



1N5921B~1N5942B

SILICON ZENER DIODES

VOLTAGE 6.8 to 51 Volts **POWER** 1.5 Watts

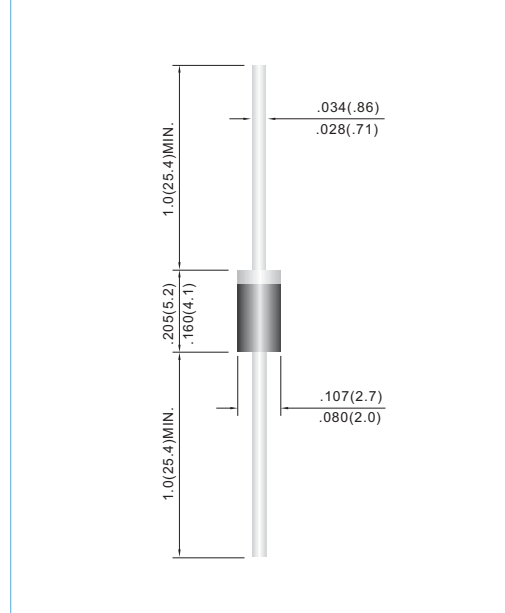
DO-41 Unit: inch(mm)

FEATURES

- Low profile package
- Built-in strain relief
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: JEDEC DO-41, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard packing: 52mm tape
- Weight: 0.0118 ounce, 0.336 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
DC Power Dissipation on TA=75 °C ,Measure at Zero Lead Length Derate above 75°C (NOTE 1)	P _D	1.5	Watts
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

NOTES:

1. Mounted on 5.0mm² (.013mm thick) land areas.



1N5921B~1N5942B

Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Maximum Leakage Current	
	V _Z @ I _{ZT}			Z _{zT} @ I _{ZT}		Z _{zK} @ I _{zK}		I _R	V _R
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
1N5921B	6.8	6.46	7.14	3	55.1	200	1	5	5.2
1N5922B	7.5	7.13	7.88	3	50	400	0.5	5	6
1N5923B	8.2	7.79	8.61	4	45.7	400	0.5	5	6.5
1N5924B	9.1	8.65	9.56	4	41.2	500	0.5	5	7
1N5925B	10	9.5	10.5	5	37.5	500	0.25	5	8
1N5926B	11	10.45	11.55	6	34.1	550	0.25	1	8.4
1N5927B	12	11.4	12.6	7	31.2	550	0.25	1	9.1
1N5928B	13	12.35	13.65	7	28.8	550	0.25	1	9.9
1N5929B	15	14.25	15.75	9	25	600	0.25	1	11.4
1N5930B	16	15.2	16.8	10	23.4	600	0.25	1	12.2
1N5931B	18	17.1	18.9	12	20.8	650	0.25	1	13.7
1N5932B	20	19	21	14	18.7	650	0.25	1	15.2
1N5933B	22	20.9	23.1	18	17	650	0.25	1	16.7
1N5934B	24	22.8	25.2	19	15.6	700	0.25	1	18.2
1N5935B	27	25.65	28.35	23	13.9	700	0.25	1	20.6
1N5936B	30	28.5	31.5	26	12.5	750	0.25	1	22.8
1N5937B	33	31.35	34.65	33	11.4	800	0.25	1	25.1
1N5938B	36	34.2	37.8	38	10.4	850	0.25	1	27.4
1N5939B	39	37.05	40.95	45	9.6	900	0.25	1	29.7
1N5940B	43	40.85	45.15	53	8.7	950	0.25	1	32.7
1N5941B	47	44.65	49.35	67	8	1000	0.25	1	35.8
1N5942B	51	48.45	53.55	70	7.3	1100	0.25	1	38.8



