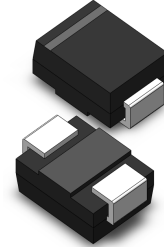


# 1SMB3EZ3.9 - 1SMB3EZ400

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE RANGE: 3.9 - 400V**  
**POWER: 3.0Watts**

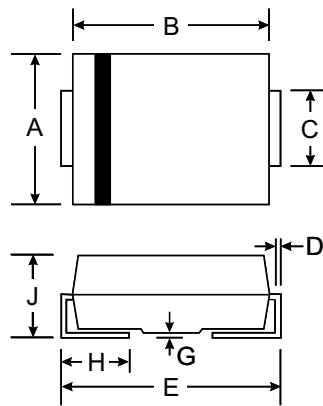


### Features

- Complete Voltage Range 3.9 to 400 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



SMB(DO-214AA)		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

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

Rating	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)	$P_D$	3.0	Watts
Maximum Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.5	Volts
Maximum Thermal Resistance Junction to Ambient Air (Note2)	$R_{\theta JA}$	60	K / W
Junction Temperature Range	$T_J$	- 55 to + 175	$^\circ\text{C}$
Storage Temperature Range	$T_S$	- 55 to + 175	$^\circ\text{C}$

**Note :**

- (1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body  
 (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



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

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IzT	IzT	ZzT @ IzT	Zzk @ Izk	Izk	I <sub>R</sub> @ V <sub>R</sub>		Iz <sub>M</sub>
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMB3EZ3.9	3.9	192	4.5	400	1.0	80	1.0	630
1SMB3EZ4.3	4.3	174	4.5	400	1.0	30	1.0	590
1SMB3EZ4.7	4.7	160	4.0	500	1.0	20	1.0	550
1SMB3EZ5.1	5.1	147	3.5	550	1.0	5.0	1.0	520
1SMB3EZ5.6	5.6	134	2.5	600	1.0	5.0	2.0	480
1SMB3EZ6.2	6.2	121	1.5	700	1.0	5.0	3.0	435
1SMB3EZ6.8	6.8	110	2.0	700	1.0	50	4.0	393
1SMB3EZ7.5	7.5	100	2.0	700	0.5	50	5.0	360
1SMB3EZ8.2	8.2	91	2.3	700	0.5	50	6.0	330
1SMB3EZ9.1	9.1	82	2.5	700	0.5	50	7.0	297
1SMB3EZ10	10	75	3.5	700	0.3	50	7.6	270
1SMB3EZ11	11	68	4.0	700	0.25	50	8.4	225
1SMB3EZ12	12	63	4.5	700	0.25	1.0	9.1	246
1SMB3EZ13	13	58	4.5	700	0.25	0.5	9.1	208
1SMB3EZ14	14	53	5.0	700	0.25	0.5	10.6	193
1SMB3EZ15	15	50	5.5	700	0.25	0.5	11.4	180
1SMB3EZ16	16	47	5.5	700	0.25	0.5	12.2	169
1SMB3EZ17	17	44	6.0	750	0.25	0.5	13.0	159
1SMB3EZ18	18	42	6.0	750	0.25	0.5	13.7	150
1SMB3EZ19	19	40	7.0	750	0.25	0.5	14.4	142
1SMB3EZ20	20	37	7.0	750	0.25	0.5	15.2	135
1SMB3EZ22	22	34	8.0	750	0.25	0.5	16.7	123
1SMB3EZ24	24	31	9.0	750	0.25	0.5	18.2	112
1SMB3EZ27	27	28	10	750	0.25	0.5	20.6	100
1SMB3EZ28	28	27	12	750	0.25	0.5	21.0	96
1SMB3EZ30	30	25	16	1000	0.25	0.5	22.5	90
1SMB3EZ33	33	23	20	1000	0.25	0.5	25.1	82
1SMB3EZ36	36	21	22	1000	0.25	0.5	27.4	75
1SMB3EZ39	39	19	28	1000	0.25	0.5	29.7	69
1SMB3EZ43	43	17	33	1500	0.25	0.5	32.7	60
1SMB3EZ47	47	16	38	1500	0.25	0.5	35.6	57
1SMB3EZ51	51	15	45	1500	0.25	0.5	38.8	53
1SMB3EZ56	56	13	50	2000	0.25	0.5	42.6	48
1SMB3EZ62	62	12	55	2000	0.25	0.5	47.1	44
1SMB3EZ68	68	11	70	2000	0.25	0.5	51.7	40
1SMB3EZ75	75	10	85	2000	0.25	0.5	56.0	36
1SMB3EZ82	82	9.1	95	3000	0.25	0.5	62.2	33
1SMB3EZ91	91	8.2	115	3000	0.25	0.5	69.2	30
1SMB3EZ100	100	7.5	160	3000	0.25	0.5	76.0	27



**ELECTRICAL CHARACTERISTICS** Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IzT	IzT	ZzT @ IzT	Zzk @ Izk	Izk	IR @ VR		IzM
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMB3EZ110	110	6.8	225	4000	0.25	0.5	83.6	25
1SMB3EZ120	120	6.3	300	4500	0.25	0.5	91.2	22
1SMB3EZ130	130	5.8	375	5000	0.25	0.5	98.8	21
1SMB3EZ140	140	5.3	475	5000	0.25	0.5	106.4	19
1SMB3EZ150	150	5.0	550	6000	0.25	0.5	114.0	18
1SMB3EZ160	160	4.7	625	6500	0.25	0.5	121.6	17
1SMB3EZ170	170	4.4	650	7000	0.25	0.5	130.4	16
1SMB3EZ180	180	4.2	700	7000	0.25	0.5	136.8	15
1SMB3EZ190	190	4.0	800	8000	0.25	0.5	144.8	14
1SMB3EZ200	200	3.7	875	8000	0.25	0.5	152.0	13
1SMB3EZ220	220	3.4	1600	9000	0.25	1	167.0	12
1SMB3EZ240	240	3.1	1700	9000	0.25	1	182.0	11
1SMB3EZ270	270	2.8	1800	9000	0.25	1	205.0	10
1SMB3EZ300	300	2.5	1900	9000	0.25	1	228.0	9
1SMB3EZ330	330	2.3	2200	9000	0.25	1	251.0	8
1SMB3EZ360	360	2.1	2700	9000	0.25	1	274.0	8
1SMB3EZ400	400	1.9	3500	9000	0.25	1	304.0	7