

# 3SMBJ5918B THRU 3SMBJ5943B

## 3.0 Watt Surface Mount Silicon Zener Diodes

### Features

- Surface Mount Application
- 5.1thru 56 Volt Voltage Range
- Low Inductance, Low Profile Mounting
- Glass Passivated Junction
- Available on Tape and Reel

### Mechanical Data

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals solderable per MIL-STD-750, Method 2026
- Polarity is indicated by cathode band.
- Packaging: Standard 12mm Tape (see EIA 481)
- Maximum temperature for soldering: 260°C for 10 seconds.

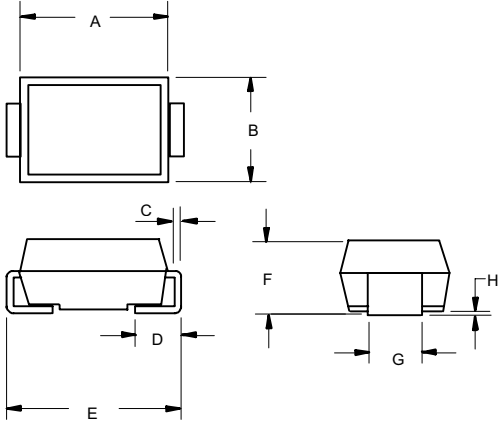
### Maximum Ratings @ 25°C Unless Otherwise Specified

Maximum Forward Voltage	V <sub>F</sub>	1.5V	(Note: 1)
Steady State Power Dissipation	P <sub>d</sub>	3.0W	(Note: 2)
Operation and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55°C to +150°C	
Junction To Ambient	R <sub>thJA</sub>	100 °C/W	

#### NOTES:

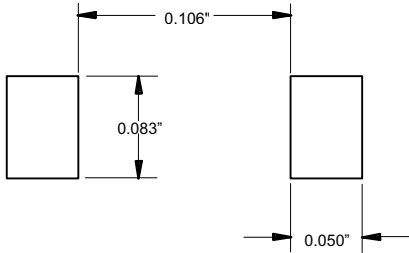
1. Forward Current @ 200mA.
2. Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.  
Lead temperature at T<sub>L</sub>=75°C

### DO-214AA (SMB) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.160	.185	4.06	4.70	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.200	.220	5.08	5.59	
F	.079	.096	2.00	2.44	
G	.075	.087	1.91	2.21	
H	.002	.008	0.05	0.203	

#### SUGGESTED SOLDER PAD LAYOUT



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ELECTRICAL CHARACTERISTICS (T <sub>L</sub> =30C unless otherwise noted) (V <sub>F</sub> =1.5Volts Max @ I <sub>F</sub> =200mAdc for all types.)									
Device	Nominal Zener Voltage Vz @ I <sub>ZT</sub> volts (Note 1.)	Test current I <sub>ZT</sub> mA	Maximum Zener Impedance (Note 2.)			Max reverse Leakage Current		Maximum DC Zener Current I <sub>ZM</sub> mAdc	Device Marking Code
			Z <sub>ZT</sub> @ I <sub>ZT</sub> Ohms	Z <sub>ZK</sub> @ I <sub>ZK</sub> Ohms	I <sub>ZK</sub> mA	I <sub>R</sub> uA	V <sub>R</sub> Volts		
3SMBJ5918B	5.1	73.5	4.0	350	1.00	5.0	2.0	294	H18B
3SMBJ5919B	5.6	66.9	2.0	250	1.00	5.0	3.0	267	H19B
3SMBJ5920B	6.2	60.5	2.0	200	1.00	5.0	4.0	241	H20B
3SMBJ5921B	6.8	55.1	2.5	200	1.00	5.0	5.2	220	H21B
3SMBJ5922B	7.5	50	3.0	400	0.50	5.0	6.0	200	H22B
3SMBJ5923B	8.2	45.7	3.5	400	0.50	5.0	6.5	182	H23B
3SMBJ5924B	9.1	41.2	4.0	500	0.50	5.0	7.0	164	H24B
3SMBJ5925B	10	37.5	4.5	500	0.25	5.0	8.0	150	H25B
3SMBJ5926B	11	34.1	5.5	550	0.25	1	8.4	136	H26B
3SMBJ5927B	12	31.2	6.5	550	0.25	1	9.1	125	H27B
3SMBJ5928B	13	28.8	7	550	0.25	1	9.9	115	H28B
3SMBJ5929B	15	25	9	600	0.25	1	11.4	100	H29B
3SMBJ5930B	16	23.4	10	600	0.25	1	12.2	93	H30B
3SMBJ5931B	18	20.8	12	650	0.25	1	13.7	83	H31B
3SMBJ5932B	20	18.7	14	650	0.25	1	15.2	75	H32B
3SMBJ5933B	22	17	17.5	650	0.25	1	16.7	68	H33B
3SMBJ5934B	24	15.6	19	700	0.25	1	18.2	62	H34B
3SMBJ5935B	27	13.9	23	700	0.25	1	20.6	55	H35B
3SMBJ5936B	30	12.5	28	750	0.25	1	22.8	50	H36B
3SMBJ5937B	33	11.4	33	800	0.25	1	25.1	45	H37B
3SMBJ5938B	36	10.4	38	850	0.25	1	27.4	41	H38B
3SMBJ5939B	39	9.6	45	900	0.25	1	29.7	38	H39B
3SMBJ5940B	43	8.7	53	950	0.25	1	32.7	34	H40B
3SMBJ5941B	47	8.0	67	1000	0.25	1	35.8	31	H41B
3SMBJ5942B	51	7.3	70	1100	0.25	1	38.8	29	H42B
3SMBJ5943B	56	6.7	86	1300	0.25	1	42.6	26	H43B

Note 1: TOLERANCE AND VOLTAGE DESIGNATION - The type numbers listed indicate a tolerance of +/- 5%.

