



Micro Commercial Components



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**1N5913BP
THRU
1N5946BP**

Features

- Glass Passivated Junction
- Low Profile Package
- Low Inductance
- Built-in Strain Relief
- Lead Free Finish/RoHS Compliant (Note1)("P"Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking : 1N5913B~1N5946B type number and Cathode Band

**1.5 Watt
Zener Diode
3.3to 75 Volts**

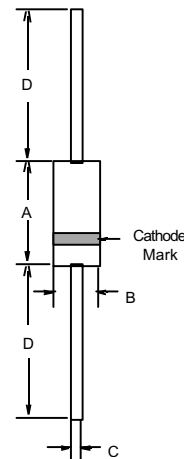
Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Forward Voltage at $I_F=200mA$	V_F	1.5	V
Power Dissipation at $T_L = 75^\circ C$	P_{tot}	1.5 ⁽²⁾	W
Pwak forward Surge Current 8.3ms single half sine/square wave	I_{FSM}	10	Amps
Junction Temperature	T_j	-55 ~ +175	°C
Storage Temperature Range	T_{STG}	-55 ~ +175	°C

Note1: High Temperature Solder Exemption Applied, see EU Directive Annex 7.
2. 0.375" lead length from body.

DO-41



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.160	0.205	4.10	5.20	
B	0.080	0.107	2.00	2.70	Diameter
C	0.028	0.034	0.71	0.86	Diameter
D	1.000	-----	25.40	-----	

ELECTRICAL CHARACTERISTICS @25°C

Type	V _{Znom} V	I _{ZT} mA	for r _{zT} Ω	r _{zK} at Ω	I _{ZK} mA	I _R at μA	V _R V
1N5913BP	3.3	113.6	<10	<500	1	<100	1
1N5914BP	3.6	104.2	<9	<500	1	<75	1
1N5915BP	3.9	96.1	<7.5	<500	1	<25	1
1N5916BP	4.3	87.2	<6	<500	1	<5	1
1N5917BP	4.7	79.8	<5	<500	1	<5	1.5
1N5918BP	5.1	73.5	<4	<350	1	<5	2
1N5919BP	5.6	66.9	<2	<250	1	<5	3
1N5920BP	6.2	60.5	<2	<200	1	<5	4
1N5921BP	6.8	55.1	<2.5	<200	1	<5	5.2
1N5922BP	7.5	50	<3	<400	0.5	<5	6
1N5923BP	8.2	45.7	<3.5	<400	0.5	<5	6.5
1N5924BP	9.1	41.2	<4	<500	0.5	<5	7
1N5925BP	10	37.5	<4.5	<500	0.25	<5	8
1N5926BP	11	34.1	<5.5	<550	0.25	<1	8.4
1N5927BP	12	31.2	<6.5	<550	0.25	<1	9.1
1N5928BP	13	28.8	<7	<550	0.25	<1	9.9
1N5929BP	15	25	<9	<600	0.25	<1	11.4
1N5930BP	16	23.4	<10	<600	0.25	<1	12.2
1N5931BP	18	20.8	<12	<650	0.25	<1	13.7
1N5932BP	20	18.7	<14	<650	0.25	<1	15.2
1N5933BP	22	17	<17.5	<650	0.25	<1	16.7
1N5934BP	24	15.6	<19	<700	0.25	<1	18.2
1N5935BP	27	13.9	<23	<700	0.25	<1	20.6
1N5936BP	30	12.5	<26	<750	0.25	<1	22.8
1N5937BP	33	11.4	<33	<800	0.25	<1	25.1
1N5938BP	36	10.4	<38	<850	0.25	<1	27.4
1N5939BP	39	9.6	<45	<900	0.25	<1	29.7
1N5940BP	43	8.7	<53	<950	0.25	<1	32.7
1N5941BP	47	8	<67	<1000	0.25	<1	35.8
1N5942BP	51	7.3	<70	<1100	0.25	<1	38.8
1N5943BP	56	6.7	<86	<1300	0.25	<1	42.6
1N5944BP	62	6	<100	<1500	0.25	<1	47.1
1N5945BP	68	5.5	<120	<1700	0.25	<1	51.7
1N5946BP	75	5	<140	<2000	0.25	<1	56

* TOLERANCE AND VOLTAGE DESIGNATION Tolerance designation - The type numbers listed indicate a tolerance of +/-5%

Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter
V_Z	Reverse zener voltage @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance @ I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage @ I_F

