

1N5926B THRU 1N5956B

GLASS PASSIVATED JUNCTION SILICON ZENER DIODE

VOLTAGE - 11 TO 200 Volts Power - 1.5 Watts

FEATURES

- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Typical I_R less than 1 μ A above 11V
- High temperature soldering :
260 $^{\circ}$ C/10 seconds at terminals
- Plastic package has Underwriters Laboratory
Flammability Classification 94V-O

MECHANICAL DATA

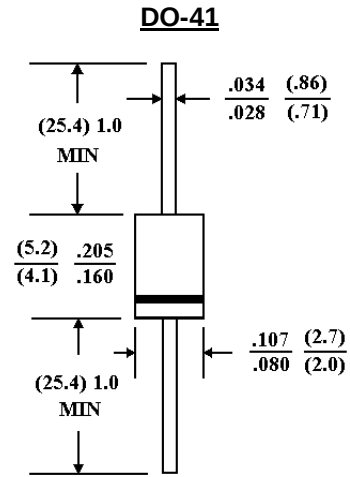
Case: JEDEC DO-41 Molded plastic over passivated junction

Terminals: Solder plated, solderable per MIL-STD-750,
method 2026

Polarity: Color band denotes positive end (cathode)

Standard Packaging: 52mm tape

Weight: 0.012 ounce, 0.3 gram



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}$ C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNITS
DC Power Dissipation @ $T_L=75^{\circ}\text{C}$, Measure at Zero Lead Length(Note 1, Fig. 1) Derate above 75 $^{\circ}$ C	P_D	1.5 15	Watts mW/ $^{\circ}$ C
Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) (Note 1,2)	I_{FSM}	10	Amps
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}$ C

NOTES:

1. Mounted on 5.0mm²(.013mm thick) land areas.
2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
3. ZENER VOLTAGE (V_Z) MEASUREMENT Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25 $^{\circ}$ C.
4. ZENER IMPEDANCE (Z_Z) DERIVATION Z_{ZT} are measured by dividing the ac voltage drop across the device by the current applied. The specified limits are for $I_{Z(ac)} = 0.1 I_Z$, (dc) with the ac frequency = 60Hz.

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ELECTRICAL CHARACTERISTICS ($T_L=30\text{ }^{\circ}\text{C}$ unless otherwise noted) ($V_F=1.5\text{ Volts Max @ }I_F=200\text{mA}$)

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} mAdc
			Z_{ZT} @ I_{ZT} Ohms	Z_{ZK} @ I_{ZK} Ohms	I_{ZK} mA	I_R μ A	V_R Volts	
1N5926B	11	34.1	5.5	550	0.25	1	8.4	136
1N5927B	12	31.2	6.5	550	0.25	1	9.1	125
1N5928B	13	28.8	7	550	0.25	1	9.9	115
1N5929B	15	25	9	600	0.25	1	11.4	100
1N5930B	16	23.4	10	600	0.25	1	12.2	93
1N5931B	18	20.8	12	650	0.25	1	13.7	83
1N5932B	20	18.7	14	650	0.25	1	15.2	75
1N5933B	22	17	17.5	650	0.25	1	16.7	68
1N5934B	24	15.6	19	700	0.25	1	18.2	62
1N5935B	27	13.9	23	700	0.25	1	20.6	55
1N5936B	30	12.5	26	750	0.25	1	22.8	50
1N5937B	33	11.4	33	800	0.25	1	25.1	45
1N5938B	36	10.4	38	850	0.25	1	27.4	41
1N5939B	39	9.6	45	900	0.25	1	29.7	38
1N5940B	43	8.7	53	950	0.25	1	32.7	34
1N5941B	47	8	67	1000	0.25	1	35.8	31
1N5942B	51	7.3	70	1100	0.25	1	38.8	29
1N5943B	56	6.7	86	1300	0.25	1	42.6	26
1N5944B	62	6	100	1500	0.25	1	47.1	24
1N5945B	68	5.5	120	1700	0.25	1	51.7	22
1N5946B	75	5	140	2000	0.25	1	56	20
1N5947B	82	4.6	160	2500	0.25	1	62.2	18
1N5948B	91	4.1	200	3000	0.25	1	69.2	16
1N5949B	100	3.7	250	3100	0.25	1	76	15
1N5950B	110	3.4	300	4000	0.25	1	83.6	13
1N5951B	120	3.1	380	4500	0.25	1	91.2	12
1N5952B	130	2.9	450	5000	0.25	1	98.8	11
1N5953B	150	2.5	600	6000	0.25	1	114	10
1N5954B	160	2.3	700	6500	0.25	1	121.6	9
1N5955B	180	2.1	900	7000	0.25	1	136.8	8
1N5956B	200	1.9	1200	8000	0.25	1	152	7

* TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation - The type numbers listed indicate a tolerance of $\pm 5\%$

RATING AND CHARACTERISTICS CURVES

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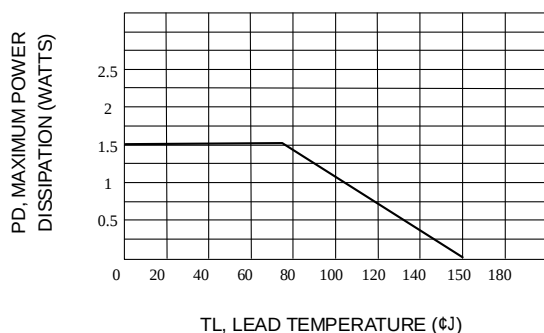


