



**THE DATASHEET OF
3SMBJ5920B-TP**



Features

- 4.7 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

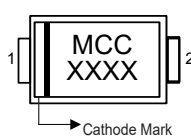
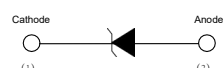
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance : 226°C/W Junction to Ambient
- Thermal Resistance : 25°C/W Junction to Lead
- Thermal Resistance : 22°C/W Junction to Case

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 $T_L=75^\circ C$

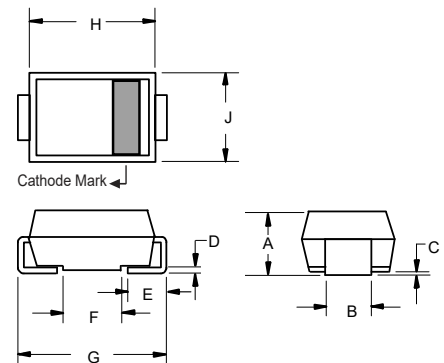
Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		

XXXX = Marking code

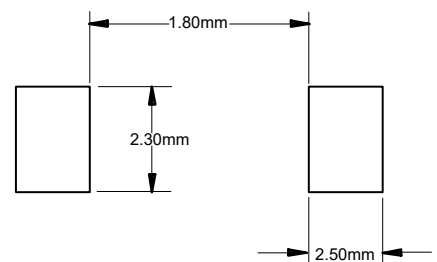
3.0 Watt Surface Mount Silicon Zener Diodes 4.7V to 200V

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

Part Number	Zener Voltage	Test Current	Maximum Dynamic Impedance Resistance			Maximum Reverse leakage Current		Marking Code
	VZ@IZT	IZT	ZZT at IZT	ZZK at IZK	IZK	IR	VR	
	Nom(V)	mA	Ω	Ω	mA	μA	V	
3SMBJ5917B	4.7	79.8	5	500	1	5	1.5	H17B
3SMBJ5918B	5.1	73.5	4	350	1	5	2	H18B
3SMBJ5919B	5.6	66.9	2	250	1	5	3	H19B
3SMBJ5920B	6.2	60.5	2	200	1	5	4	H20B
3SMBJ5921B	6.8	55.1	2.5	200	1	5	5.2	H21B
3SMBJ5922B	7.5	50	3	400	0.5	5	6	H22B
3SMBJ5923B	8.2	45.7	3.5	400	0.5	5	6.5	H23B
3SMBJ5924B	9.1	41.2	4	500	0.5	5	7	H24B
3SMBJ5925B	10	37.5	4.5	500	0.25	5	8	H25B
3SMBJ5926B	11	34.1	5.5	550	0.25	1	8.4	H26B
3SMBJ5927B	12	31.2	6.5	550	0.25	1	9.1	H27B
3SMBJ5928B	13	28.8	7	550	0.25	1	9.9	H28B
3SMBJ5929B	15	25	9	600	0.25	1	11.4	H29B
3SMBJ5930B	16	23.4	10	600	0.25	1	12.2	H30B
3SMBJ5931B	18	20.8	12	650	0.25	1	13.7	H31B
3SMBJ5932B	20	18.7	14	650	0.25	1	15.2	H32B
3SMBJ5933B	22	17	17.5	650	0.25	1	16.7	H33B
3SMBJ5934B	24	15.6	19	700	0.25	1	18.2	H34B
3SMBJ5935B	27	13.9	23	700	0.25	1	20.6	H35B
3SMBJ5936B	30	12.5	28	750	0.25	1	22.8	H36B
3SMBJ5937B	33	11.4	33	800	0.25	1	25.1	H37B
3SMBJ5938B	36	10.4	38	850	0.25	1	27.4	H38B
3SMBJ5939B	39	9.6	45	900	0.25	1	29.7	H39B
3SMBJ5940B	43	8.7	53	950	0.25	1	32.7	H40B
3SMBJ5941B	47	8	67	1000	0.25	1	35.8	H41B
3SMBJ5942B	51	7.3	70	1100	0.25	1	38.8	H42B
3SMBJ5943B	56	6.7	86	1300	0.25	1	42.6	H43B
3SMBJ5944B	62	6	100	1500	0.25	1	47.1	H44B
3SMBJ5945B	68	5.5	120	1700	0.25	1	51.7	H45B
3SMBJ5946B	75	5	140	2000	0.25	1	56	H46B
3SMBJ5947B	82	4.6	160	2500	0.25	1	62.2	H47B
3SMBJ5948B	91	4.1	200	3000	0.25	1	69.2	H48B
3SMBJ5949B	100	3.7	250	3100	0.25	1	76	H49B
3SMBJ5950B	110	3.4	300	4000	0.25	1	83.6	H50B
3SMBJ5951B	120	3.1	380	4500	0.25	1	91.2	H51B
3SMBJ5952B	130	2.9	450	5000	0.25	1	98.8	H52B
3SMBJ5953B	150	2.5	600	6000	0.25	1	114	H53B
3SMBJ5954B	160	2.3	700	6500	0.25	1	121.6	H54B
3SMBJ5955B	180	2.1	900	7000	0.25	1	136.8	H55B
3SMBJ5956B	200	1.9	1200	8000	0.25	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

