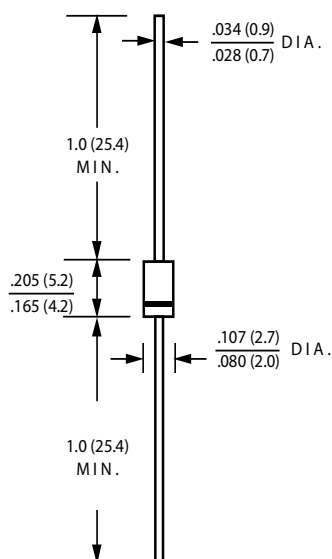




1N59xxB SERIES



1.5W Zener Diode



DO-41

Dimensions in inches and (millimeters)



Ordering Information	
Part Number	Compound
1N59xxB	General
1N59xxB-H	Halogen Free

PRIMARY CHARACTERISTICS	
V_{RRM}	6.2~200V
V_F	1.5V
$T_J \text{ max}$	175°C

Features

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipat
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating

Mechanical Data

- Case : DO-41
- Epoxy : UL94V-0 rate flame retardant
- Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity : Color band denotes cathode end
- Weight : 0.318 gram (approximate)

Rating at 25°C ambient temperature unless otherwise specif

Parameter	Symbol	Value	UNIT
DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)	P_D	1.5	Watts
Maximum Forward Voltage at $I_F = 200 \text{ mA}$	V_F	1.5	Volts
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}	- 55 to + 175	°C

Note:(1) T_L = Lead temperature at 3/8 " (9.5mm) from body.

1.5 Watt Zener Diodes / DO-41

Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max. Reverse Leakage Current		Max. DC Zener Current	Marking Code
	$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		I_{ZM}	
	Nom. V	mA	Ω	mA	Ω	mA	μA	V	mA	
1N5920B	6.2	60.5	2.0	60.5	200	1.0	2.5	4.0	240	1N5920B
1N5921B	6.8	55.1	2.5	55.1	200	1.0	2.5	5.2	220	1N5921B
1N5922B	7.5	50.0	3.0	50.0	400	0.5	2.5	6.0	200	1N5922B
1N5923B	8.2	45.7	3.5	45.7	400	0.5	2.5	6.5	182	1N5923B
1N5924B	9.1	41.2	4.0	41.2	500	0.5	2.5	7.0	164	1N5924B
1N5925B	10.0	37.5	4.5	37.5	500	0.25	2.5	8.0	150	1N5925B
1N5926B	11.0	34.1	5.5	34.1	550	0.25	0.5	8.4	136	1N5926B
1N5927B	12.0	31.2	6.5	31.2	550	0.25	0.5	9.1	125	1N5927B
1N5928B	13.0	28.8	7.0	28.8	550	0.25	0.5	9.9	115	1N5928B
1N5929B	15.0	25.0	9.0	25.0	600	0.25	0.5	11.4	100	1N5929B
1N5930B	16.0	23.4	10.0	23.4	600	0.25	0.5	12.2	93	1N5930B
1N5931B	18.0	20.8	12.0	20.8	650	0.25	0.5	13.7	83	1N5931B
1N5932B	20.0	18.7	14.0	18.7	650	0.25	0.5	15.2	75	1N5932B
1N5933B	22.0	17.0	17.5	17.0	650	0.25	0.5	16.7	68	1N5933B
1N5934B	24.0	15.6	19.0	15.6	700	0.25	0.5	18.2	62	1N5934B
1N5935B	27.0	13.9	23.0	13.9	700	0.25	0.5	20.6	55	1N5935B
1N5936B	30.0	12.5	26.0	12.5	750	0.25	0.5	22.8	50	1N5936B
1N5937B	33.0	11.4	33.0	11.4	800	0.25	0.5	25.1	45	1N5937B
1N5938B	36.0	10.4	38.0	10.4	850	0.25	0.5	27.4	41	1N5938B
1N5939B	39.0	9.6	45.0	9.6	900	0.25	0.5	29.7	38	1N5939B
1N5940B	43.0	8.7	53.0	8.7	950	0.25	0.5	32.7	34	1N5940B
1N5941B	47.0	8.0	67.0	8.0	1000	0.25	0.5	35.8	31	1N5941B
1N5942B	51.0	7.3	70.0	7.3	1100	0.25	0.5	38.8	29	1N5942B
1N5943B	56.0	6.7	86.0	6.7	1300	0.25	0.5	42.6	26	1N5943B
1N5944B	62.0	6.0	100.0	6.0	1500	0.25	0.5	47.1	24	1N5944B
1N5945B	68.0	5.5	120.0	5.5	1700	0.25	0.5	51.7	22	1N5945B
1N5946B	75.0	5.0	140.0	5.0	2000	0.25	0.5	56.0	20	1N5946B
1N5947B	82.0	4.6	160.0	4.6	2500	0.25	0.5	62.2	18	1N5947B
1N5948B	91.0	4.1	200.0	4.1	3000	0.25	0.5	69.2	16	1N5948B
1N5949B	100.0	3.7	250.0	3.7	3100	0.25	0.5	76.0	15	1N5949B
1N5950B	110.0	3.4	300.0	3.4	4000	0.25	0.5	83.6	13	1N5950B
1N5951B	120.0	3.1	380.0	3.1	4500	0.25	0.5	91.2	12	1N5951B
1N5952B	130.0	2.9	450.0	2.9	5000	0.25	0.5	98.8	11	1N5952B
1N5953B	150	2.5	600	2.5	6000	0.25	0.5	114.0	10	1N5953B
1N5954B	160	2.3	700	2.3	6500	0.25	0.5	121.6	9	1N5954B
1N5955B	180	2.1	900	2.1	7000	0.25	0.5	136.8	8	1N5955B
1N5956B	200	1.9	1200	1.9	8000	0.25	0.5	152.0	7	1N5956B

Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent

Fig. 1 - Power Temperature Derating Curve

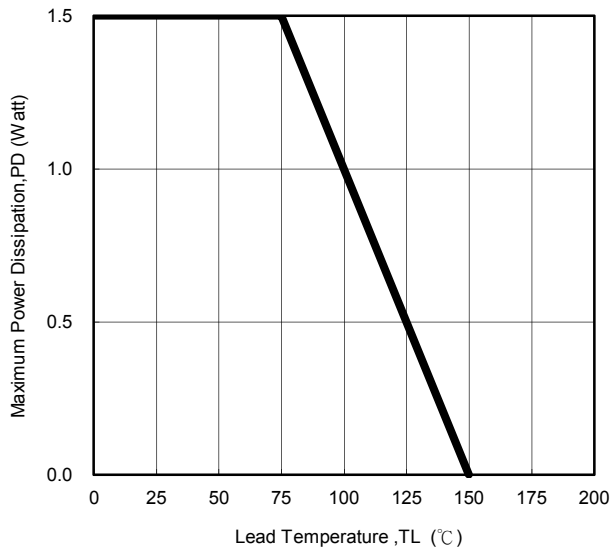


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

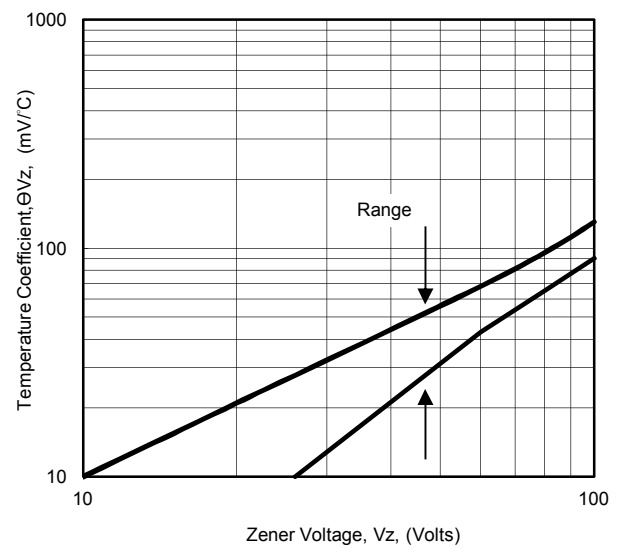


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

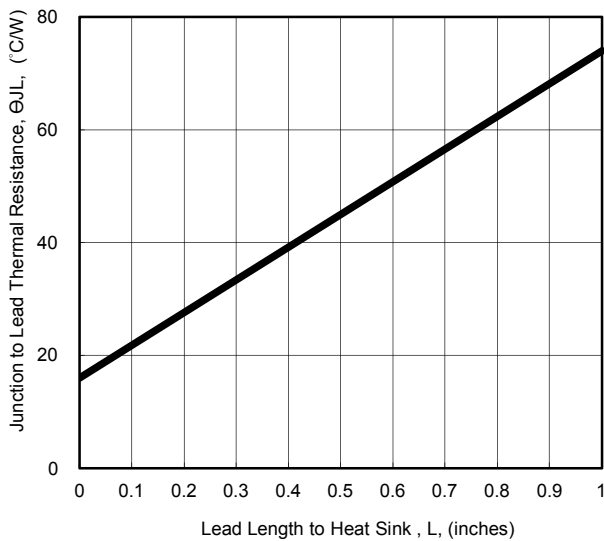


Fig. 4 - Maximum Surge Power

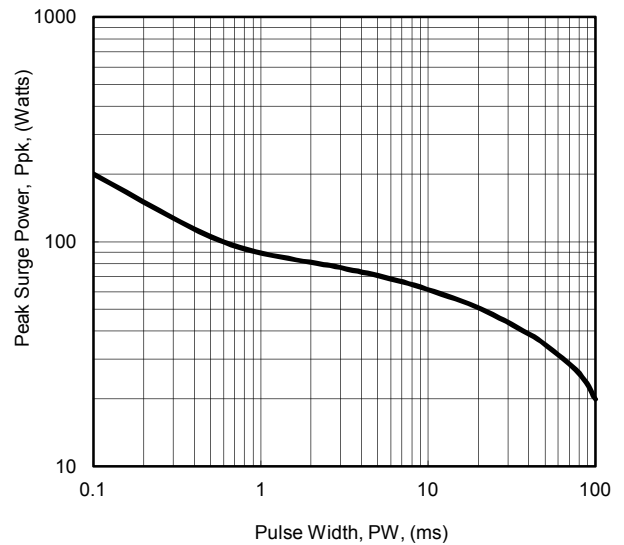


Fig. 5 - Typical Thermal Response L , Lead Length=3/8inch

