



# THE DATASHEET OF SMBJ5939B-TP



## Features

- 5.1 thru 200 Volt Voltage Range
- Glass Passivated Junction
- Surface Mount Application
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

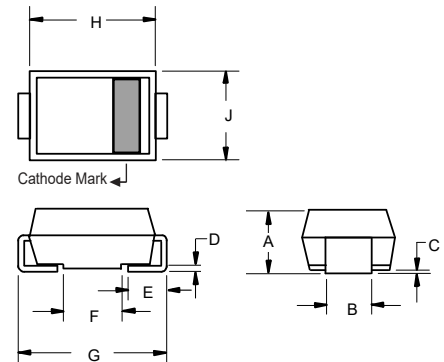
Parameter	Symbol	Rating	Conditions
Steady State Power Dissipation	$P_D$	1.5W	Note 3
Maximum Forward Voltage	$V_F$	1.5V	$I_F=200mA$

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.
3. Mounted On 5.0mm<sup>2</sup> (1oz Thick) Land Areas. Lead Temperature at  $T_L=75^\circ C$ .

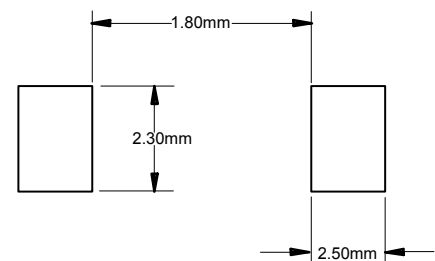
# 1.5 Watt Surface Mount Silicon Zener Diodes 5.1V to 200V

## SMB (DO-214AA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

### Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number	Zener Voltage <sup>(4)</sup>	Test Current	Maximum Dynamic Impedance	Knee Current	Knee Impedance	Maximum Reverse Current	Reverse Voltage	Marking Code
	V <sub>Z</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	I <sub>ZK</sub>	Z <sub>Zk</sub>	I <sub>R</sub>	V <sub>R</sub>	
	V	mA	Ω	mA	Ω	μA	V	
SMBJ5918B	5.1	73.5	4.0	1.0	350	5.0	2.0	918B
SMBJ5919B	5.6	66.9	2.0	1.0	250	5.0	3.0	919B
SMBJ5920B	6.2	60.5	2.0	1.0	200	5.0	4.0	920B
SMBJ5921B	6.8	55.1	2.5	1.0	200	5.0	5.2	921B
SMBJ5922B	7.5	50.0	3.0	0.5	400	5.0	6.0	922B
SMBJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	923B
SMBJ5924B	9.1	41.2	4.0	0.5	500	5.0	7.0	924B
SMBJ5925B	10	37.5	4.5	0.25	500	5.0	8.0	925B
SMBJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	926B
SMBJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	927B
SMBJ5928B	13	28.8	7.0	0.25	550	1.0	9.9	928B
SMBJ5929B	15	25.0	9.0	0.25	600	1.0	11.4	929B
SMBJ5930B	16	23.4	10.0	0.25	600	1.0	12.2	930B
SMBJ5931B	18	20.8	12.0	0.25	650	1.0	13.7	931B
SMBJ5932B	20	18.7	14.0	0.25	650	1.0	15.2	932B
SMBJ5933B	22	17.0	17.5	0.25	650	1.0	16.7	933B
SMBJ5934B	24	15.6	19.0	0.25	700	1.0	18.2	934B
SMBJ5935B	27	13.9	23.0	0.25	700	1.0	20.6	935B
SMBJ5936B	30	12.5	28.0	0.25	750	1.0	22.8	936B
SMBJ5937B	33	11.4	33.0	0.25	800	1.0	25.1	937B
SMBJ5938B	36	10.4	38.0	0.25	850	1.0	27.4	938B
SMBJ5939B	39	9.6	45.0	0.25	900	1.0	29.7	939B
SMBJ5940B	43	8.7	53.0	0.25	950	1.0	32.7	940B
SMBJ5941B	47	8.0	67.0	0.25	1000	1.0	35.8	941B
SMBJ5942B	51	7.3	70.0	0.25	1100	1.0	38.8	942B
SMBJ5943B	56	6.7	86.0	0.25	1300	1.0	42.6	943B
SMBJ5944B	62	6.0	100	0.25	1500	1.0	47.1	944B
SMBJ5945B	68	5.5	120	0.25	1700	1.0	51.2	945B
SMBJ5946B	75	5.0	140	0.25	2000	1.0	56.0	946B
SMBJ5947B	82	4.6	160	0.25	2500	1.0	62.2	947B
SMBJ5948B	91	4.1	200	0.25	3000	1.0	69.2	948B
SMBJ5949B	100	3.7	250	0.25	3100	1.0	76.0	949B
SMBJ5950B	110	3.4	300	0.25	4000	1.0	83.6	950B
SMBJ5951B	120	3.1	380	0.25	4500	1.0	91.2	951B
SMBJ5952B	130	2.9	450	0.25	5000	1.0	98.8	952B
SMBJ5953B	150	2.5	600	0.25	6000	1.0	114	953B
SMBJ5954B	160	2.3	700	0.25	6500	1.0	121.6	954B
SMBJ5955B	180	2.1	900	0.25	7000	1.0	136.8	955B
SMBJ5956B	200	1.9	1200	0.25	8000	1.0	152	956B

