



# THE DATASHEET OF SMAZ18-TP



**Features**

- 1.0W Power Dissipation
- 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 Compliant. See Ordering Information)

**Maximum Ratings**

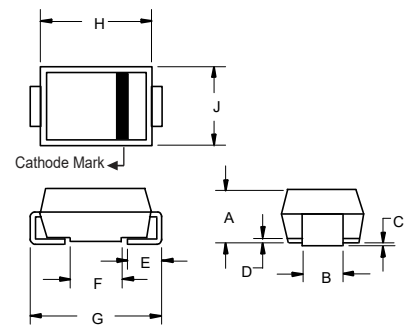
- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Junction to Terminal: 30°C/W Junction to Terminal
- Thermal Resistance: 100°C/W Junction to Ambient

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.

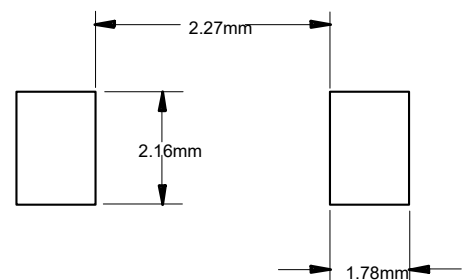
**1 Watt  
Zener Diode  
5.1V - 39V Volts**

**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	
SMAZ5V1	4.84	5.10	5.40	100	5.0	1.0	500	2.5	1.0	196	Z5V1
SMAZ5V6	5.32	5.60	5.88	100	2.0	2.0	250	5.0	2.0	179	Z5V6
SMAZ6V2	5.89	6.20	6.51	100	2.0	2.0	200	5.0	3.0	161	Z6V2
SMAZ6V8	6.46	6.80	7.14	100	2.0	1.0	200	5.0	4.0	147	Z6V8
SMAZ7V5	7.13	7.50	7.88	100	2.0	1.0	450	5.0	5.0	133	Z7V5
SMAZ8V2	7.79	8.20	8.61	100	2.0	1.0	200	5.0	6.0	122	Z8V2
SMAZ9V1	8.65	9.10	9.56	50	4.0	1.0	200	5.0	7.0	110	Z9V1
SMAZ10	9.50	10.00	10.50	50	4.0	1.0	200	1.0	7.6	100	Z10
SMAZ12	11.40	12.00	12.60	50	7.0	1.0	150	1.0	9.1	83	Z12
SMAZ15	14.25	15.00	15.75	50	10.0	1.0	150	1.0	11.4	67	Z15
SMAZ16	15.20	16.00	16.80	25	15.0	1.0	150	0.5	12.2	63	Z16
SMAZ18	17.10	18.00	18.90	25	15.0	1.0	150	0.5	13.7	56	Z18
SMAZ20	19.00	20.00	21.00	25	15.0	1.0	180	0.5	15.2	50	Z20
SMAZ22	20.90	22.00	23.10	25	15.0	1.0	180	0.5	16.7	45	Z22
SMAZ24	22.80	24.00	25.20	25	15.0	1.0	180	0.5	18.2	42	Z24
SMAZ27	25.65	27.00	28.35	25	15.0	1.0	200	0.5	20.5	37	Z27
SMAZ30	28.50	30.00	31.50	25	15.0	1.0	250	0.5	22.8	33	Z30
SMAZ33	31.35	33.00	34.65	25	15.0	1.0	300	0.5	25.1	30	Z33
SMAZ36	34.20	36.00	37.80	10	40.0	1.0	350	0.5	27.4	28	Z36
SMAZ39	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

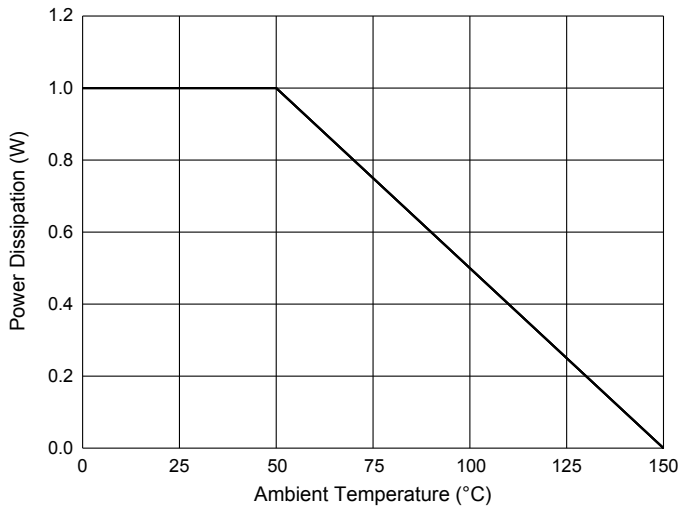


Fig. 2 - Typical Zener Breakdown Characteristics

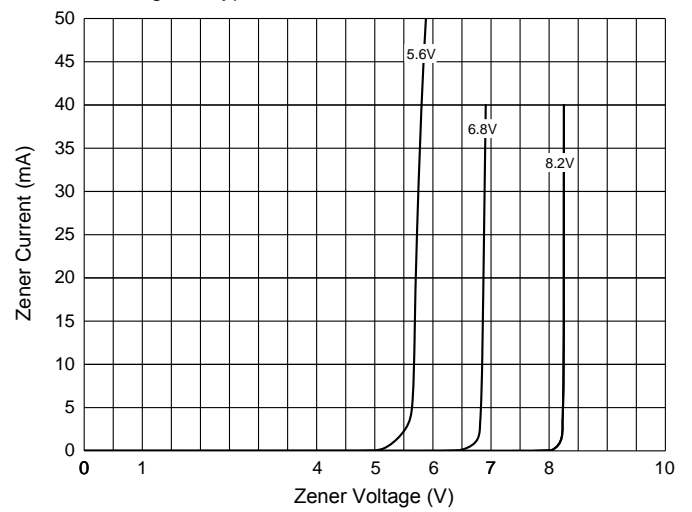
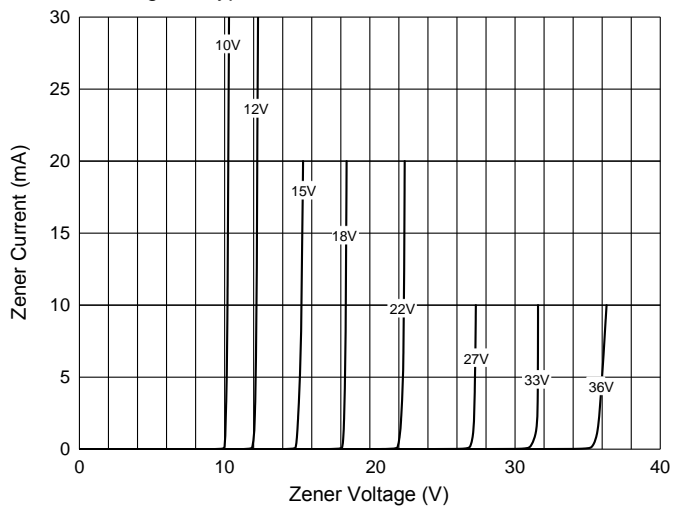


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:7.5Kpcs/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 SMAZ18-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