



**THE DATASHEET OF  
3SMBJ5947BHE3-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

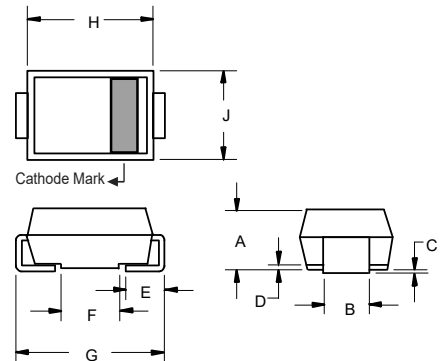
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 42°C/W Junction to Ambient

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 5.0mm<sup>2</sup> (1oz thick) land areas. Lead temperature at  $T_L=75^\circ C$

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

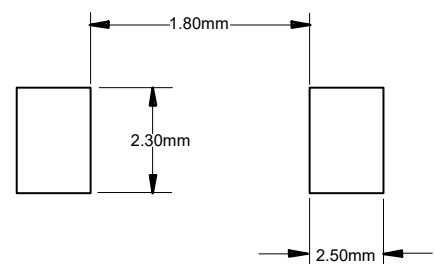
### SMB (DO-214AA) (LEAD FRAME)



#### 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 <sup>(4)</sup>	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	$\Omega$	mA	$\Omega$	$\mu A$	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

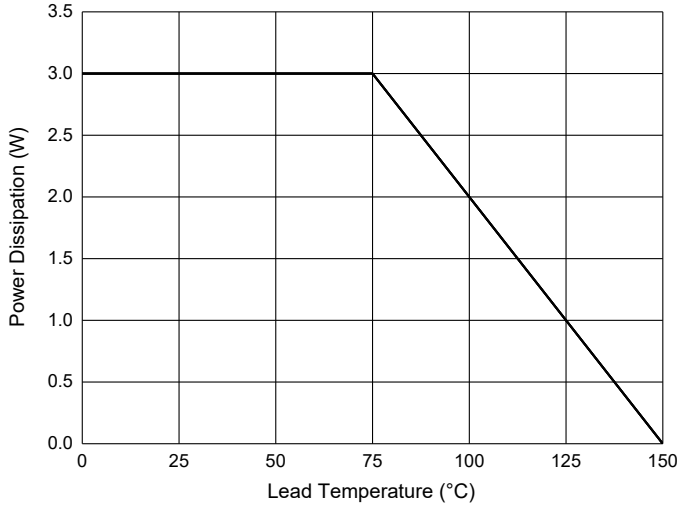
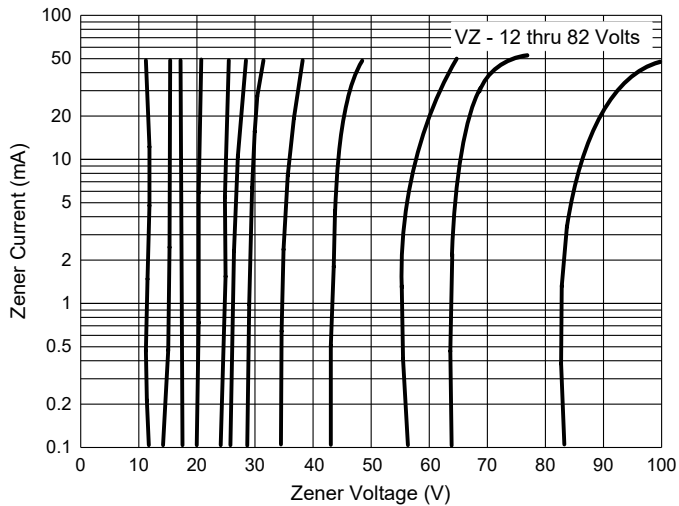


Fig. 2 - Typical Zener Breakdown Characteristics



Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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