Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- High Surge Current Capability
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Available on Tape and Reel (see E1A std RS-481)
- Low Profile Package for Surface Mountiong(Flat Handling Surface for Accurate Placement)
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)

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

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 15°C/W Junction to Lead
- Thermal Resistance: 90°C/W Junction to Ambient(Note3)

Parameter	Symbol	Rating	Conditions
Steady State Power Dissipation	$P_{(AV)}$	5.0W	Note 4
Maximum Forward Voltage	V_F	1.2V	I_F=1.0mA

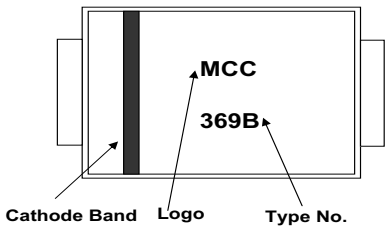
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

3. Ambient Temperature at 15°C = T_A at Mounting Plane. Derate Linearly Above 15°C to Zero Power at 150°C

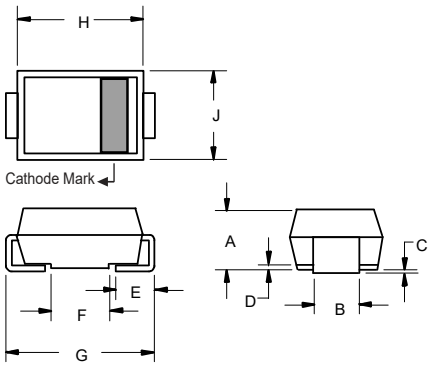
4. Lead Temperature at 75°C = T_L at Mounting Plane. Derate Linearly Above 75°C to Zero Power at 150°C

Device Marking:



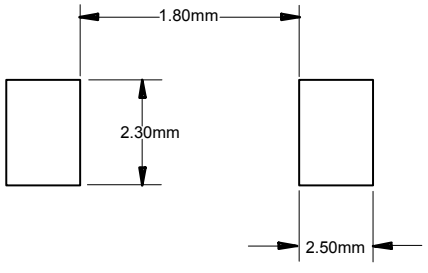
For Example: 339B for SMBJ5339B
369B for SMBJ5369B