RATING AND CHARACTERISTICS CURVES

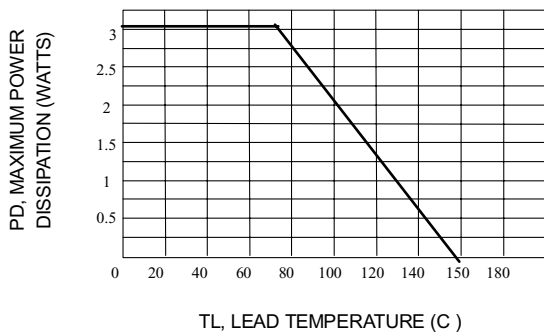


Fig. 1-STEADY STATE POWER DERATING

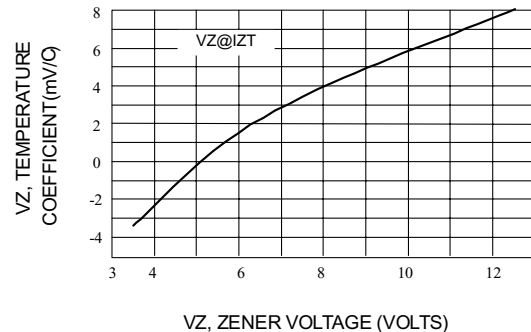


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

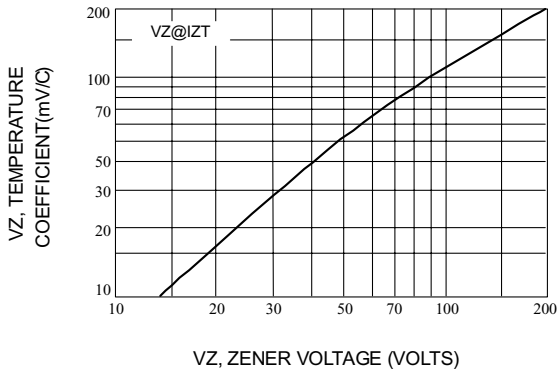


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

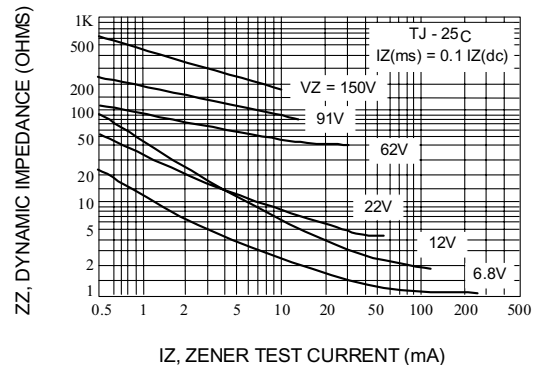


Fig. 4-EFFECT OF ZENER CURRENT

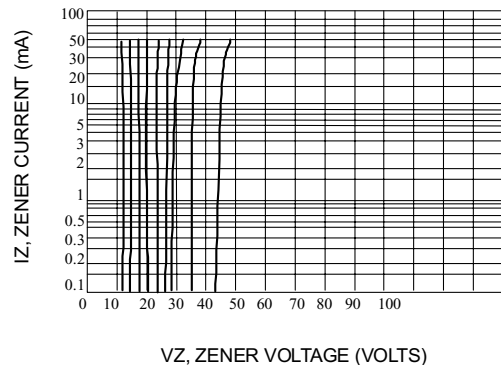
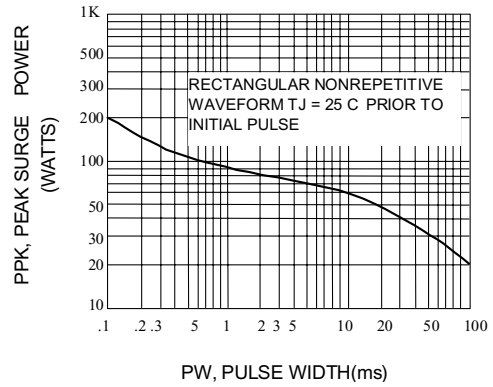
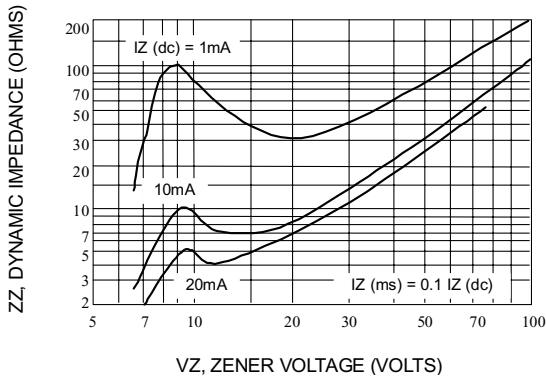


Fig. 7-VZ = 12 THRU 40 VOLTS



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