

## Features

- AEC-Q101 Qualified
- High Surge Capability
- Ideally Suited for Automatic Assembly
- Standard  $V_z$  Tolerance is +/- 5%
- 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
- Junction to Terminal: 30°C/W Junction to Terminal
- Thermal Resistance: 100°C/W Junction to Ambient

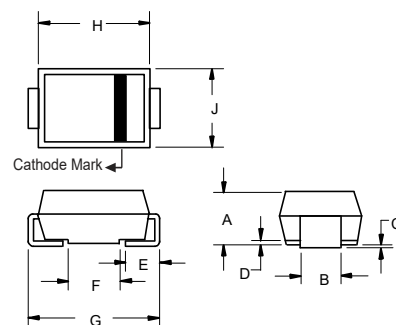
Parameter	Symbol	Rating	Conditions
Zener Current	$I_{ZM}$	Pd/Vz mA	
Power Dissipation	$P_{tot}$	1.0W	$T_A=50^\circ\text{C}$

### 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.

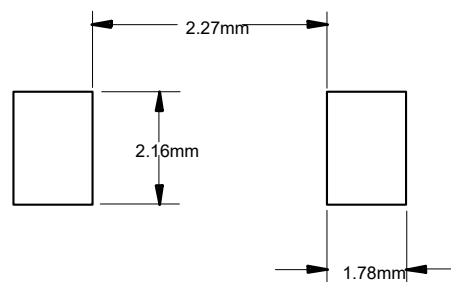
# 1 Watt Zener Diode 10V - 39V Volts

## SMA (DO-214AC) LEAD FRAME



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.096	2.00	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.181	4.00	4.60	
J	0.090	0.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C Unless Otherwise Specified,  $V_F=1.2$  V max ,  $I_F=200$  mA for all types**

MCC Part Number	Zener Voltage			Maximum Zener Impedance		Maximum Zener Impedance		Reverse Current		Maximum Zener Current (Note 3)	Marking Code
	$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT}$	$I_{ZK}$	$Z_{ZK}$	$I_R(\text{Max})$	$V_R$	$I_{ZM}$	
	Min.(V)	Nom(V)	Max.(V)	mA	$\Omega$	mA	$\Omega$	$\mu\text{A}$	V	mA	
SMAZ10HE3	9.50	10.00	10.50	50	4.0	1.0	200	1.0	7.6	100	Z10
SMAZ12HE3	11.40	12.00	12.60	50	7.0	1.0	150	1.0	9.1	83	Z12
SMAZ15HE3	14.25	15.00	15.75	50	10.0	1.0	150	1.0	11.4	67	Z15
SMAZ16HE3	15.20	16.00	16.80	25	15.0	1.0	150	0.5	12.2	63	Z16
SMAZ18HE3	17.10	18.00	18.90	25	15.0	1.0	150	0.5	13.7	56	Z18
SMAZ20HE3	19.00	20.00	21.00	25	15.0	1.0	180	0.5	15.2	50	Z20
SMAZ22HE3	20.90	22.00	23.10	25	15.0	1.0	180	0.5	16.7	45	Z22
SMAZ24HE3	22.80	24.00	25.20	25	15.0	1.0	180	0.5	18.2	42	Z24
SMAZ27HE3	25.65	27.00	28.35	25	15.0	1.0	200	0.5	20.5	37	Z27
SMAZ30HE3	28.50	30.00	31.50	25	15.0	1.0	250	0.5	22.8	33	Z30
SMAZ33HE3	31.35	33.00	34.65	25	15.0	1.0	300	0.5	25.1	30	Z33
SMAZ36HE3	34.20	36.00	37.80	10	40.0	1.0	350	0.5	27.4	28	Z36
SMAZ39HE3	37.05	39.00	40.95	10	40.0	1.0	450	0.5	29.6	26	Z39

Notes: 3.Device mounted on FR-4 PCB, 1 inch x0.85 inch x 0.062 inch

**Curve Characteristics**

Fig. 1 - Power Derating Curve

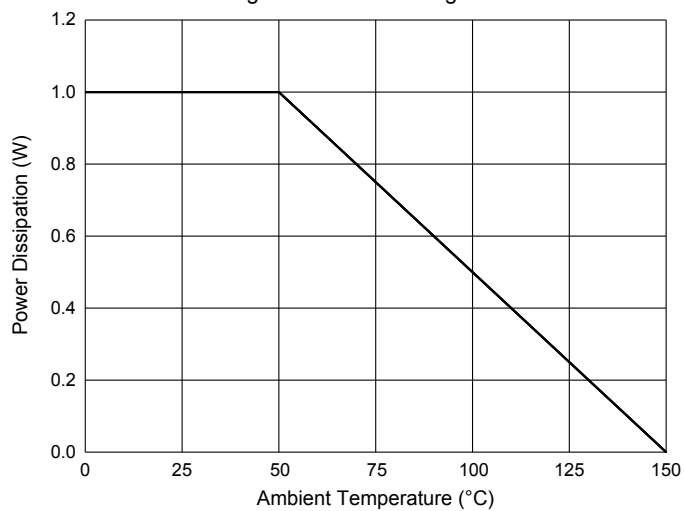
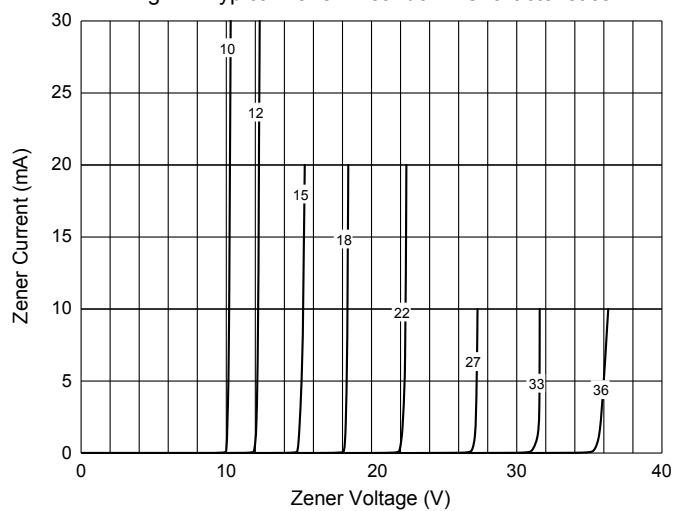


Fig. 2 - Typical Zener Breakdown Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:7.5Kpcs/Reel

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