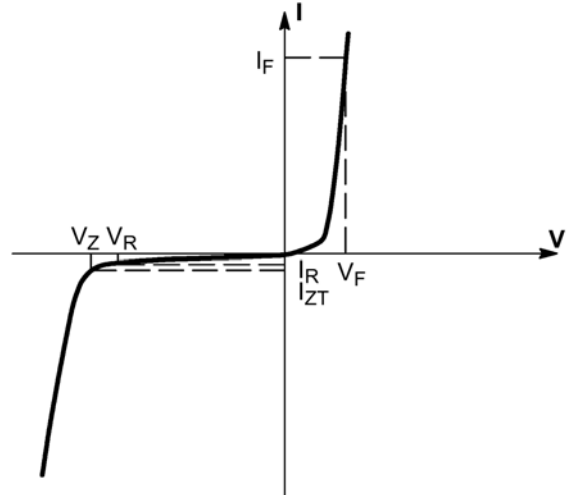


Figure 1. Zener voltage regulator

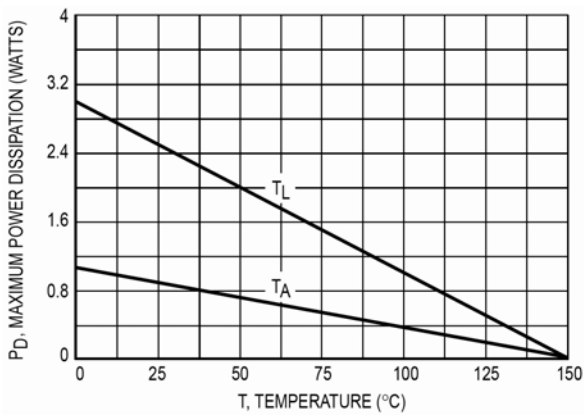


Figure 2. Steady state power derating

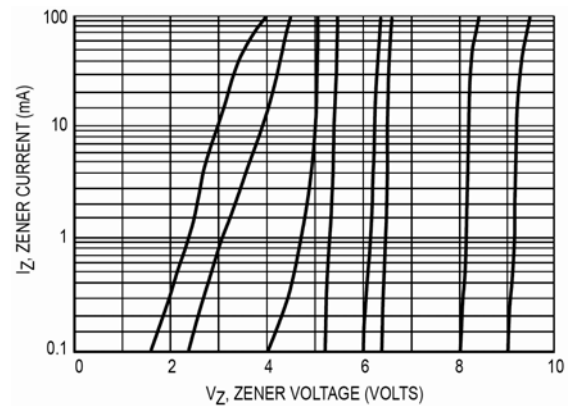


Figure 3. $V_Z - 3.3$ thru 10 volts

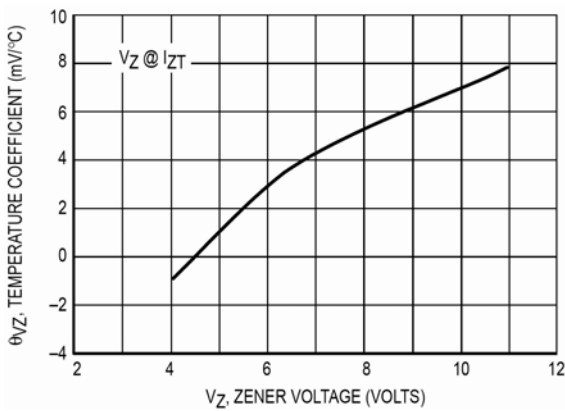


Figure 4. Zener voltage - 3.3 to 12 volts

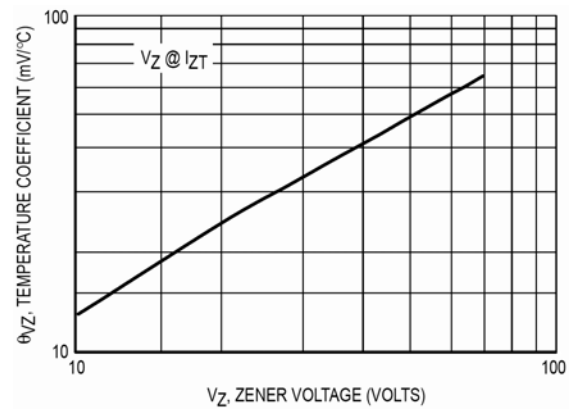


Figure 5. Zener voltage - 14 to 43 volts

1N5913BP THRU 1N5946BP

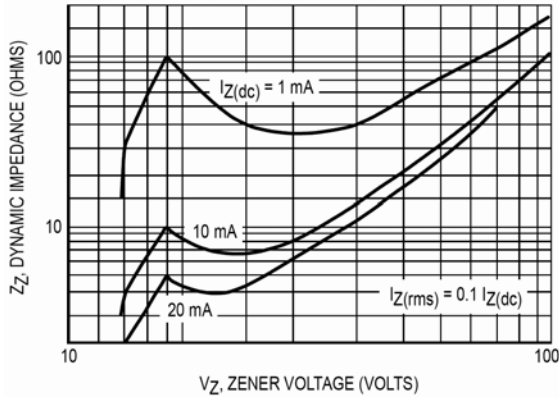


