



**THE DATASHEET OF
3SMBJ5937B-TP**



Features

- 5.1 Thru 200 Volt Voltage Range
- Glass Passivated Junction
- Available On Tape and Reel
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

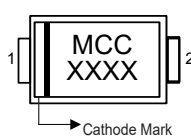
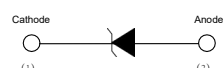
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance : 226°C/W Junction to Ambient
- Thermal Resistance : 25°C/W Junction to Lead
- Thermal Resistance : 22°C/W Junction to Case

Parameter	Symbol	Rating	Conditions
Steady State Power Dissipation	P_D	3.0W	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 5.0mm² (1oz thick) land areas. Lead temperature at $T_L=75^\circ C$

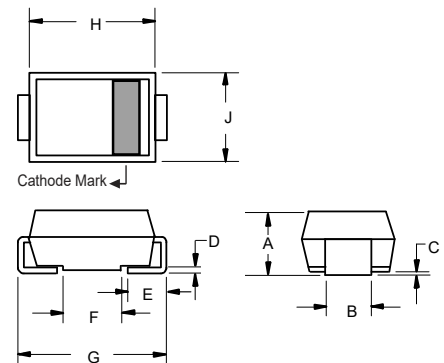
Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		

XXXX = Marking code

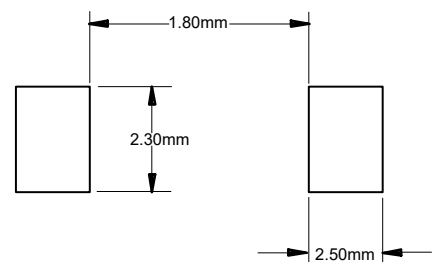
3.0 Watt Surface Mount Silicon Zener Diodes 5.1V to 200V

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 ⁽⁴⁾	Test Current	Maximum Dynamic Impedance	Knee Current	Knee Impedance	Maximum Reverse Current	Reverse Voltage	Marking Code
	V _Z	I _{ZT}	Z _{ZT} @ I _{ZT}	I _{ZK}	Z _{Zk}	I _R	V _R	
	V	mA	Ω	mA	Ω	μA	V	
3SMBJ5918B	5.1	73.5	4	1	350	5	2	H18B
3SMBJ5919B	5.6	66.9	2	1	250	5	3	H19B
3SMBJ5920B	6.2	60.5	2	1	200	5	4	H20B
3SMBJ5921B	6.8	55.1	2.5	1	200	5	5.2	H21B
3SMBJ5922B	7.5	50	3	0.5	400	5	6	H22B
3SMBJ5923B	8.2	45.7	3.5	0.5	400	5	6.5	H23B
3SMBJ5924B	9.1	41.2	4	0.5	500	5	7	H24B
3SMBJ5925B	10	37.5	4.5	0.25	500	5	8	H25B
3SMBJ5926B	11	34.1	5.5	0.25	550	1	8.4	H26B
3SMBJ5927B	12	31.2	6.5	0.25	550	1	9.1	H27B
3SMBJ5928B	13	28.8	7	0.25	550	1	9.9	H28B
3SMBJ5929B	15	25	9	0.25	600	1	11.4	H29B
3SMBJ5930B	16	23.4	10	0.25	600	1	12.2	H30B
3SMBJ5931B	18	20.8	12	0.25	650	1	13.7	H31B
3SMBJ5932B	20	18.7	14	0.25	650	1	15.2	H32B
3SMBJ5933B	22	17	17.5	0.25	650	1	16.7	H33B
3SMBJ5934B	24	15.6	19	0.25	700	1	18.2	H34B
3SMBJ5935B	27	13.9	23	0.25	700	1	20.6	H35B
3SMBJ5936B	30	12.5	28	0.25	750	1	22.8	H36B
3SMBJ5937B	33	11.4	33	0.25	800	1	25.1	H37B
3SMBJ5938B	36	10.4	38	0.25	850	1	27.4	H38B
3SMBJ5939B	39	9.6	45	0.25	900	1	29.7	H39B
3SMBJ5940B	43	8.7	53	0.25	950	1	32.7	H40B
3SMBJ5941B	47	8	67	0.25	1000	1	35.8	H41B
3SMBJ5942B	51	7.3	70	0.25	1100	1	38.8	H42B
3SMBJ5943B	56	6.7	86	0.25	1300	1	42.6	H43B
3SMBJ5944B	62	6	100	0.25	1500	1	47.1	H44B
3SMBJ5945B	68	5.5	120	0.25	1700	1	51.7	H45B
3SMBJ5946B	75	5	140	0.25	2000	1	56	H46B
3SMBJ5947B	82	4.6	160	0.25	2500	1	62.2	H47B
3SMBJ5948B	91	4.1	200	0.25	3000	1	69.2	H48B
3SMBJ5949B	100	3.7	250	0.25	3100	1	76	H49B
3SMBJ5950B	110	3.4	300	0.25	4000	1	83.6	H50B
3SMBJ5951B	120	3.1	380	0.25	4500	1	91.2	H51B
3SMBJ5952B	130	2.9	450	0.25	5000	1	98.8	H52B
3SMBJ5953B	150	2.5	600	0.25	6000	1	114	H53B
3SMBJ5954B	160	2.3	700	0.25	6500	1	121.6	H54B
3SMBJ5955B	180	2.1	900	0.25	7000	1	136.8	H55B
3SMBJ5956B	200	1.9	1200	0.25	8000	1	152	H56B