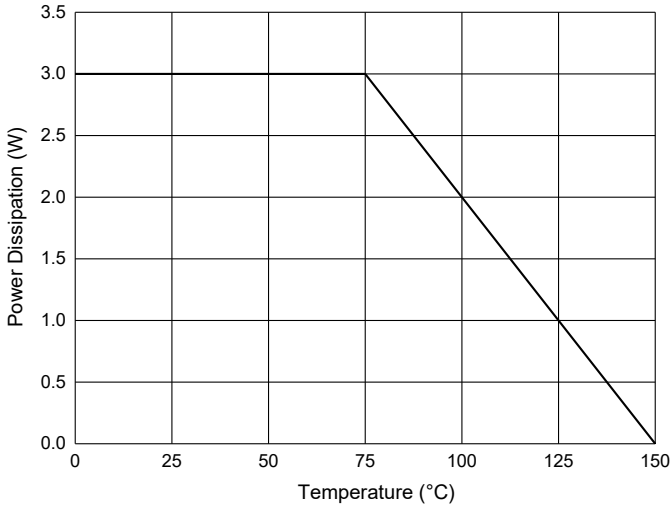


Fig. 2 - Typical Zener Breakdown Characteristics

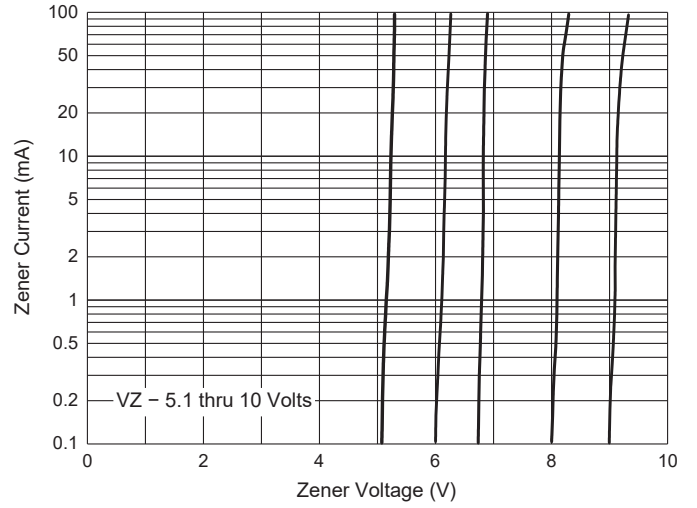


Fig. 3 - Typical Zener Breakdown Characteristics

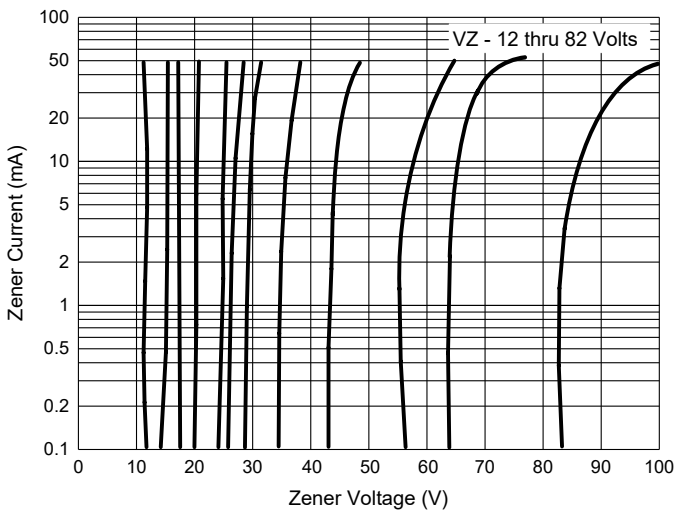


Fig. 4 - Typical Zener Breakdown Characteristics

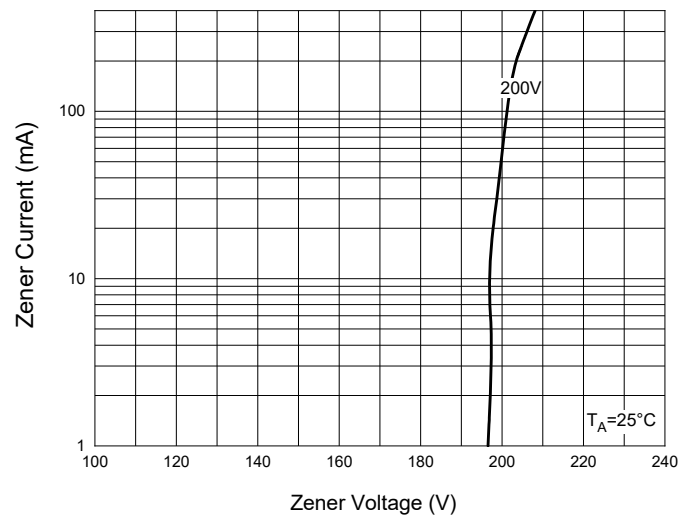
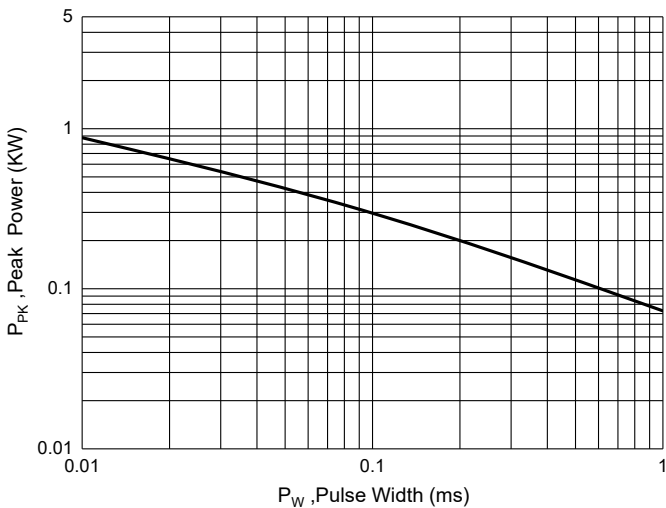


Fig. 5 - Peak Pulse Power Rating Curve



Ordering Information

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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages. **Micro Commercial Components Corp.** products are sold subject to the general terms and conditions of commercial sale, as published at <https://www.mccsemi.com/Home/TermsAndConditions>.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View 3SMBJ5920B-TP on WIN SOURCE](#)

 [Micro Commercial Co Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management