



**THE DATASHEET OF
3SMBJ5946BHE3-TP**



Features

- AEC-Q101 Qualified
- 10 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 Compliant. See Ordering Information)

Maximum Ratings

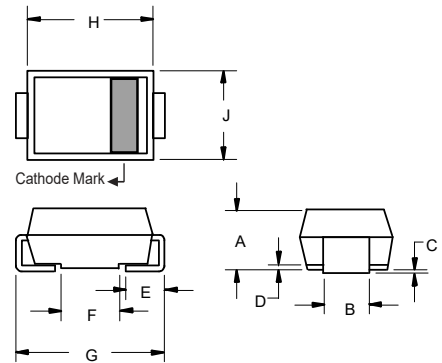
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 42°C/W Junction to Ambient

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 $T_L=75^\circ C$

3.0 Watt Surface Mount Silicon Zener Diodes 10V to 200V

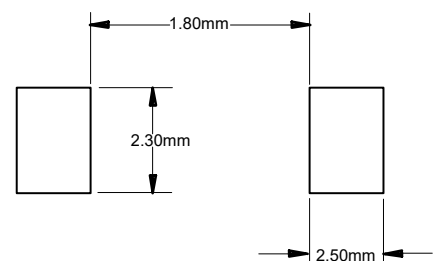
SMB (DO-214AA) (LEAD FRAME)



DIMENSIONS

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	
3SMBJ5925BHE3	10	37.5	4.5	0.25	500	5	8	H25B
3SMBJ5926BHE3	11	34.1	5.5	0.25	550	1	8.4	H26B
3SMBJ5927BHE3	12	31.2	6.5	0.25	550	1	9.1	H27B
3SMBJ5928BHE3	13	28.8	7	0.25	550	1	9.9	H28B
3SMBJ5929BHE3	15	25	9	0.25	600	1	11.4	H29B
3SMBJ5930BHE3	16	23.4	10	0.25	600	1	12.2	H30B
3SMBJ5931BHE3	18	20.8	12	0.25	650	1	13.7	H31B
3SMBJ5932BHE3	20	18.7	14	0.25	650	1	15.2	H32B
3SMBJ5933BHE3	22	17	17.5	0.25	650	1	16.7	H33B
3SMBJ5934BHE3	24	15.6	19	0.25	700	1	18.2	H34B
3SMBJ5935BHE3	27	13.9	23	0.25	700	1	20.6	H35B
3SMBJ5936BHE3	30	12.5	28	0.25	750	1	22.8	H36B
3SMBJ5937BHE3	33	11.4	33	0.25	800	1	25.1	H37B
3SMBJ5938BHE3	36	10.4	38	0.25	850	1	27.4	H38B
3SMBJ5939BHE3	39	9.6	45	0.25	900	1	29.7	H39B
3SMBJ5940BHE3	43	8.7	53	0.25	950	1	32.7	H40B
3SMBJ5941BHE3	47	8	67	0.25	1000	1	35.8	H41B
3SMBJ5942BHE3	51	7.3	70	0.25	1100	1	38.8	H42B
3SMBJ5943BHE3	56	6.7	86	0.25	1300	1	42.6	H43B
3SMBJ5944BHE3	62	6	100	0.25	1500	1	47.1	H44B
3SMBJ5945BHE3	68	5.5	120	0.25	1700	1	51.7	H45B
3SMBJ5946BHE3	75	5	140	0.25	2000	1	56	H46B
3SMBJ5947BHE3	82	4.6	160	0.25	2500	1	62.2	H47B
3SMBJ5948BHE3	91	4.1	200	0.25	3000	1	69.2	H48B
3SMBJ5949BHE3	100	3.7	250	0.25	3100	1	76	H49B
3SMBJ5950BHE3	110	3.4	300	0.25	4000	1	83.6	H50B
3SMBJ5951BHE3	120	3.1	380	0.25	4500	1	91.2	H51B
3SMBJ5952BHE3	130	2.9	450	0.25	5000	1	98.8	H52B
3SMBJ5953BHE3	150	2.5	600	0.25	6000	1	114	H53B
3SMBJ5954BHE3	160	2.3	700	0.25	6500	1	121.6	H54B
3SMBJ5955BHE3	180	2.1	900	0.25	7000	1	136.8	H55B
3SMBJ5956BHE3	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

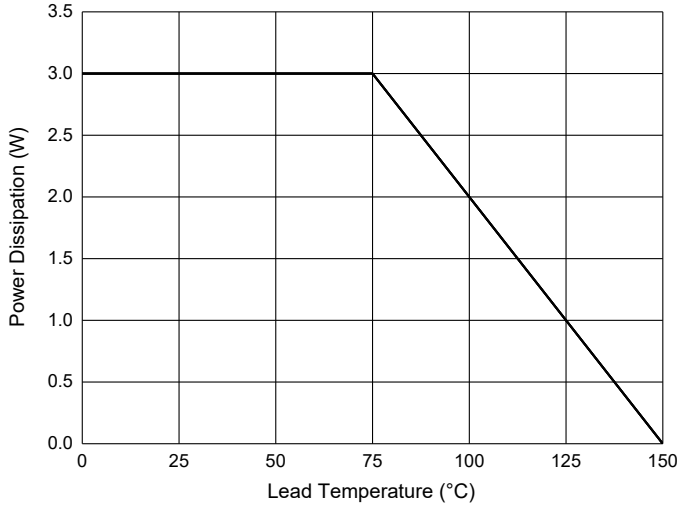
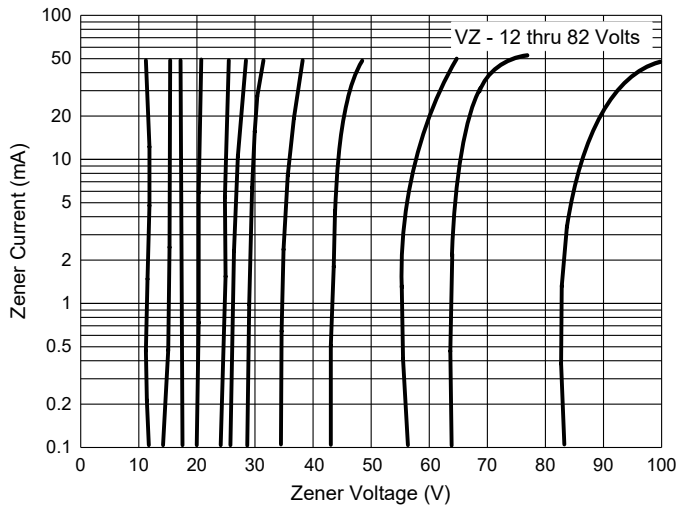


Fig. 2 - Typical Zener Breakdown Characteristics



Fig. 3 - Typical Zener Breakdown Characteristics



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 3SMBJ5946BHE3-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