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

Curve Characteristics

Fig. 1 - Power Derating Curve

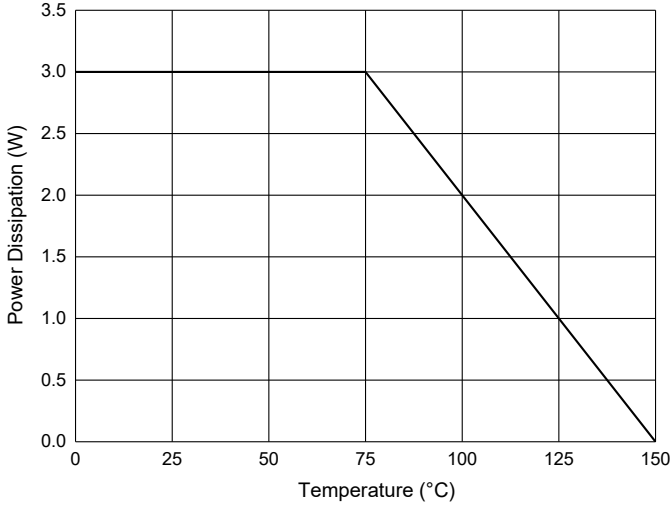


Fig. 2 - Typical Zener Breakdown Characteristics

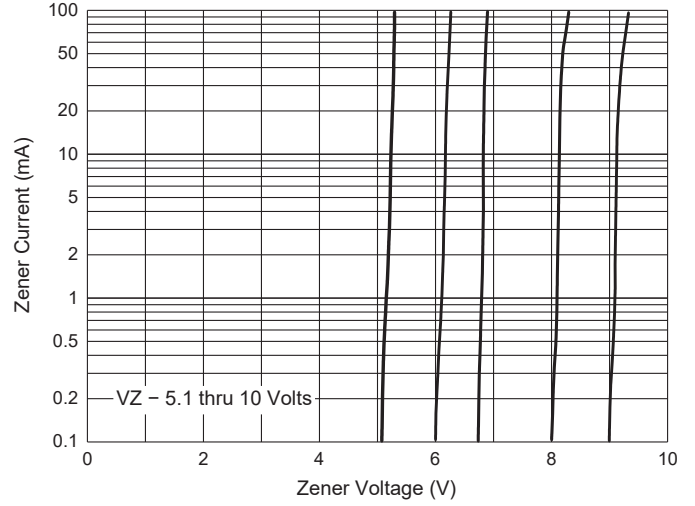


Fig. 3 - Typical Zener Breakdown Characteristics

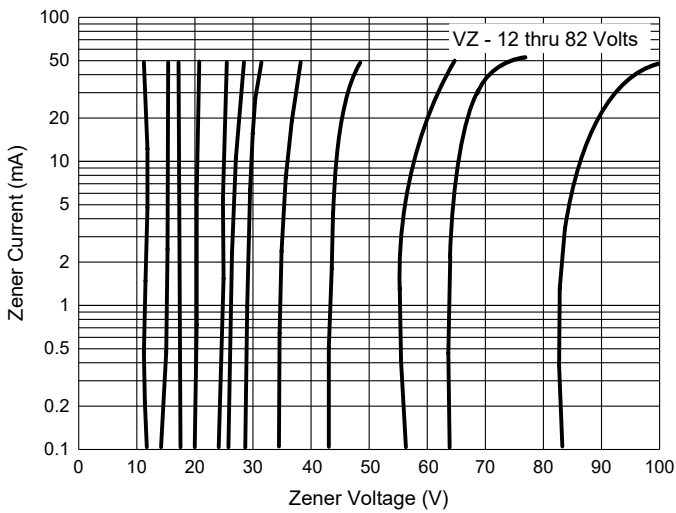