Note : 4. TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/-5%

**Curve Characteristics**

Fig. 1 - Power Derating Curve

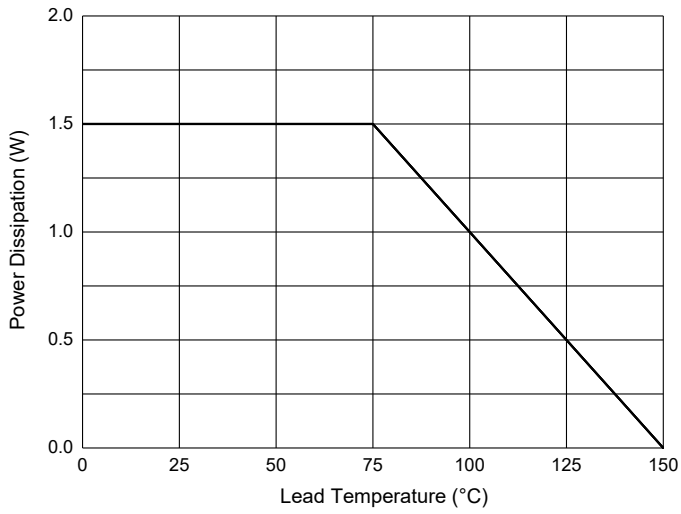


Fig. 2 - Typical Zener Breakdown Characteristics

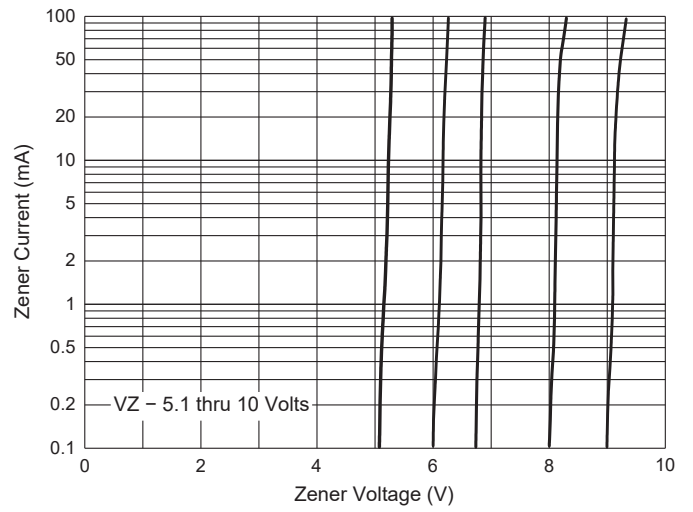
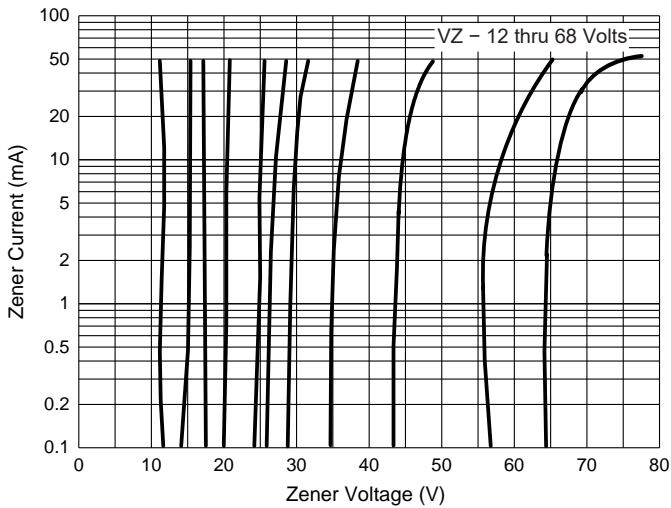


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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