

# 1N5918B3~1N5956B3

## ZENER DIODES

**VOLTAGE** 5.1 to 200 Volt **POWER** 3.0 Watt

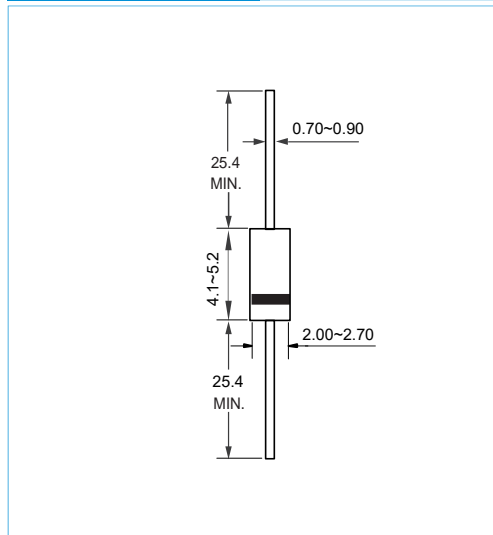
**DO-41** Unit:mm

### FEATURES

- Flat Handling Surface for Accurate Placement
- Glass Passivated Junction
- Low Profile Package
- Low Zener Impedance
- Lead free in compliance with EU RoHS

### MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 200\text{mA}$	$V_F$	1.5	V
Power Dissipation	$P_d$	3.0	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	42	$^{\circ}\text{C/W}$
Junction Temperature	$T_j$	150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55~+150	$^{\circ}\text{C}$

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## ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE VZ (1)	TEST CURRENT IZT	MAXIMUM DYNAMIC IMPEDANCE ZZT @IZT	KNEE CURRENT IZK	KNEE IMPEDANCE ZZK	MAXIMUM REVERSE CURRENT IR	REVERSE VOLTAGE VR
	VOLTS	mA	OHMS	mA	OHMS	μA	VOLTS
1N5918B3	5.1	73.5	4	1	350	5.0	2
1N5919B3	5.6	66.9	2	1	250	5.0	3
1N5920B3	6.2	60.5	2	1	200	5.0	4
1N5921B3	6.8	55.1	2.5	1	200	5.0	5.2
1N5922B3	7.5	50	3	0.5	400	5.0	6
1N5923B3	8.2	45.7	3.5	0.5	400	5.0	6.5
1N5924B3	9.1	41.2	4	0.25	500	5.0	7
1N5925B3	10	37.5	4.5	0.25	500	5.0	8
1N5926B3	11	34.1	5.5	0.25	550	1.0	8.4
1N5927B3	12	31.2	6.5	0.25	550	1.0	9.1
1N5928B3	13	28.8	7	0.25	550	1.0	9.9
1N5929B3	15	25	9	0.25	600	1.0	11.4
1N5930B3	16	23.4	10	0.25	600	1.0	12.2
1N5931B3	18	20.8	12	0.25	650	1.0	13.7
1N5932B3	20	18.7	14	0.25	650	1.0	15.2
1N5933B3	22	17	17.5	0.25	650	1.0	16.7
1N5934B3	24	15.6	19	0.25	700	1.0	18.2
1N5935B3	27	13.9	23	0.25	700	1.0	20.6
1N5936B3	30	12.5	28	0.25	750	1.0	22.8
1N5937B3	33	11.4	33	0.25	800	1.0	25.1
1N5938B3	36	10.4	38	0.25	850	1.0	27.4
1N5939B3	39	9.6	45	0.25	900	1.0	29.7
1N5940B3	43	8.7	53	0.25	950	1.0	32.7
1N5941B3	47	8	67	0.25	1000	1.0	35.8
1N5942B3	51	7.3	70	0.25	1100	1.0	38.8
1N5943B3	56	6.7	86	0.25	1300	1.0	42.6
1N5944B3	62	6	100	0.25	1500	1.0	47.1
1N5945B3	68	5.5	120	0.25	1700	1.0	51.7
1N5946B3	75	5	140	0.25	2000	1.0	56
1N5947B3	82	4.6	160	0.25	2500	1.0	62.2
1N5948B3	91	4.1	200	0.25	3000	1.0	69.2
1N5949B3	100	3.7	250	0.25	3100	1.0	76
1N5950B3	110	3.4	300	0.25	4000	1.0	83.6
1N5951B3	120	3.1	380	0.25	4500	1.0	91.2
1N5952B3	130	2.9	450	0.25	5000	1.0	98.8
1N5953B3	150	2.5	600	0.25	6000	1.0	114
1N5954B3	160	2.3	700	0.25	6500	1.0	121.6
1N5955B3	180	2.1	900	0.25	7000	1.0	136.8
1N5956B3	200	1.9	1200	0.25	8000	1.0	152