1N5921B~1N5942B

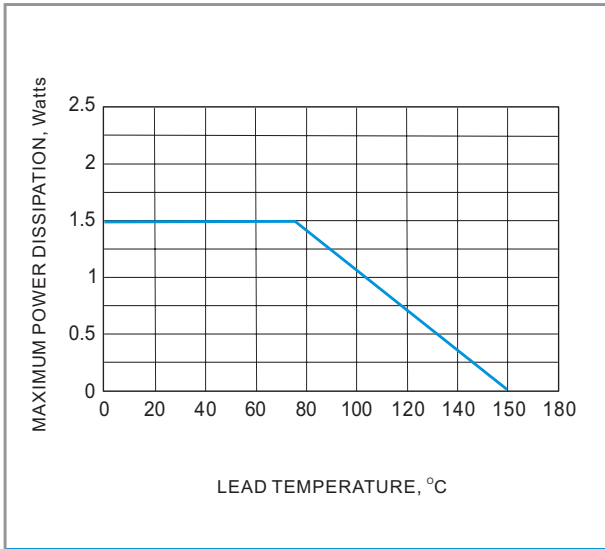


Fig.1 Steady State Power Derating

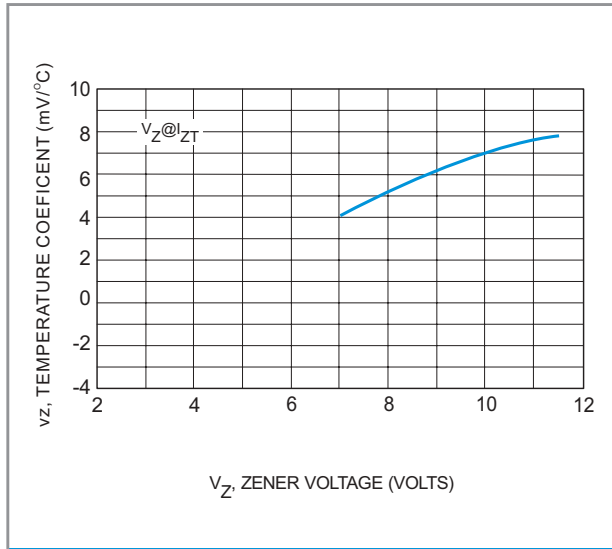


Fig.2 Temperature coefficient v.s. zener voltage, Vz(V)

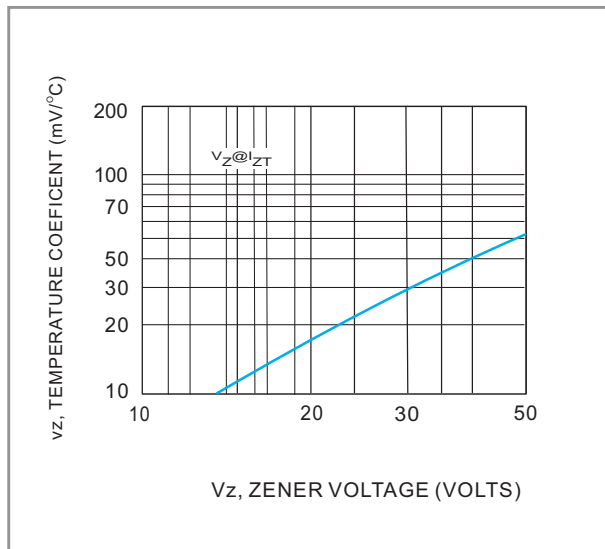


Fig.3 Temperature coefficient v.s. zener voltage, Vz(V)

