5342B	342B	6.8	175	1.0	200	1.0	10	5.2
SMB5343B	343B	7.5	175	1.5	200	1.0	10	5.7
SMB5344B	344B	8.2	150	1.5	200	1.0	10	6.2
SMB5345B	345B	8.7	150	2.0	200	1.0	1.0	6.6
SMB5346B	346B	9.1	150	2.0	150	1.0	7.5	6.9
SMB5347B	347B	10	125	2.0	125	1.0	5.0	7.6
SMB5348B	348B	11	125	2.5	125	1.0	5.0	8.4
SMB5349B	349B	12	100	2.5	125	1.0	2.0	9.1
SMB5350B	350B	13	100	2.5	100	1.0	1.0	9.9
SMB5351B	351B	14	100	2.5	75	1.0	1.0	10.6
SMB5352B	352B	15	75	2.5	75	1.0	1.0	11.5
SMB5353B	353B	16	75	2.5	75	1.0	1.0	12.2
SMB5354B	354B	17	70	2.5	75	1.0	0.5	12.9
SMB5355B	355B	18	65	2.5	75	1.0	0.5	13.7
SMB5356B	356B	19	65	3.0	75	1.0	0.5	14.4
SMB5357B	357B	20	65	3.0	75	1.0	0.5	15.2
SMB5358B	358B	22	50	3.5	75	1.0	0.5	16.7
SMB5359B	359B	24	50	3.5	100	1.0	0.5	18.2
SMB5360B	360B	25	50	4.0	110	1.0	0.5	19.0
SMB5361B	361B	27	50	5.0	120	1.0	0.5	20.6
SMB5362B	362B	28	50	6.0	130	1.0	0.5	21.2
SMB5363B	363B	30	40	8.0	140	1.0	0.5	22.8
SMB5364B	364B	33	40	10	150	1.0	0.5	25.1
SMB5365B	365B	36	30	11	160	1.0	0.5	27.4
SMB5366B	366B	39	30	14	170	1.0	0.5	29.7
SMB5367B	367B	43	30	20	190	1.0	0.5	32.7
SMB5368B	368B	47	25	25	210	1.0	0.5	35.8
SMB5369B	369B	51	25	27	230	1.0	0.5	38.8
SMB5370B	370B	56	20	35	280	1.0	0.5	42.6
SMB5371B	371B	60	20	40	350	1.0	0.5	45.5
SMB5372B	372B	62	20	42	400	1.0	0.5	47.1
SMB5373B	373B	68	20	44	500	1.0	0.5	51.7

■Electrical characteristics

P/N (Note 1)	Marking Code	Nominal Zener Voltage (Note 2)	Test Current	Max. Zener Impedance (Note 3)			Max. Leakage Current	
		$V_z @ I_{zT}$	I_{zT}	$Z_{zT} @ I_{zT}$	$Z_{zK} @ I_{zK}$	I_{zK}	$I_R @ V_R$	
		(V)	(mA)	Ω	Ω	(mA)	(μ A)	(V)
SMB5374B	374B	75	20	45	620	1.0	0.5	56.0
SMB5375B	375B	82	15	65	720	1.0	0.5	62.2
SMB5376B	376B	87	15	75	760	1.0	0.5	66.0
SMB5377B	377B	91	15	75	760	1.0	0.5	69.2
SMB5378B	378B	100	12	90	800	1.0	0.5	76.0
SMB5379B	379B	110	12	125	1000	1.0	0.5	83.6
SMB5380B	380B	120	10	170	1150	1.0	0.5	91.2
SMB5381B	381B	130	10	190	1250	1.0	0.5	98.8
SMB5382B	382B	140	8.0	230	1500	1.0	0.5	106.0
SMB5383B	383B	150	8.0	330	1500	1.0	0.5	114.0
SMB5384B	384B	160	8.0	350	1650	1.0	0.5	122.0
SMB5385B	385B	170	8.0	380	1750	1.0	0.5	129.0
SMB5386B	386B	180	5.0	430	1750	1.0	0.5	137.0
SMB5387B	387B	190	5.0	450	1850	1.0	0.5	144.0
SMB5388B	388B	200	5.0	480	1850	1.0	0.5	152.0

- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of $\pm 5\%$.
 2. Measured under thermal equilibrium and DC (I_{zT}) test conditions.
 3. The Zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{zT} or I_{zK}) is superimposed on I_{zT} or I_{zK} . Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

