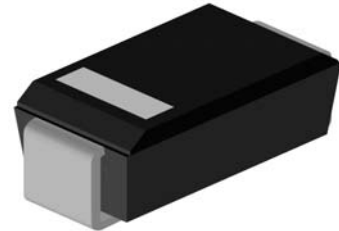




Zener diode

Features

- 1. For surface mounted applications
- 2. Excellent clamping capability
- 3. Glass passivated junction
- 4. V_Z -tolerance $\pm 5\%$



Applications

Voltage stabilization

Absolute Maximum Ratings

$T_j=25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$T_{amb} \leq 75^\circ\text{C}$		P_V	5	W
Z-current			I_Z	P_V/V_Z	mA
Junction temperature			T_j	150	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65~+150	$^\circ\text{C}$

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

Electrical Characteristics

$T_j=25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1\text{A}$		V_F			1.2	V

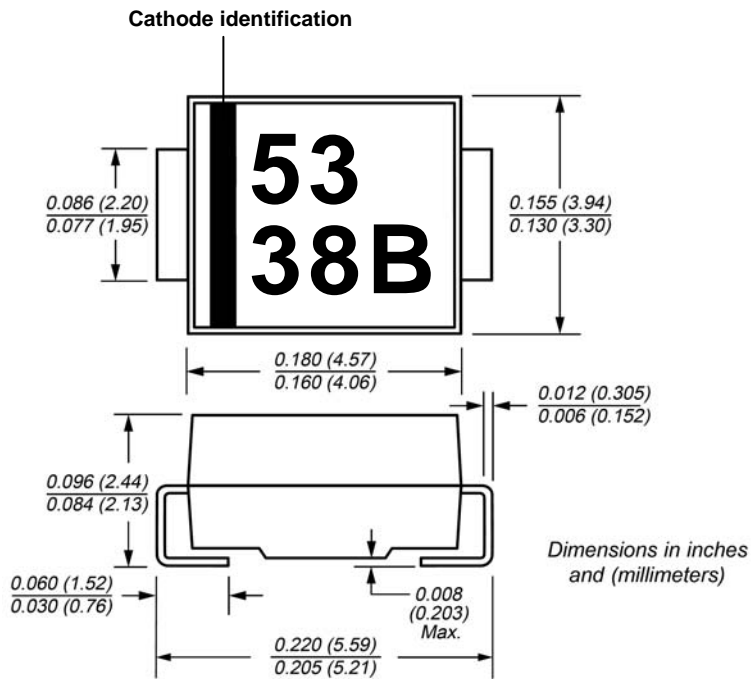


Type	V_{Znom} ¹⁾	I_{ZT} for Z_{ZT}		Z_{ZK} @ $I_{ZK}=1mA$	I_R @ V_R		I_R ²⁾	ΔV_Z ³⁾	I_{ZM} ⁴⁾
	V	mA	Ω	Ω	μA	V	A	V	mA
SMB5338B	5.1	240	1.5	400	1	1	14.4	0.39	930
SMB5339B	5.6	220	1	400	1	2	13.4	0.25	865
SMB5340B	6.0	200	1	300	1	3	12.7	0.19	790
SMB5341B	6.2	200	1	200	1	3	12.4	0.1	765
SMB5342B	6.8	175	1	200	10	5.2	11.5	0.15	700
SMB5343B	7.5	175	1.5	200	10	5.7	10.7	0.15	630
SMB5344B	8.2	150	1.5	200	10	6.2	10	0.2	580
SMB5345B	8.7	150	2	200	10	6.6	9.5	0.2	545
SMB5346B	9.1	150	2	150	7.5	6.9	9.2	0.22	520
SMB5347B	10	125	2	125	5	7.6	8.6	0.22	475
SMB5348B	11	125	2.5	125	5	8.4	8	0.25	430
SMB5349B	12	100	2.5	125	2	9.1	7.5	0.25	395
SMB5350B	13	100	2.5	100	1	9.9	7	0.25	365
SMB5351B	14	100	2.5	75	1	10.6	6.7	0.25	340
SMB5352B	15	75	2.5	75	1	11.5	6.3	0.25	315
SMB5353B	16	75	2.5	75	1	12.2	6	0.3	295
SMB5354B	17	70	2.5	75	0.5	12.9	5.8	0.35	280
SMB5355B	18	65	2.5	75	0.5	13.7	5.5	0.4	265
SMB5356B	19	65	3	75	0.5	14.4	5.3	0.4	250
SMB5357B	20	65	3	75	0.5	15.2	5.1	0.4	237
SMB5358B	22	50	3.5	75	0.5	16.7	4.7	0.45	216
SMB5359B	24	50	3.5	100	0.5	18.2	4.4	0.55	198
SMB5360B	25	50	4	110	0.5	19	4.3	0.55	190
SMB5361B	27	50	5	120	0.5	20.6	4.1	0.6	176
SMB5362B	28	50	6	130	0.5	21.2	3.9	0.6	170
SMB5363B	30	40	8	140	0.5	22.8	3.7	0.6	158
SMB5364B	33	40	10	150	0.5	25.1	3.5	0.6	144
SMB5365B	36	30	11	160	0.5	27.4	3.3	0.65	132
SMB5366B	39	30	14	170	0.5	29.7	3.1	0.65	122
SMB5367B	43	30	20	190	0.5	32.7	2.8	0.7	110
SMB5368B	47	25	25	210	0.5	35.8	2.7	0.8	100
SMB5369B	51	25	27	230	0.5	38.8	2.5	0.9	93

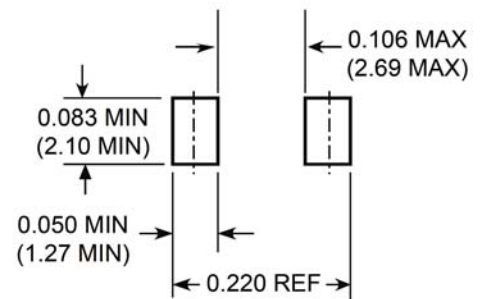
- 1) Zener voltage (V_Z): Based on DC-measurement at thermal equilibrium while maintaining the lead temperature (T_L) at 25°C, 9.5mm (3/8") from the diode body.
- 2) Surge current (I_R) is specified as the maximum allowable peak, non-recurrent square-wave current with a plus width, PW, of 8.3 ms.
- 3) Voltage regulation (ΔV_Z): Test conditions for voltage regulation are as below, V_Z measurements are made at 10% and then at 50% of the I_Z max value listed in the electrical characteristics table. The test current time duration for each V_Z measurements is 40±10 ms. ($T_A=25^\circ C +8, -2^\circ C$)
- 4) Maximum regulator current (I_{ZM}): The maximum current shown is based on the maximum voltage of a 5% type unit; therefore, it applies only to the B-suffix device. The actual I_{ZM} for any device may not exceed the value of 5 watts divided by the actual V_Z of the device. $T_L=75^\circ C$ at 9.5mm (3/8") from the diode body.



Dimensions in inches (mm)



Mounting Pad Layout



DO-214AA (SMBJ)