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	

Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Regulator Voltage	Test Current	Maximum Dynamic Impedance	Maximum Reverse Current	Test Voltage	Maximum Regulator Current	Maximum Dynamic Knee Impedance	Maximum Surge Current	Maximum Voltage Regulation
	V_Z	I_Z	Z_{ZT}	I_R	V_R	I_{ZM}	Z_{ZK} @1.0mA	I_{ZSM}	
	V	mA	Ω	μA	V	mA	Ω	A	V
SMBJ5347BHE3	10	125	2	5	7.6	475	125	8.6	0.22
SMBJ5348BHE3	11	125	2.5	5	8.4	430	125	8	0.25
SMBJ5349BHE3	12	100	2.5	2	9.1	395	125	7.5	0.25
SMBJ5350BHE3	13	100	2.5	1	9.9	365	100	7	0.25
SMBJ5351BHE3	14	100	2.5	1	10.6	340	75	6.7	0.25
SMBJ5352BHE3	15	75	2.5	1	11.5	315	75	6.3	0.25
SMBJ5353BHE3	16	75	2.5	1	12.2	295	75	6	0.3
SMBJ5354BHE3	17	70	2.5	0.5	12.9	280	75	5.8	0.35
SMBJ5355BHE3	18	65	2.5	0.5	13.7	264	75	5.5	0.4
SMBJ5356BHE3	19	65	3	0.5	14.4	250	75	5.3	0.4
SMBJ5357BHE3	20	65	3	0.5	15.2	237	75	5.1	0.4
SMBJ5358BHE3	22	50	3.5	0.5	16.7	216	75	4.7	0.45
SMBJ5359BHE3	24	50	3.5	0.5	18.2	198	100	4.4	0.55
SMBJ5360BHE3	25	50	4	0.5	19	190	110	4.3	0.55
SMBJ5361BHE3	27	50	5	0.5	20.6	176	120	4.1	0.6
SMBJ5362BHE3	28	50	6	0.5	21.2	170	130	3.9	0.6
SMBJ5363BHE3	30	40	8	0.5	22.8	158	140	3.7	0.6
SMBJ5364BHE3	33	40	10	0.5	25.1	144	150	3.5	0.6
SMBJ5365BHE3	36	30	11	0.5	27.4	132	160	3.3	0.65
SMBJ5366BHE3	39	30	14	0.5	29.7	122	170	3.1	0.65
SMBJ5367BHE3	43	30	20	0.5	32.7	110	190	2.8	0.7
SMBJ5368BHE3	47	25	25	0.5	35.8	100	210	2.7	0.8
SMBJ5369BHE3	51	25	27	0.5	38.8	93	230	2.5	0.9
SMBJ5370BHE3	56	20	35	0.5	42.6	86	280	2.3	1
SMBJ5371BHE3	60	20	40	0.5	45.5	79	350	2.2	1.2
SMBJ5372BHE3	62	20	42	0.5	47.1	76	400	2.1	1.35
SMBJ5373BHE3	68	20	44	0.5	51.7	70	500	2	1.5
SMBJ5374BHE3	75	20	45	0.5	56	63	620	1.9	1.6
SMBJ5375BHE3	82	15	65	0.5	62.2	58	720	1.8	1.8
SMBJ5376BHE3	87	15	75	0.5	66	54.5	760	1.7	2
SMBJ5377BHE3	91	15	75	0.5	69.2	52.5	760	1.6	2.2
SMBJ5378BHE3	100	12	90	0.5	76	47.5	800	1.5	2.3
SMBJ5379BHE3	110	12	125	0.5	83.6	43	1000	1.4	2.5
SMBJ5380BHE3	120	10	170	0.5	91.2	39.5	1150	1.3	2.5
SMBJ5381BHE3	130	10	190	0.5	98.8	36.6	1250	1.2	2.5
SMBJ5382BHE3	140	8.0	230	0.5	106	34	1500	1.2	2.5
SMBJ5383BHE3	150	8.0	330	0.5	114	31.6	1500	1.1	3
SMBJ5384BHE3	160	8.0	350	0.5	122	29.4	1650	1.1	3
SMBJ5385BHE3	170	8.0	380	0.5	129	28	1750	1.0	3
SMBJ5386BHE3	180	5.0	430	0.5	137	26.4	1750	1.0	4
SMBJ5387BHE3	190	5.0	450	0.5	144	25	1850	0.9	5
SMBJ5388BHE3	200	5.0	480	0.5	152	23.6	1850	0.9	5

Remarks:

1. Devices Listed Have a ± 5% Tolerance on Nominal V_Z. Suffix C Denotes a +2%
2. Nominal Zener Voltage (V_Z) is Tested With a 40 +/-10 Milliseconds Pulse Current at 25°C to Avoid Self-heat Affection.
3. The Zener Impedance (Z_{ZT} or Z_{ZK}) is Derived from The 60Hz AC Voltage, Which Results When an AC Current Having a rms value Equal to 10% of the DC Zener Current (I_{ZT} or I_{ZK}) Respectively.
4. The Maximum Reverse(Leakage) Current is Specified for Devices With ± 20% and ± 10% Voltage Tolerances on Nominal V_Z in Another Column.
5. The Maximum Zener Current(I_{ZM}) Shown is for ± 5% Tolerance Devices. I_{ZM} for ± 10% and ± 20% Devices Can be Calculated Using the Formula:

$$I_{ZM} = \frac{P}{V_{ZM}}$$

Where "V_{ZM}" is V_Z at The High End of The Voltage Tolerance Specified and "P" is The Rated Power of The Device.

