



# THE DATASHEET OF SMAJ5923B-TP



## Features

- $V_Z$  – Tolerance:  $\pm 5\%$
- For Surface Mount Applications
- 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:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $50^{\circ}\text{C/W}$  Junction to Lead(Note 3)
- Thermal Resistance :  $83^{\circ}\text{C/W}$  Junction to Ambient(Note 3)

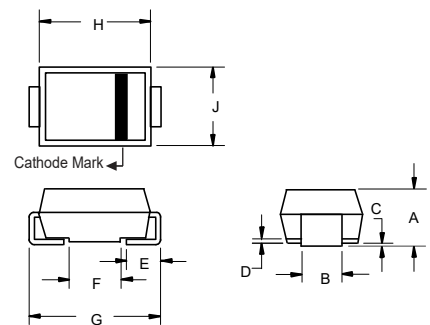
Parameter	Symbol	Rating	Conditions
Power Dissipation	$P_D$	1.5W	$T_L \leq 75^{\circ}\text{C}$
Maximum Forward Voltage	$V_F$	1.5V	$I_F = 200\text{mA}$

### Note:

1. Halogen free “Green” products are defined as those which contain  $<900\text{ppm}$  bromine,  $<900\text{ppm}$  chlorine ( $<1500\text{ppm}$  total Br + Cl) and  $<1000\text{ppm}$  antimony compounds.
2. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.
3. Mounted on PCB with recommended pad layout.

# 1.5 Watt Zener Diode 5.1 to 200 Volts

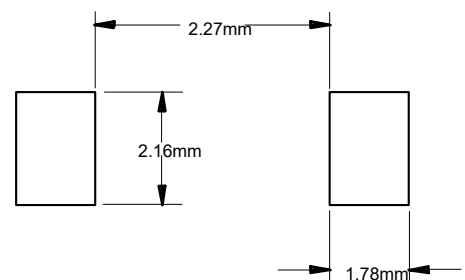
## SMA (DO-214AC) LEAD FRAME



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	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	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number	Zener Voltage (3)	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	
SMAJ5918B	5.1	73.5	4	1	350	5.0	2	18B
SMAJ5919B	5.6	66.9	2	1	250	5.0	3	19B
SMAJ5920B	6.2	60.5	2	1	200	5.0	4	20B
SMAJ5921B	6.8	55.1	2.5	1	200	5.0	5.2	21B
SMAJ5922B	7.5	50	3	0.5	400	5.0	6	22B
SMAJ5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	23B
SMAJ5924B	9.1	41.2	4	0.25	500	5.0	7	24B
SMAJ5925B	10	37.5	4.5	0.25	500	5.0	8	25B
SMAJ5926B	11	34.1	5.5	0.25	550	1.0	8.4	26B
SMAJ5927B	12	31.2	6.5	0.25	550	1.0	9.1	27B
SMAJ5928B	13	28.8	7	0.25	550	0.5	9.9	28B
SMAJ5929B	15	25	9	0.25	600	0.5	11.4	29B
SMAJ5930B	16	23.4	10	0.25	600	0.5	12.2	30B
SMAJ5931B	18	20.8	12	0.25	650	0.5	13.7	31B
SMAJ5932B	20	18.7	14	0.25	650	0.5	15.2	32B
SMAJ5933B	22	17	17.5	0.25	650	0.5	16.7	33B
SMAJ5934B	24	15.6	19	0.25	700	0.5	18.2	34B
SMAJ5935B	27	13.9	23	0.25	700	0.5	20.6	35B
SMAJ5936B	30	12.5	28	0.25	750	0.5	22.8	36B
SMAJ5937B	33	11.4	33	0.25	800	0.5	25.1	37B
SMAJ5938B	36	10.4	38	0.25	850	0.5	27.4	38B
SMAJ5939B	39	9.6	45	0.25	900	0.5	29.7	39B
SMAJ5940B	43	8.7	53	0.25	950	0.5	32.7	40B
SMAJ5941B	47	8	67	0.25	1000	0.5	35.8	41B
SMAJ5942B	51	7.3	70	0.25	1100	0.5	38.8	42B
SMAJ5943B	56	6.7	86	0.25	1300	0.5	42.6	43B
SMAJ5944B	62	6	100	0.25	1500	0.5	47.1	44B
SMAJ5945B	68	5.5	120	0.25	1700	0.5	51.7	45B
SMAJ5946B	75	5	140	0.25	2000	0.5	56	46B
SMAJ5947B	82	4.6	160	0.25	2500	0.5	62.2	47B
SMAJ5948B	91	4.1	200	0.25	3000	0.5	69.2	48B
SMAJ5949B	100	3.7	250	0.25	3100	0.5	76	49B
SMAJ5950B	110	3.4	300	0.25	4000	0.5	83.6	50B
SMAJ5951B	120	3.1	380	0.25	4500	0.5	91.2	51B
SMAJ5952B	130	2.9	450	0.25	5000	0.5	98.8	52B
SMAJ5953B	150	2.5	600	0.25	6000	0.5	114	53B
SMAJ5954B	160	2.3	700	0.25	6500	0.5	121.6	54B
SMAJ5955B	180	2.1	900	0.25	7000	0.5	136.8	55B
SMAJ5956B	200	1.9	1200	0.25	8000	0.5	152	56B