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

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## RATING AND CHARACTERISTIC CURVES

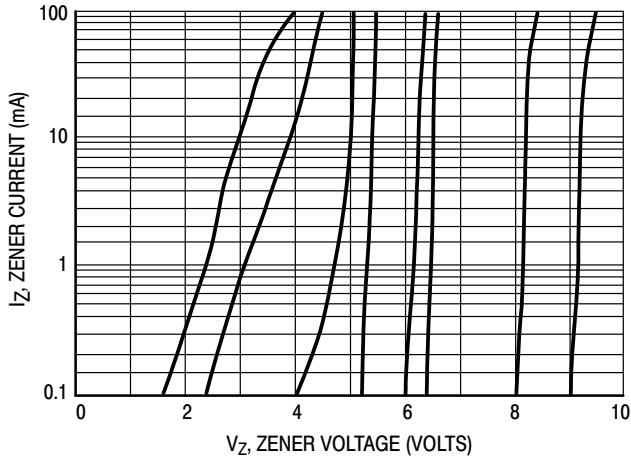


Figure 1.  $V_Z$  – 5.1 thru 10 Volts

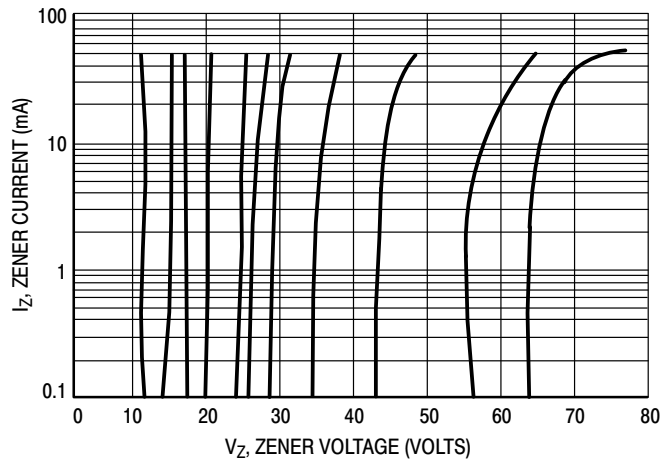


Figure 2.  $V_Z = 12$  thru 68 Volts

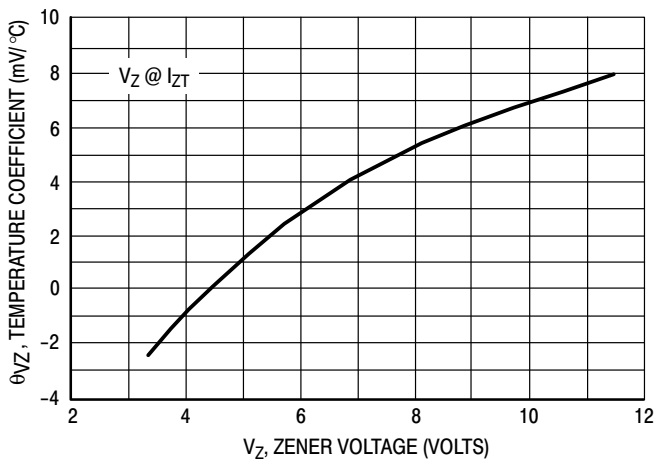