■ Rating and characteristic curves

Fig. 1 Power Derating Curve

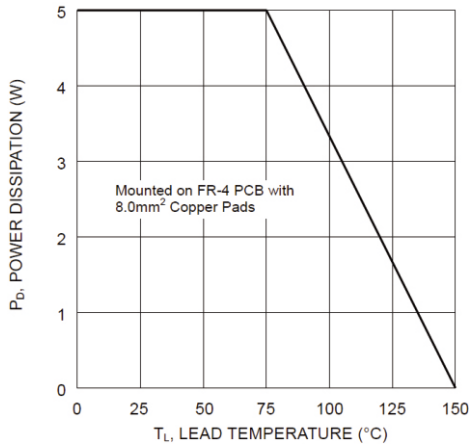


Fig. 2 Zener Breakdown Characteristics

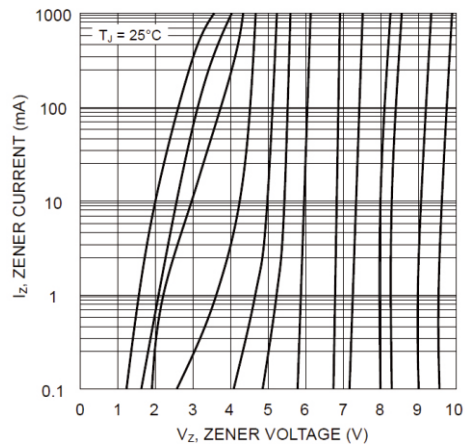


Fig. 3 Typical Forward Characteristics

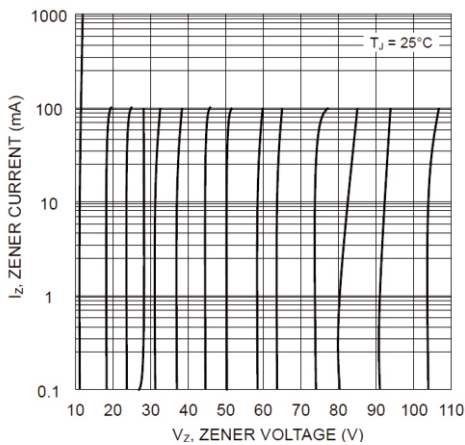


Fig. 4 Typical Temperature Coefficients

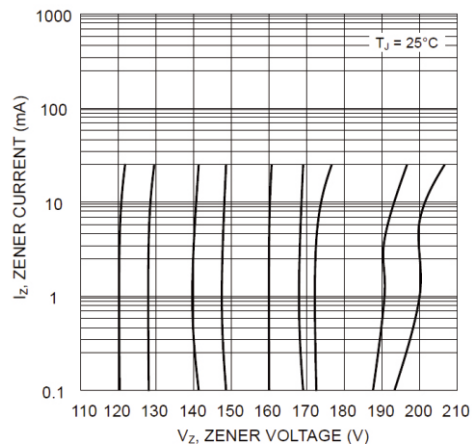


Fig. 5 Typical Forward Characteristics

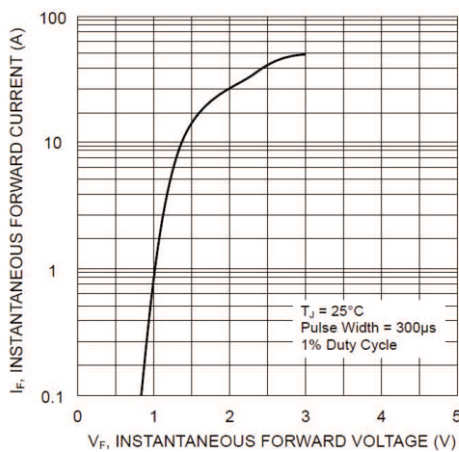
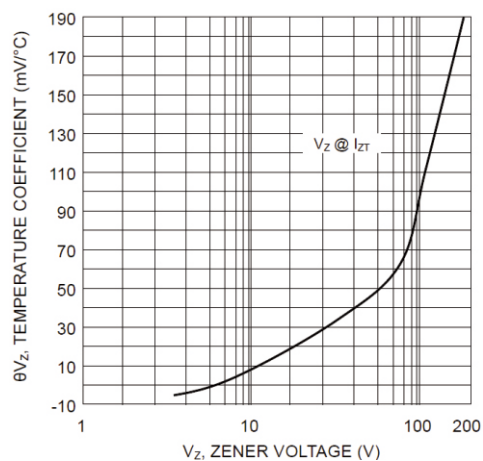
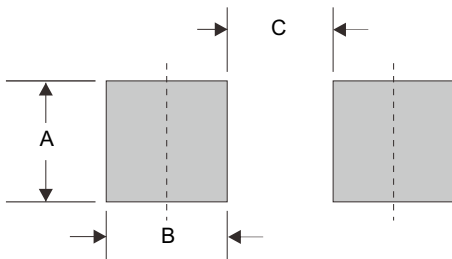


Fig. 6 Junction Capacitance vs. Nominal Zener Voltage



■ SMB foot print



A	B	C
0.082 (2.10)	0.050 (1.27)	0.106 (2.69)

Dimensions in inches and (millimeters)

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