Fig. 1-STEADY STATE POWER DERATING

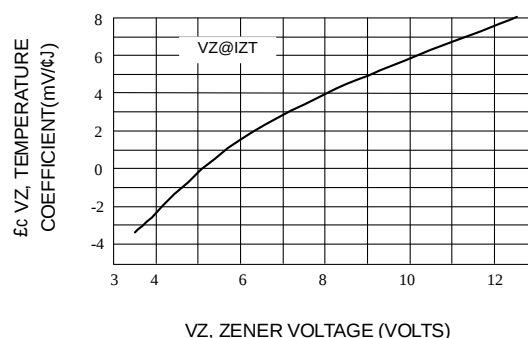


Fig. 2-ZENER VOLTAGE-TO 12 VOLTS

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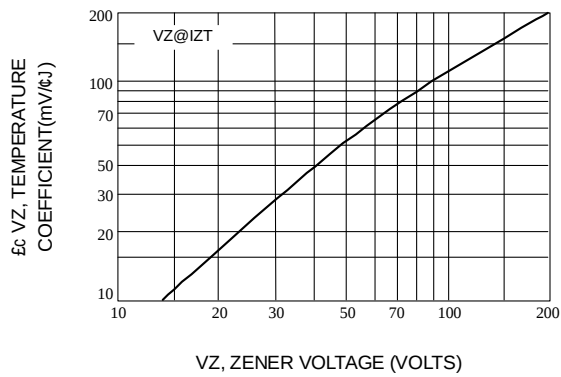


Fig. 3-ZENER VOLTAGE-10 TO 200 VOLTS

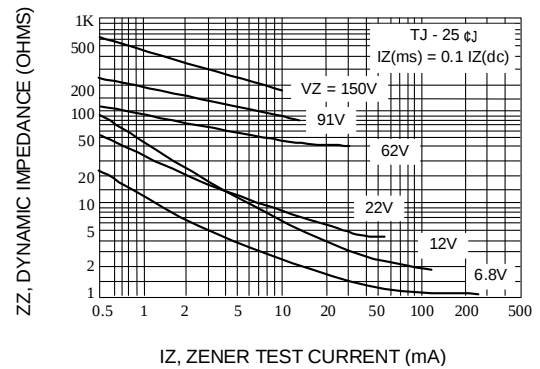


Fig. 4-EFFECT OF ZENER CURRENT

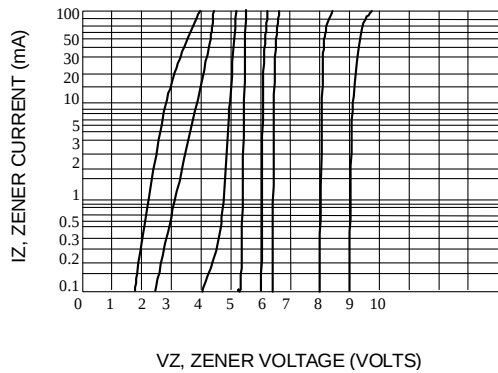
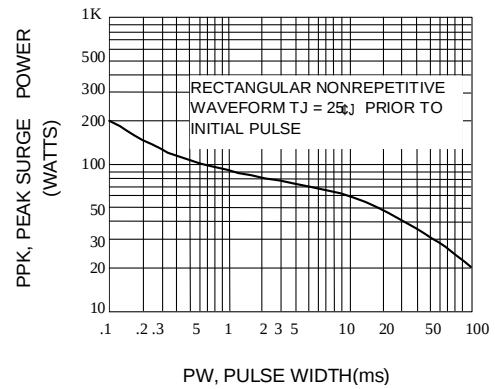
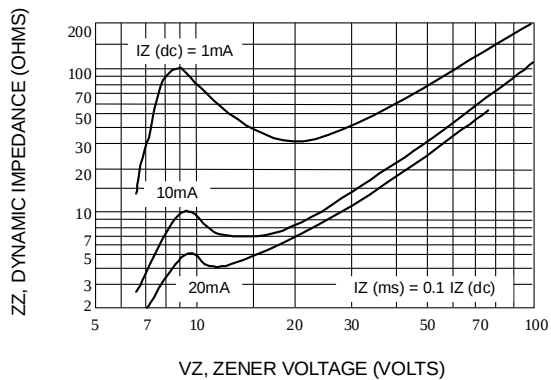


Fig. 7- $V_Z = 6.8$ THRU 10 VOLTS

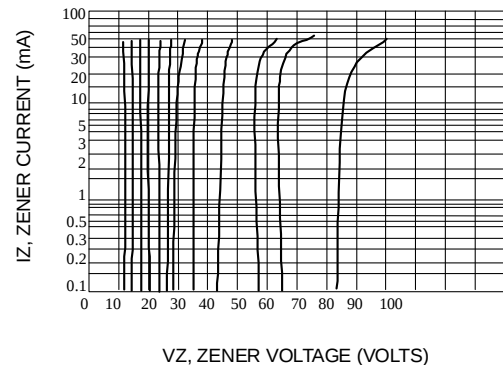


Fig. 8- $V_Z = 12$ THRU 82 VOLTS