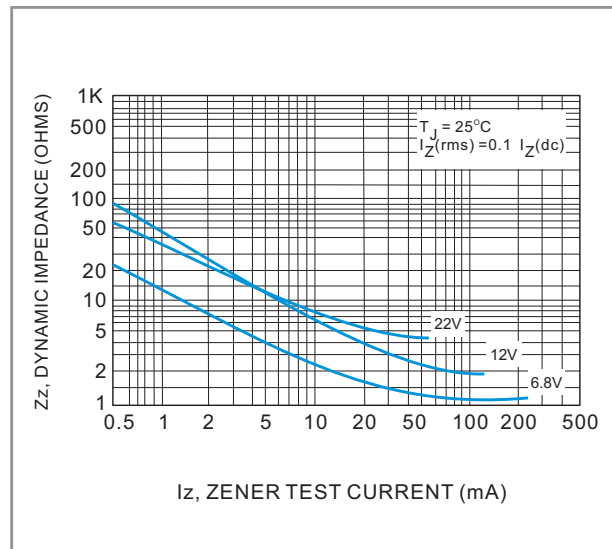


Fig.4 Zener impedance v.s. zener current

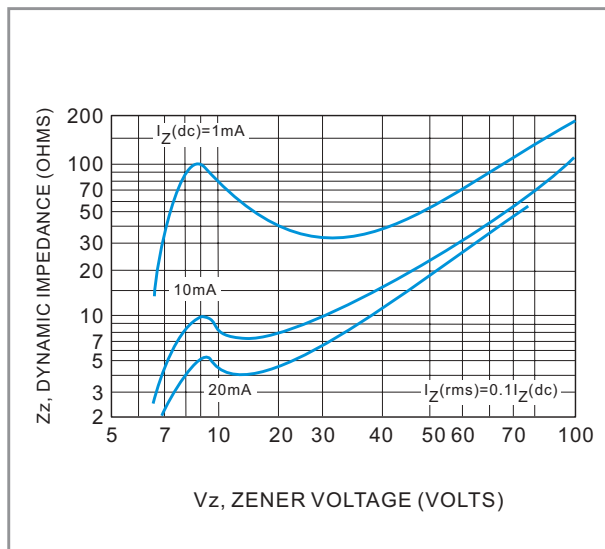


Fig.5 Zener impedance v.s. zener voltage

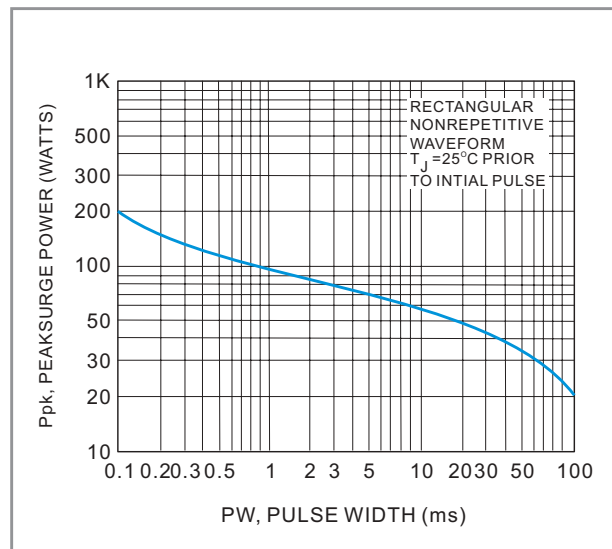


Fig.6 Maximum Surge Power



1N5921B~1N5942B

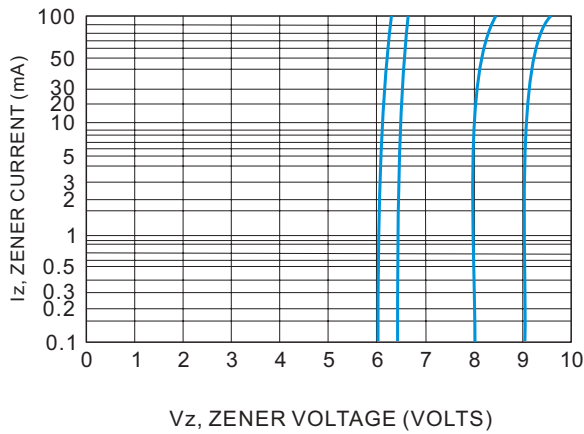


Fig.7 Vz = 6.8 thru 10 Volts

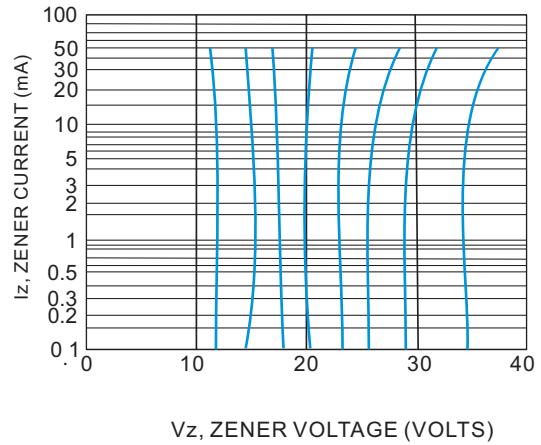


Fig.8 Vz = 12 thru 82 Volts

NOTE 3. ZENER VOLTAGE (V_z) MEASUREMENT

Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25°C

NOTE 4. ZENER IMPEDANCE (Z_z) DERIVATION

Z_{zt} and Z_{zk} are measured by dividing the ac voltage drop across the device by the ac current applied. The specified limits are for $I_z(ac) = 0.1 I_z(dc)$ with the ac frequency = 60Hz