Figure 3. Zener Voltage – 5.1 to 12 Volts

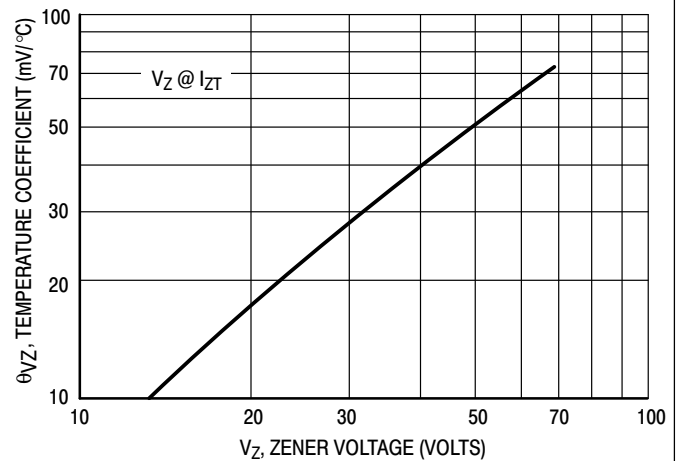


Figure 4. Zener Voltage – 12 to 68 Volts

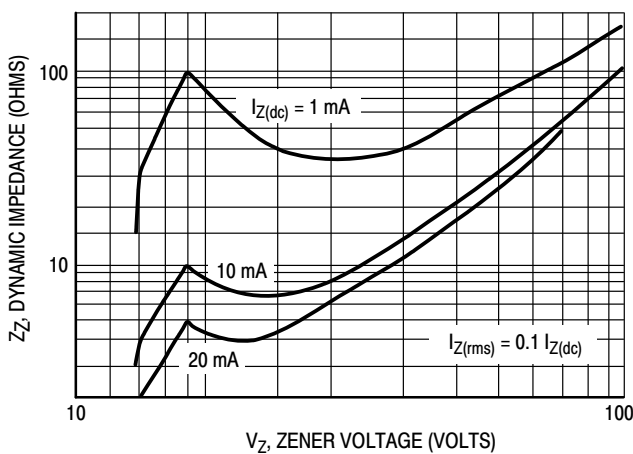


Figure 5. Effect of Zener Voltage

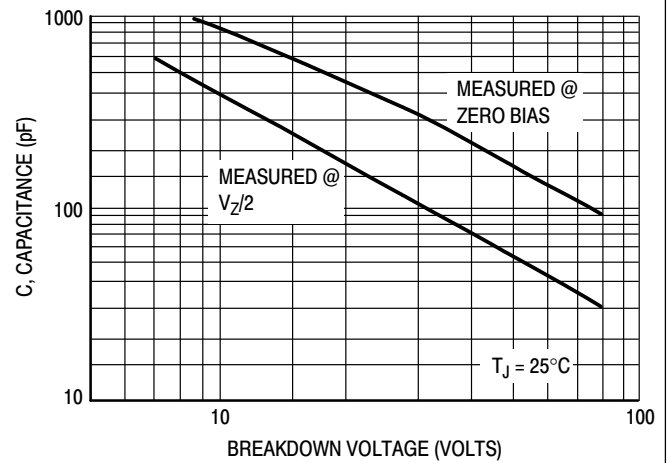


Figure 6. Capacitance Curve

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## RATING AND CHARACTERISTIC CURVES

