



**THE DATASHEET OF  
3SMAJ5942B-TP**



## Features

- 5.1 Thru 200 Volt Voltage Range
- Glass Passivated Junction
- Surface Mount Application
- 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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance : 25°C/W Junction to Lead
- Thermal Resistance : 135°C/W Junction to Ambient

Parameter	Symbol	Rating	Conditions
Steady State Power Dissipation	$P_D$	3.0W	Note 3
Maximum Forward Voltage	$V_F$	1.5V	$I_F=200mA$

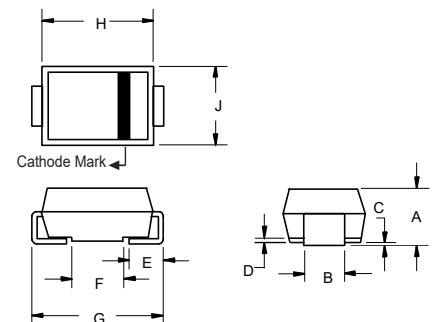
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

3. Mounted on 5.0mm<sup>2</sup> (1oz thick) land areas.  
Lead temperature at  $T_L=75^\circ C$

## 3.0 Watt Surface Mount Silicon Zener Diodes 5.1V to 200V

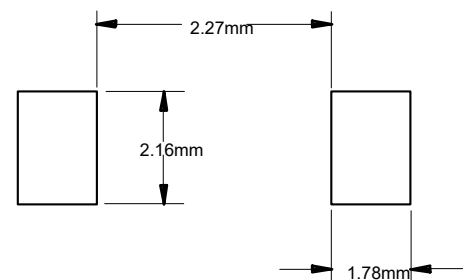
### SMA (DO-214AC) LEAD FRAME



#### 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 <sup>(4)</sup>	Test Current	Maximum Dynamic Impedance	Knee Current	Knee Impedance	Maximum Reverse Current	Reverse Voltage	Maximum DC Zener Current	Marking Code
	V <sub>Z</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	I <sub>ZK</sub>	Z <sub>ZK</sub>	I <sub>R</sub>	V <sub>R</sub>	I <sub>ZM</sub>	
	V	mA	Ω	mA	Ω	μA	V	mA	
3SMAJ5918B	5.1	73.5	4	1	350	5	2	588	H18B
3SMAJ5919B	5.6	66.9	2	1	250	5	3	534	H19B
3SMAJ5920B	6.2	60.5	2	1	200	5	4	482	H20B
3SMAJ5921B	6.8	55.1	2.5	1	200	5	5.2	440	H21B
3SMAJ5922B	7.5	50	3	0.5	400	5	6	400	H22B
3SMAJ5923B	8.2	45.7	3.5	0.5	400	5	6.5	364	H23B
3SMAJ5924B	9.1	41.2	4	0.5	500	5	7	328	H24B
3SMAJ5925B	10	37.5	4.5	0.25	500	5	8	300	H25B
3SMAJ5926B	11	34.1	5.5	0.25	550	1	8.4	272	H26B
3SMAJ5927B	12	31.2	6.5	0.25	550	1	9.1	250	H27B
3SMAJ5928B	13	28.8	7	0.25	550	1	9.9	230	H28B
3SMAJ5929B	15	25	9	0.25	600	1	11.4	200	H29B
3SMAJ5930B	16	23.4	10	0.25	600	1	12.2	186	H30B
3SMAJ5931B	18	20.8	12	0.25	650	1	13.7	166	H31B
3SMAJ5932B	20	18.7	14	0.25	650	1	15.2	150	H32B
3SMAJ5933B	22	17	17.5	0.25	650	1	16.7	136	H33B
3SMAJ5934B	24	15.6	19	0.25	700	1	18.2	124	H34B
3SMAJ5935B	27	13.9	23	0.25	700	1	20.6	110	H35B
3SMAJ5936B	30	12.5	28	0.25	750	1	22.8	100	H36B
3SMAJ5937B	33	11.4	33	0.25	800	1	25.1	90	H37B
3SMAJ5938B	36	10.4	38	0.25	850	1	27.4	82	H38B
3SMAJ5939B	39	9.6	45	0.25	900	1	29.7	76	H39B
3SMAJ5940B	43	8.7	53	0.25	950	1	32.7	68	H40B
3SMAJ5941B	47	8	67	0.25	1000	1	35.8	62	H41B
3SMAJ5942B	51	7.3	70	0.25	1100	1	38.8	58	H42B
3SMAJ5943B	56	6.7	86	0.25	1300	1	42.6	52	H43B
3SMAJ5944B	62	6	100	0.25	1500	1	47.1	48	H44B
3SMAJ5945B	68	5.5	120	0.25	1700	1	51.7	44	H45B
3SMAJ5946B	75	5	140	0.25	2000	1	56	40	H46B
3SMAJ5947B	82	4.6	160	0.25	2500	1	62.2	36	H47B
3SMAJ5948B	91	4.1	200	0.25	3000	1	69.2	32	H48B
3SMAJ5949B	100	3.7	250	0.25	3100	1	76	30	H49B
3SMAJ5950B	110	3.4	300	0.25	4000	1	83.6	26	H50B
3SMAJ5951B	120	3.1	380	0.25	4500	1	91.2	24	H51B
3SMAJ5952B	130	2.9	450	0.25	5000	1	98.8	22	H52B
3SMAJ5953B	150	2.5	600	0.25	6000	1	114	20	H53B
3SMAJ5954B	160	2.3	700 350(@5mA)	0.25	6500	1	121.6	18	H54B
3SMAJ5955B	180	2.1	900	0.25	7000	1	136.8	16	H55B
3SMAJ5956B	200	1.9	1200	0.25	8000	1	152	14	H56B