Note:4. Based on DC-measurement at Thermal Equilibrium While Maintaining The Lead Temperature( $T_L$ ) at 30°C , 9.5mm(3/8) from The Diode Body

## Curve Characteristics

Fig. 1 - Power Derating Curve

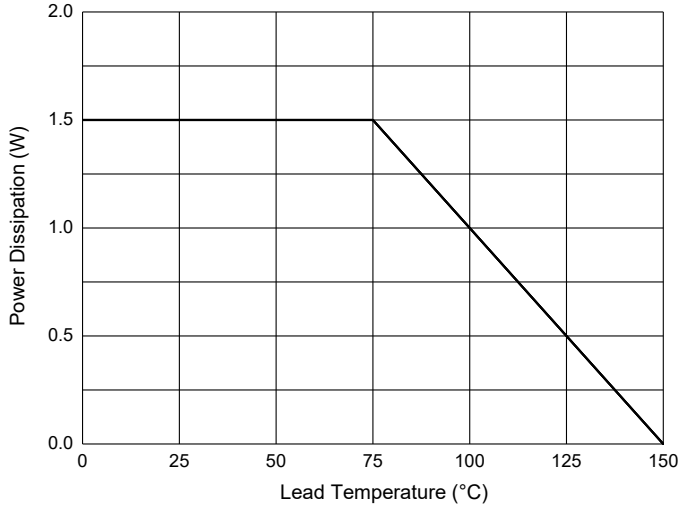


Fig. 2 - Typical Zener Breakdown Characteristics

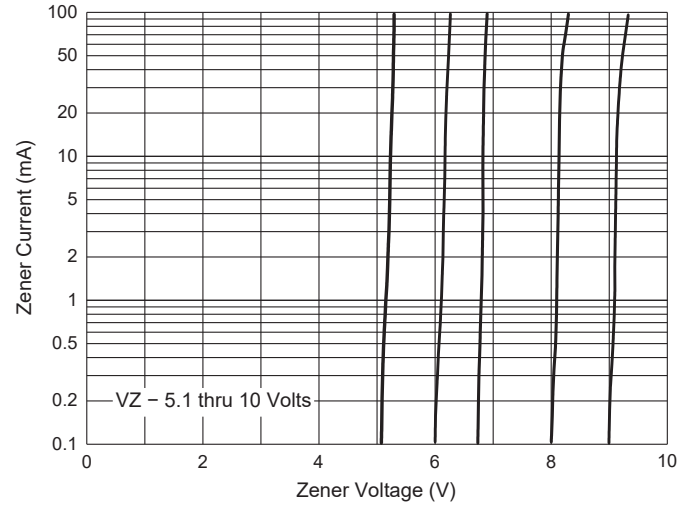


Fig. 3 - Typical Zener Breakdown Characteristics



## 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.

**\*\*\*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 SMAJ5923B-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