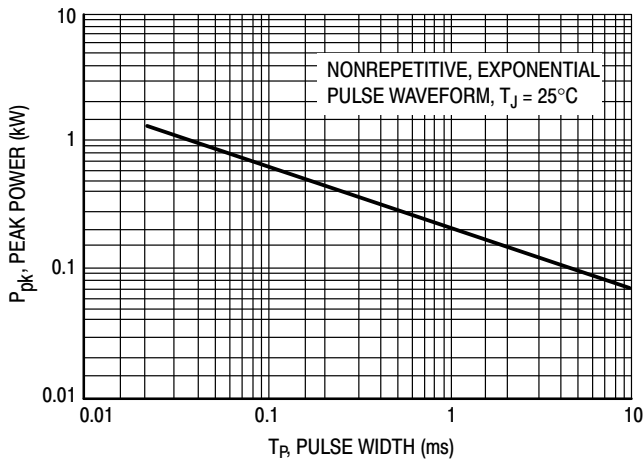


Figure 7. Typical Pulse Rating Curve

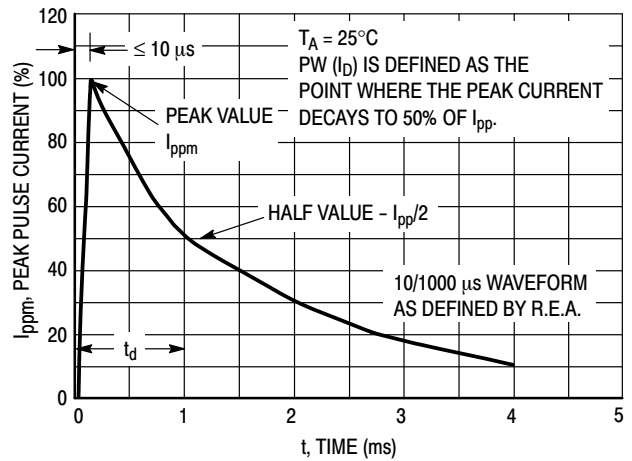


Figure 8. Pulse Waveform

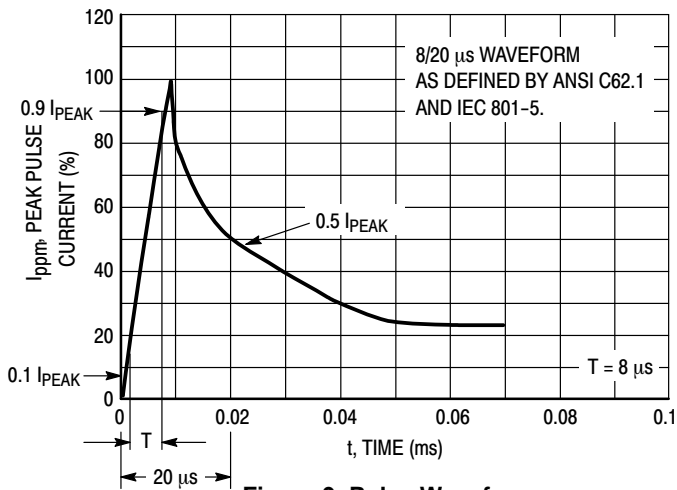


Figure 9. Pulse Waveform

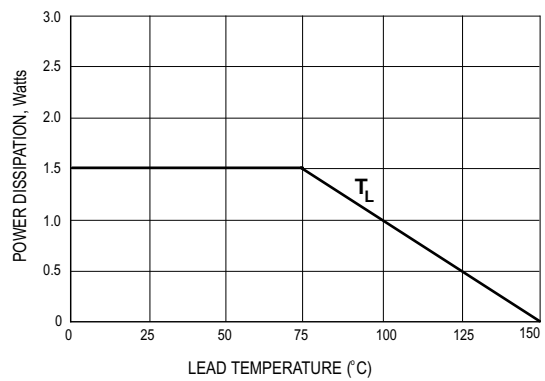


Figure 10. Steady state power derating

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### ORDER INFORMATION

• Packing information

Part Number	Case	Reel Size	QUANTITY
1N5918B3~1N5956B3	D0-41	13 Inch	5000