

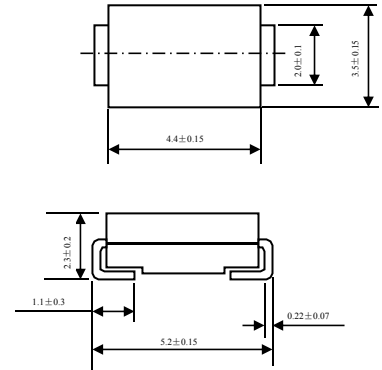
**FEATURES:**

- ◆ ZENER impedance at low current is small
- ◆ High reliability
- ◆ High temperature soldering guaranteed:  
250°C / 10S / 9.5mm lead length at 5 lbs tension

**MECHANICAL DATA:**

- ◆ Case: Molded plastic
- ◆ Epoxy: UL94V-0 rate flame retardant
- ◆ Polarity: Color band denotes cathode
- ◆ Mounting position: Any

**SMB / DO-214AA**



**1.5WATT SURFACE MOUNTSILICON ZENER DIODES**  
Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND CHARACTERISTICS**  
Rating at 25°C ambient temperature unless otherwise specified.

Parameters	SYMBOL	VALUE	UNITS
ZENER Current	I <sub>Z</sub> MAX	See table	mA
Power Dissipation ( Note1 ) Ta=70°C	P <sub>t</sub>	3.0	W
Thermal Resistances ( Junction to Ambient ,Note1)	R <sub>θ(ja)</sub>	28	°C/W
Operating Temperature Range	T <sub>J</sub>	-50~+150	°C
Storage Temperature Range	T <sub>STG</sub>	-50~+175	°C

NOTES :

1. Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area.

## ELECTRICAL CHARACTERISTICS ( at $T_A=25^\circ\text{C}$ unless otherwise noted )

TYPE NUMBER (Note 2)	Nominal ZENER Voltage	Test Current	Max ZENER Impedance			Maximum Reverse Leakage Current		Maximum DC ZENER Current of $V_{(BR)}$
	$V_{Z@I_{ZT}}$	$I_{ZT}$	$Z_{ZT}@I_{ZT}$ (Note 3)	$Z_{ZK}@I_{ZK}$ (Note 4)	$I_{ZK}$	$I_{R@V_R}$	$V_R$	$I_{ZM}@50^\circ\text{C}$ (Note 5)
	V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	V	mA
1SMB5921B	6.8	55.1	2.5	200	1.0	5.0	5.2	220
1SMB5922B	7.5	50.0	3.0	400	0.5	5.0	6.8	200
1SMB5923B	8.2	45.7	3.5	400	0.5	5.0	6.5	182
1SMB5924B	9.1	41.2	4.0	500	0.5	5.0	7.0	164
1SMB5925B	10	37.5	4.5	500	0.25	5.0	8.0	150
1SMB5926B	11	34.1	5.5	550	0.25	1.0	8.4	136
1SMB5927B	12	31.2	6.5	550	0.25	1.0	9.1	125
1SMB5928B	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMB5929B	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMB5930B	16	23.4	10.0	600	0.25	1.0	12.2	93
1SMB5931B	18	20.8	12.0	650	0.25	1.0	13.7	83
1SMB5932B	20	18.7	14.0	650	0.25	1.0	15.2	75
1SMB5933B	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMB5934B	24	15.6	19	700	0.25	1.0	18.2	62
1SMB5935B	27	13.9	23	700	0.25	1.0	20.6	55
1SMB5936B	30	12.5	26	750	0.25	1.0	22.8	50
1SMB5937B	33	11.4	33	800	0.25	1.0	25.1	45
1SMB5938B	36	10.4	38	850	0.25	1.0	27.4	41
1SMB5939B	39	9.6	45	900	0.25	1.0	29.7	38
1SMB5940B	43	8.7	53	950	0.25	1.0	32.7	34
1SMB5941B	47	8.0	67	1000	0.25	1.0	35.8	31
1SMB5942B	51	7.3	70	1100	0.25	1.0	38.8	29
1SMB5943B	56	6.7	86	1300	0.25	1.0	42.6	26
1SMB5944B	62	6.0	100	1500	0.25	1.0	47.1	24
1SMB5945B	68	5.5	120	1700	0.25	1.0	51.7	22
1SMB5946B	75	5.0	140	2000	0.25	1.0	56.0	20
1SMB5947B	82	4.6	160	2500	0.25	1.0	62.2	18
1SMB5948B	91	4.1	200	3000	0.25	1.0	69.2	16
1SMB5949B	100	3.7	250	3100	0.25	1.0	76.0	15
1SMB5950B	110	3.4	300	4000	0.25	1.0	83.6	13
1SMB5951B	120	3.1	380	4500	0.25	1.0	91.2	12
1SMB5952B	130	2.9	450	5000	0.25	1.0	98.8	11
1SMB5953B	150	2.5	600	6000	0.25	1.0	114.0	10
1SMB5954B	160	2.3	700	6500	0.25	1.0	121.6	9
1SMB5955B	180	2.1	900	7000	0.25	1.0	136.8	8
1SMB5956B	200	1.9	1200	8000	0.25	1.0	152.0	7

Note :

1.  $V_F=1.5\text{V max. @ } I_F=200\text{mA}$
2. **TOLERANCE DESIGNATION** Standard tolerance on nominal ZENER voltage is  $\pm 5\%$ ,
3. **ZENER IMPEDANCE**  $I$  ( ac rms ) =  $10\% I_{ZT}$
4. **ZENER KNEE IMPEDANCE**  $I$  ( ac rms ) =  $10\% I_{ZK}$
5. **MAXIMUM ZENER CURRENT** The nominal  $I_{ZM}$  currents shown are applicable for devices having regulator voltages approximately 10% above the nominal  $V_Z$  values shown. These values do not represent absolute limits. The actual steady state current-voltage product must not exceed the power rating.

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