6. The Surge Current (I_{ZM}) is Specified As The Maximum Peak of a Nonrecurring Sine Wave of 8.3 Milliseconds Duration.
7. Voltage Regulatio (ΔV_Z) is The Difference Between The Voltage Measured at 10% and 50% (I_{ZM}).

Curve Characteristics

Fig. 1 - Power Derating Curve

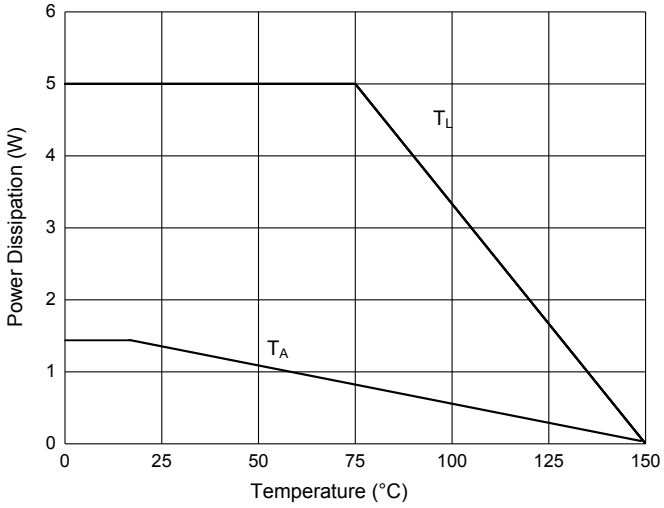


Fig. 2 - Typical Zener Breakdown Characteristics

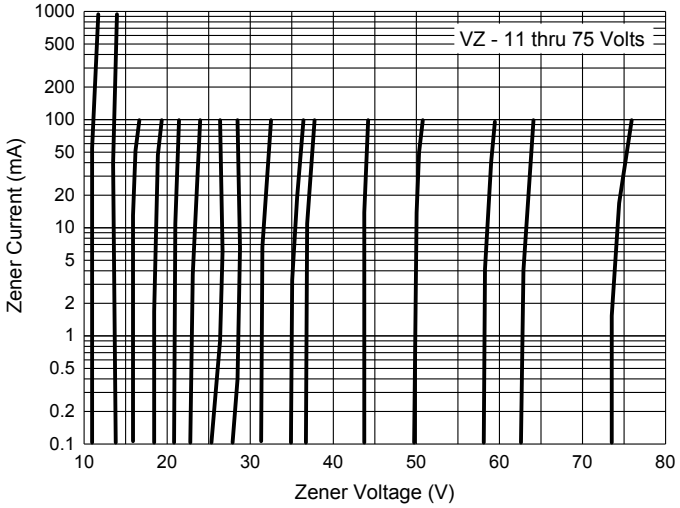
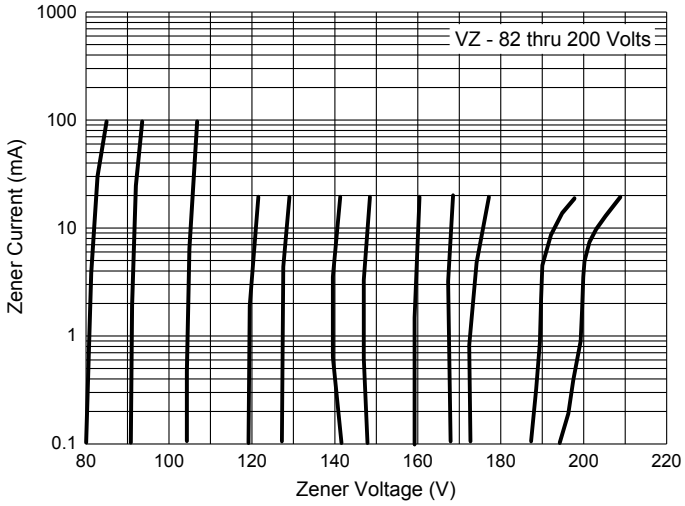


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

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

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