Figure 6. Effect of zener voltage

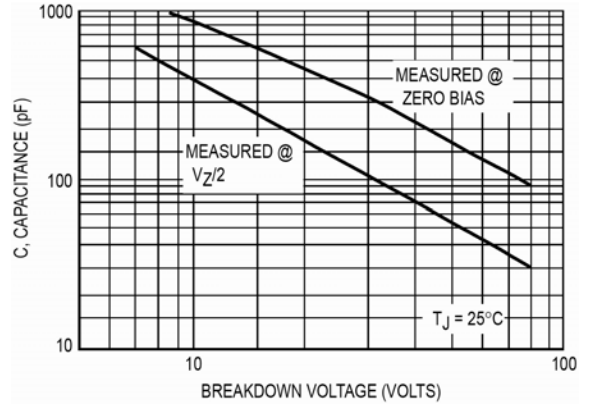


Figure 7. Capacitance curve

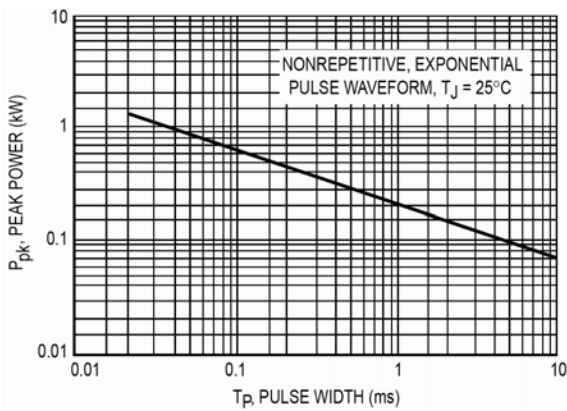


Figure 8. Typical pulse rating curve

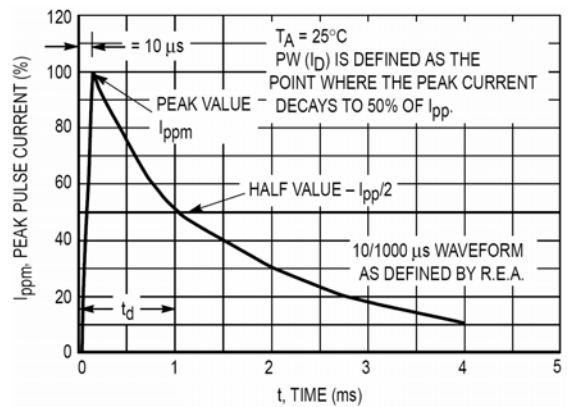


Figure 9. Pulse waveform

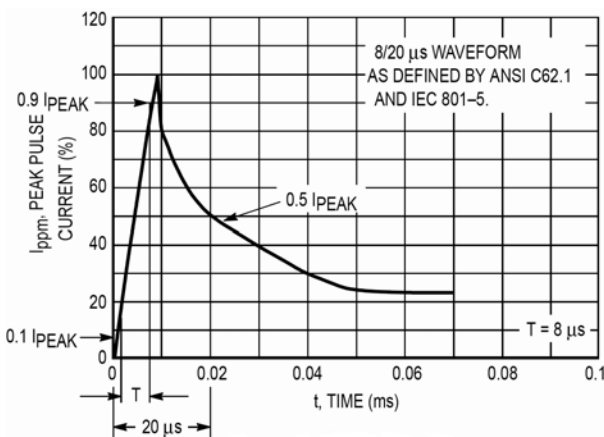


Figure 10. Pulse waveform



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

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