

## Features

- Glass Passivated Junction
- Excellent Clamping Capability
- 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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

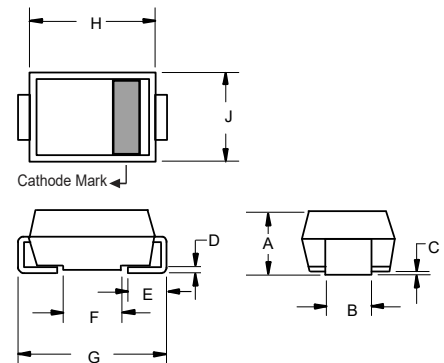
Parameter	Symbol	Rating	Conditions
Peak Forward Surge Current	$I_{FSM}$	15A	Note 3
Power Dissipation	$P_D$	2.0W	Note 4
Power Derating		24mW/°C	Above 75°C
Maximum Forward Voltage	$V_F$	1.5V	$I_F=200mA$

### 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. Measured on 8.3ms, Single Half Sine-wave or Equivalent Square Wave, Duty Cycle = 4 Pulses Per Minute Maximum.
4. Mounted on 5.0mm<sup>2</sup> (0.013mm thick) land areas.

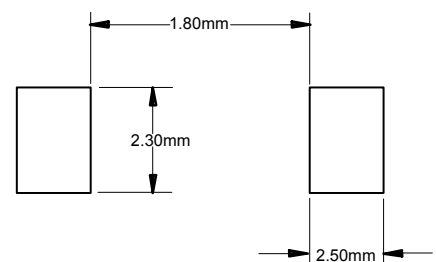
## 2.0 Watt Surface Mount Zener Diodes 5.1 to 75 Volts

### 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 (Note 5)	Nominal Zener Voltage (Note 6)	Test current	Maximum Zener Impedance (Note 7)			Leakage Current		Maximum Zener Current	Surge Current @ $T_A=25^\circ\text{C}$	Marking Code
	$V_Z @ I_{ZT}$		$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$			
	V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}(\text{Max.})$	V	mA	A	
SMB2EZ5.1D5	5.1	98.0	3.5	600	1	5	1	356	3.5	2E5.1
SMB2EZ5.6D5	5.6	89.5	2.5	500	1	5	2	324	3.3	2E5.6
SMB2EZ6.2D5	6.2	80.5	1.5	700	1	5	3	292	3.1	2E6.2
SMB2EZ6.8D5	6.8	73.5	2	700	1	5	4	266	2.9	2E6.8
SMB2EZ7.5D5	7.5	66.5	2	700	0.5	5	5	242	2.66	2E7.5
SMB2EZ8.2D5	8.2	61	2.3	700	0.5	5	6	220	2.44	2E8.2
SMB2EZ9.1D5	9.1	55	2.5	700	0.5	3	7	200	2.2	2E9.1
SMB2EZ10D5	10	50	3.5	700	0.25	3	7.6	182	2.0	2E10
SMB2EZ11D5	11	45.5	4	700	0.25	1	8.4	166	1.82	2E11
SMB2EZ12D5	12	41.5	4.5	700	0.25	1	9.1	152	1.66	2E12
SMB2EZ13D5	13	38.5	5	700	0.25	0.5	9.9	138	1.54	2E13
SMB2EZ14D5	14	35.7	5.5	700	0.25	0.5	10.6	130	1.43	2E14
SMB2EZ15D5	15	33.4	7	700	0.25	0.5	11.4	122	1.33	2E15
SMB2EZ16D5	16	31.2	8	700	0.25	0.5	12.2	114	1.25	2E16
SMB2EZ17D5	17	29.4	9	750	0.25	0.5	13	107	1.18	2E17
SMB2EZ18D5	18	27.8	10	750	0.25	0.5	13.7	100	1.11	2E18
SMB2EZ19D5	19	26.3	11	750	0.25	0.5	14.4	95	1.05	2E19
SMB2EZ20D5	20	25	11	750	0.25	0.5	15.2	90	1	2E20
SMB2EZ22D5	22	22.8	12	750	0.25	0.5	16.7	82	0.91	2E22
SMB2EZ24D5	24	20.8	13	750	0.25	0.5	18.2	76	0.83	2E24
SMB2EZ27D5	27	18.5	18	750	0.25	0.5	20.6	68	0.74	2E27
SMB2EZ30D5	30	16.6	20	1000	0.25	0.5	22.5	60	0.67	2E30
SMB2EZ33D5	33	15.1	23	1000	0.25	0.5	25.1	55	0.61	2E33
SMB2EZ36D5	36	13.9	25	1000	0.25	0.5	27.4	50	0.56	2E36
SMB2EZ39D5	39	12.8	30	1000	0.25	0.5	29.7	47	0.51	2E39
SMB2EZ43D5	43	11.6	35	1500	0.25	0.5	32.7	43	0.45	2E43
SMB2EZ47D5	47	10.6	40	1500	0.25	0.5	35.8	39	0.42	2E47
SMB2EZ51D5	51	9.8	48	1500	0.25	0.5	38.8	36	0.39	2E51
SMB2EZ56D5	56	9	55	2000	0.25	0.5	42.6	32	0.36	2E56
SMB2EZ62D5	62	8.1	60	2000	0.25	0.5	47.1	29	0.32	2E62
SMB2EZ68D5	68	7.4	75	2000	0.25	0.5	51.7	27	0.29	2E68
SMB2EZ75D5	75	6.7	90	2000	0.25	0.5	56	24	0.27	2E75

