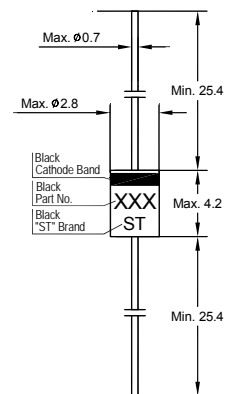


3 W Silicon Planar Power Zener Diodes

1N5913B...1N5939B



Glass Case DO-41  
Dimensions in mm

**Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )**

Parameter	Symbol	Value	Unit
Maximum Steady State Power Dissipation at $T_L = 75\text{ }^\circ\text{C}$ , Lead Length = 3/8"	$P_{tot}$	3	W
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 175	$^\circ\text{C}$

**Characteristics at  $T_a = 25\text{ }^\circ\text{C}$**

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	1.5	V

## 3 W Silicon Planar Power Zener Diodes

## 1N5913B...1N5939B

 Characteristics  $T_a = 25\text{ }^\circ\text{C}$ 

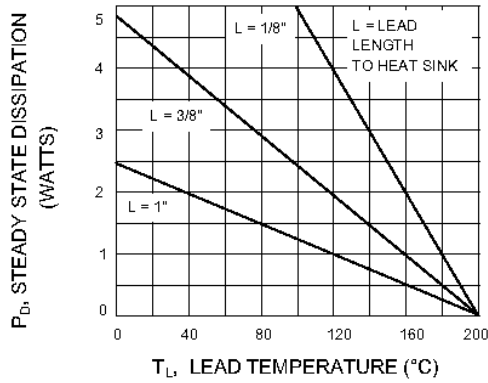
Type	Zener Voltage <sup>1)</sup>			Dynamic Resistance				Reverse Current		Maximum DC Zener Current $I_{ZM}$ (mA)	
	$V_{Znom}$	$V_{ZT}$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$		at $V_R$
	(V)	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )		(V)
1N5913B	3.3	3.14	3.47	113.6	10	113.6	500	1	100	1	454
1N5914B	3.6	3.42	3.78	104.2	9	104.2	500	1	75	1	416
1N5915B	3.9	3.71	4.1	96.1	7.5	96.1	500	1	25	1	384
1N5916B	4.3	4.09	4.52	87.2	6	87.2	500	1	5	1	348
1N5917B	4.7	4.47	4.94	79.8	5	79.8	500	1	5	1.5	319
1N5918B	5.1	4.85	5.36	73.5	4	73.5	350	1	5	2	294
1N5919B	5.6	5.32	5.88	66.9	2	66.9	250	1	40	3	267
1N5920B	6.2	5.89	6.51	60.5	2	60.5	200	1	40	4	241
1N5921B	6.8	6.46	7.14	55.1	2.5	55.1	200	1	50	5.2	220
1N5922B	7.5	7.13	7.88	50	3	50	400	0.5	50	6	200
1N5923B	8.2	7.79	8.61	45.7	3.5	45.7	400	0.5	50	6.5	182
1N5924B	9.1	8.65	9.56	41.2	4	41.2	500	0.5	50	7	164
1N5925B	10	9.5	10.5	37.5	4.5	37.5	500	0.25	50	8	150
1N5926B	11	10.45	11.55	34.1	5.5	34.1	550	0.25	50	8.4	136
1N5927B	12	11.4	12.6	31.2	6.5	31.2	550	0.25	1	9.1	125
1N5928B	13	12.35	13.65	28.8	7	28.8	550	0.25	1	9.9	115
1N5929B	15	14.25	15.75	25	9	25	600	0.25	1	11.4	100
1N5930B	16	15.2	16.8	23.4	10	23.4	600	0.25	1	12.2	93
1N5931B	18	17.1	18.9	20.8	12	20.8	650	0.25	1	13.7	83
1N5932B	20	19	21	18.7	14	18.7	650	0.25	1	15.2	75
1N5933B	22	20.9	23.1	17	17.5	17	650	0.25	1	16.7	68
1N5934B	24	22.8	25.2	15.6	19	15.6	700	0.25	1	18.2	62
1N5935B	27	25.65	28.35	13.9	23	13.9	700	0.25	1	20.6	55
1N5936B	30	28.5	31.5	12.5	26	12.5	750	0.25	1	22.8	50
1N5937B	33	31.35	34.65	11.4	33	11.4	800	0.25	1	25.1	45
1N5938B	36	34.2	37.8	10.4	38	10.4	850	0.25	1	27.4	41
1N5939B	39	37.05	40.95	9.6	45	9.6	900	0.25	1	29.7	38

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$

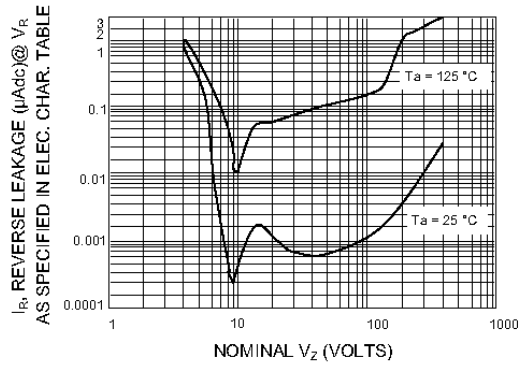
3 W Silicon Planar Power Zener Diodes

1N5913B...1N5939B

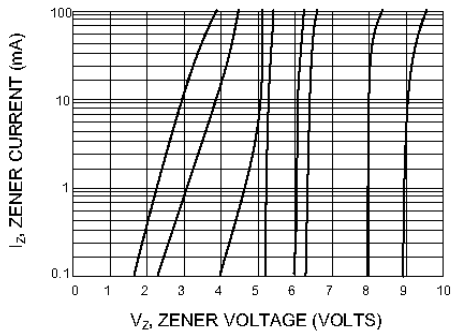
POWER TEMPERATURE DERATING CURVE



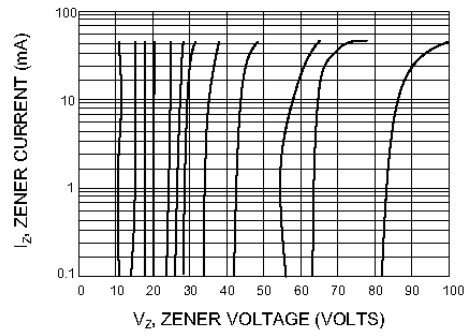
TYPICAL REVERSE LEAKAGE



ZENER VOLTAGE VS. ZENER CURRENT  
 $V_Z = 3.3$  thru 10 VOLTS



ZENER VOLTAGE VS. ZENER CURRENT  
 $V_Z = 12$  thru 82 VOLTS



ZENER VOLTAGE VS. ZENER CURRENT  
 $V_Z = 100$  thru 400 VOLTS