Note : 4.TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/-5%

## Curve Characteristics

Fig. 1 - Power Derating Curve

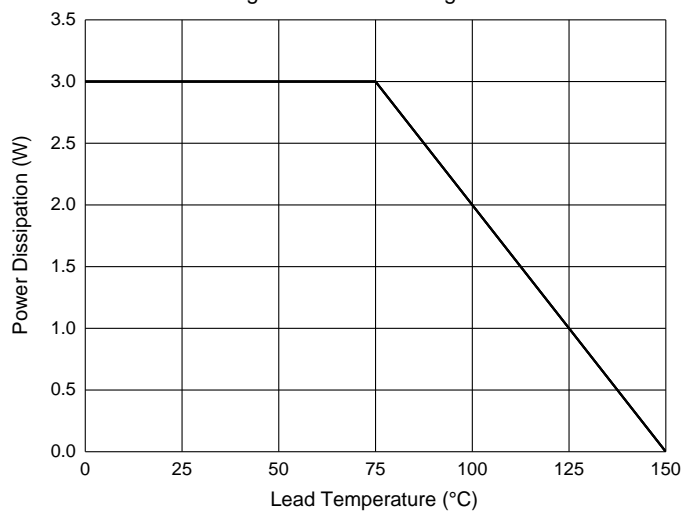


Fig. 2 - Typical Zener Breakdown Characteristics

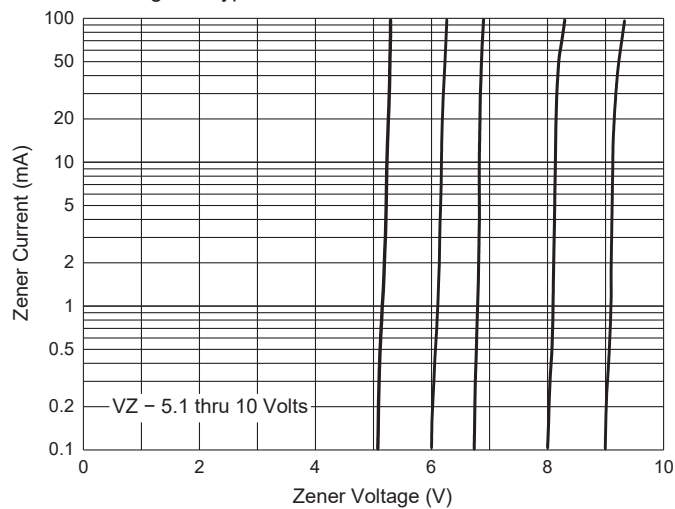
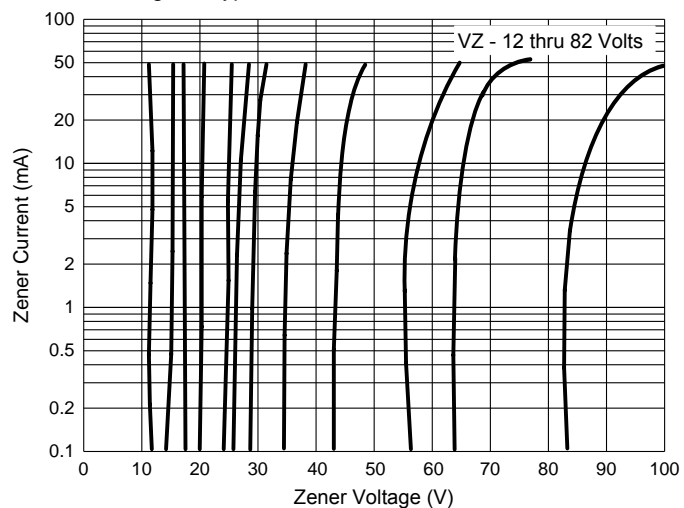


Fig. 3 - Typical Zener Breakdown Characteristics



## Ordering Information

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

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