



Micro Commercial Components

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# 3SMBJ5918B THRU 3SMBJ5942B

## 3.0 Watt Surface Mount Silicon Zener Diodes

### Features

- Surface Mount Application
- 5.1thru 51 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.

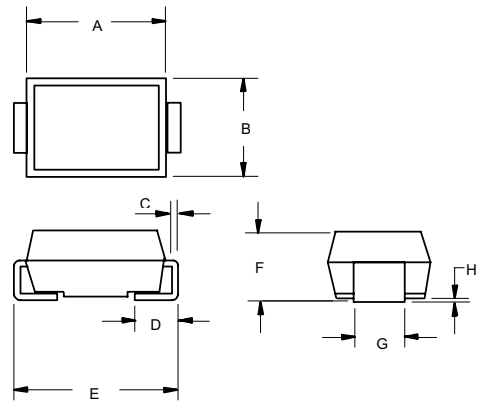
### Maximum Ratings @ 25°C Unless Otherwise Specified

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	

### NOTES:

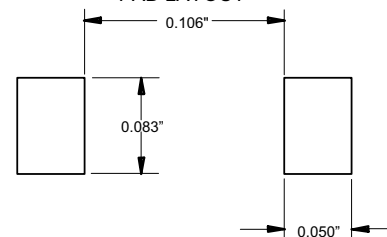
1. Forward Current @ 200mA.
2. Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.  
Lead temperature at T<sub>L</sub>=75°C

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



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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 ( $T_L=30C$ unless otherwise noted) ( $V_F=1.5$ Volts Max @ $I_F=200$ mA for all types.)										
Device	Nominal Zener Voltage $V_Z @ I_{ZT}$ volts (Note 1.)	Test current $I_{ZT}$ mA	Maximum Zener Impedance (Note 2.)			Max reverse Leakage Current			Maximum DC Zener Current $I_{ZM}$ mA	Device Marking Code
			$Z_{ZT} @ I_{ZT}$ Ohms	$Z_{ZK} @ I_{ZK}$ Ohms	$I_{ZK}$ mA	$I_R$ uA	$V_R$ 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	

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

## RATING AND CHARACTERISTICS CURVES

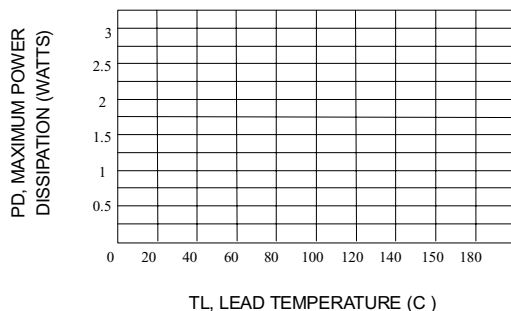


Fig. 1-STEADY STATE POWER DERATING

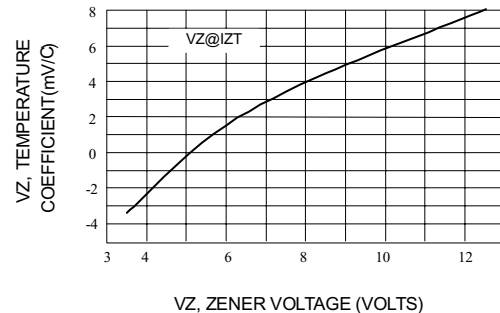


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

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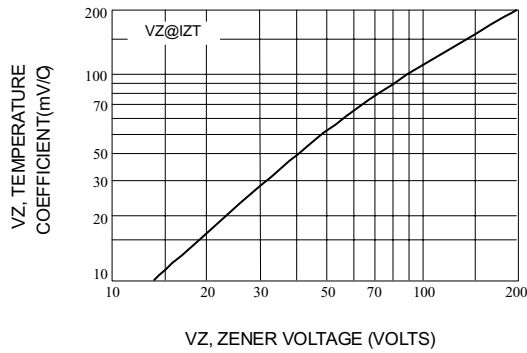


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

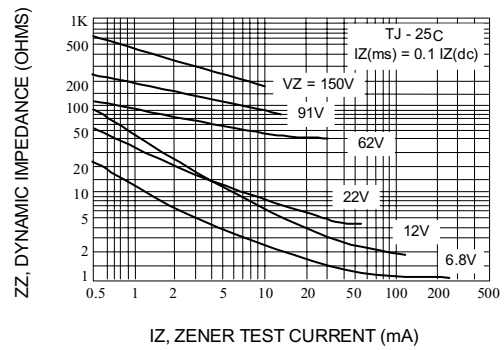


Fig. 4-EFFECT OF ZENER CURRENT

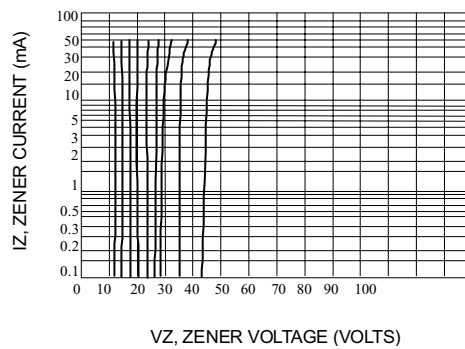
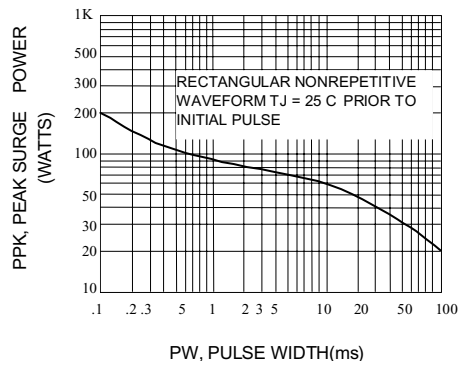
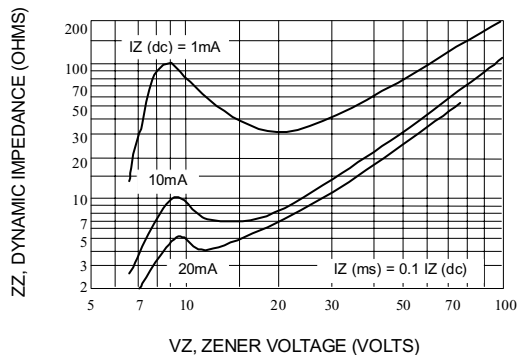


Fig. 7-VZ = 12 THRU 40 VOLTS



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