- Notes:**
- TOLERANCES - Suffix Indicates 5% Tolerance Any Other Tolerance Will be Considered as a Special Device.
  - ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT - - Guarantees The Zener Voltage When Measured at 40 ms from The Diode Body, and an Ambient Temperature of 25 °C
  - ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION - The Zener Impedance is Derived from The 60 Cycle AC Voltage, Which Results When an AC Current Having an rms Value Equal to 10% of the DC Zener Current ( $I_{ZT}$  or  $I_{ZK}$ ) is Superimposed on ( $I_{ZT}$  or  $I_{ZK}$ ).

**Curve Characteristics**

Fig. 1 - Power Derating Curve

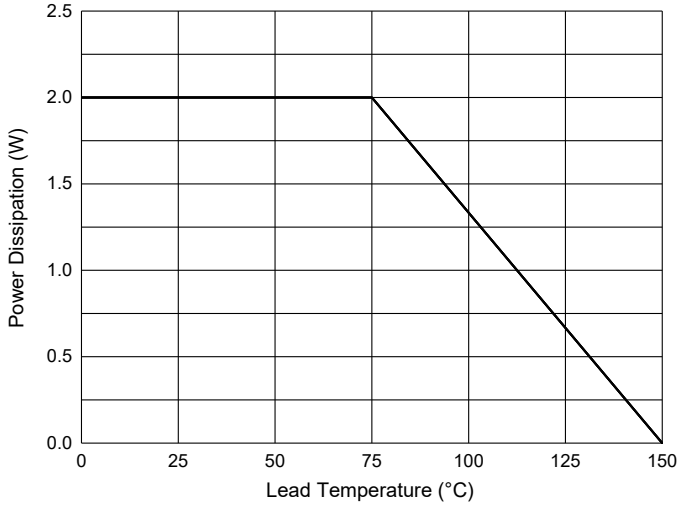


Fig. 2 - Typical Zener Breakdown Characteristics

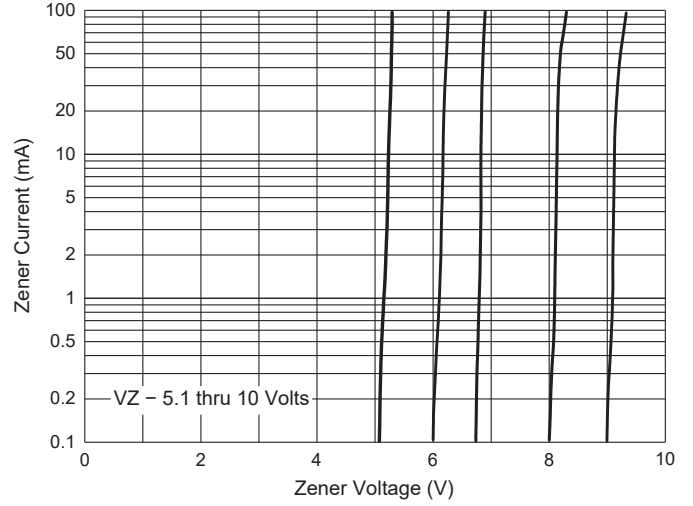
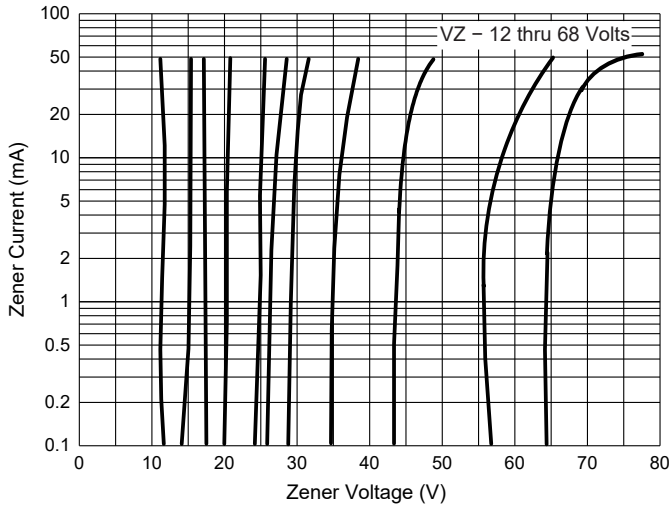


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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