Fig. 4 - Typical Zener Breakdown Characteristics

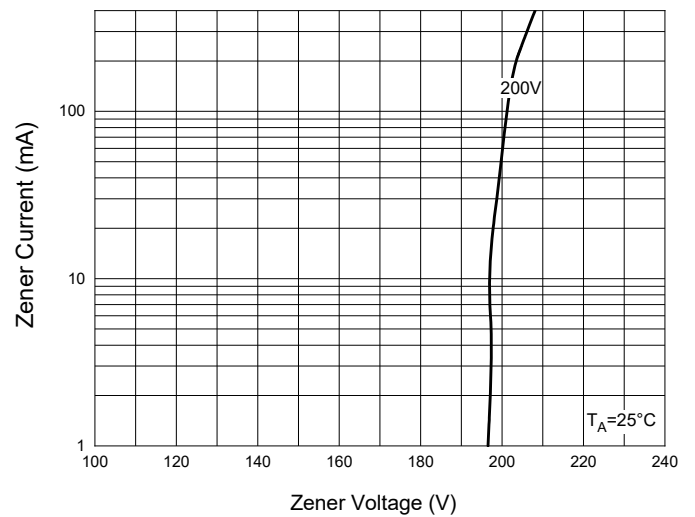
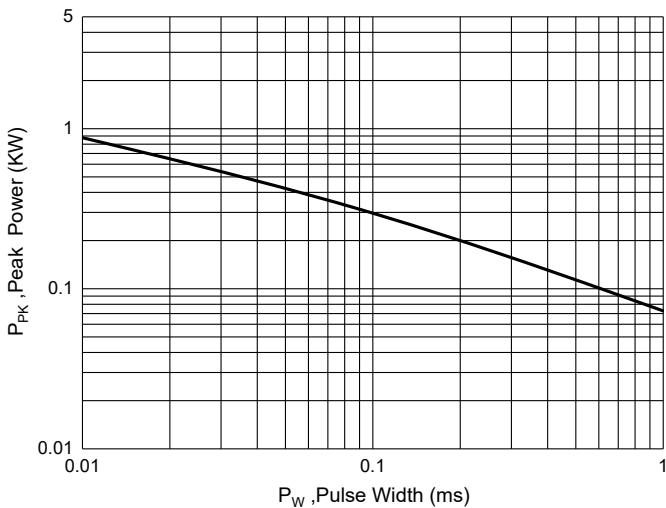


Fig. 5 - Peak Pulse Power Rating Curve



Ordering Information

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

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