



Micro Commercial Components

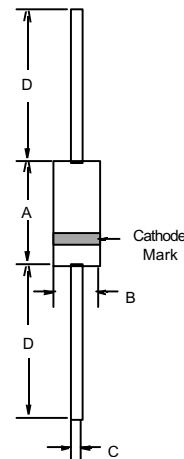


Micro Commercial Components
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**1N5913BP
 THRU
 1N5917BP**

**1.5 Watt
 Zener Diode
 3.3to 4.7 Volts**

DO-41



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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	-----	

Features

- Glass Passivated Junction
- Low Profile Package
- Low Inductance
- Built-in Strain Relief
- Halogen free available upon request by adding suffix "-HF"
- 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~1N5917B type number and Cathode Band

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°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.

ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE VZ	TEST CURRENT IZT	MAXIMUM DYNAMIC IMPEDANCE ZZT @IZT	KNEE CURRENT IZK	KNEE IMPEDANCE ZZK	MAXIMUM REVERSE CURRENT IR	REVERSE VOLTAGE VR
	VOLTS	mA	OHMS	mA	OHMS	µA	VOLTS
1N5913BP	3.3	113.6	10	1	500	100	1
1N5914BP	3.6	104.2	9	1	500	75	1
1N5915BP	3.9	96.1	7.5	1	500	25	1
1N5916BP	4.3	87.2	6	1	500	5	1
1N5917BP	4.7	79.8	5	1	500	5	1.5

* 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

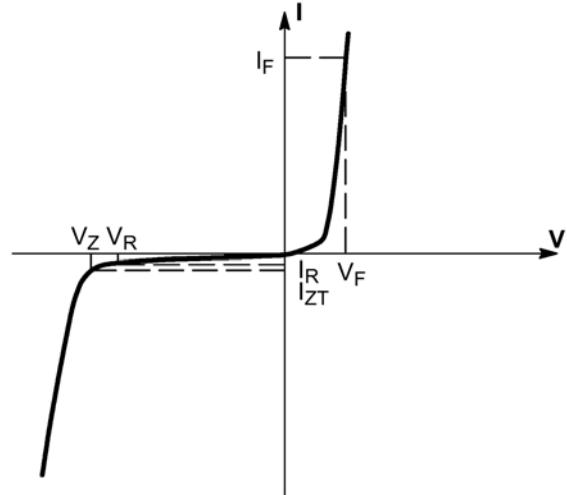


Figure 1. Zener voltage regulator

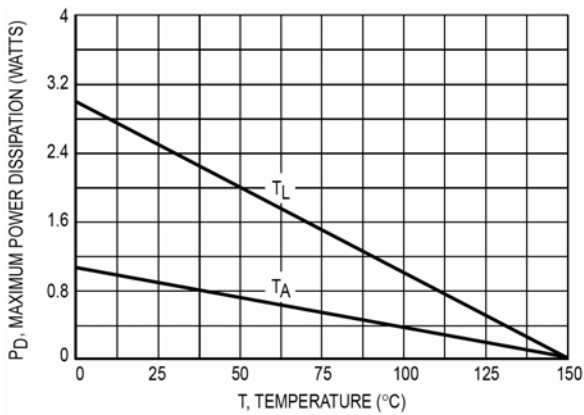


Figure 2. Steady state power derating

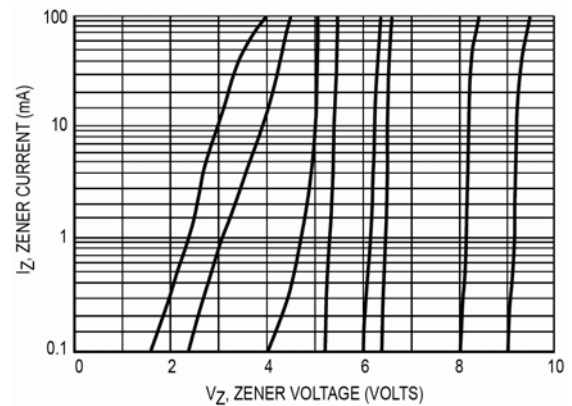


Figure 3. $V_Z - 3.3$ thru 4.7 volts

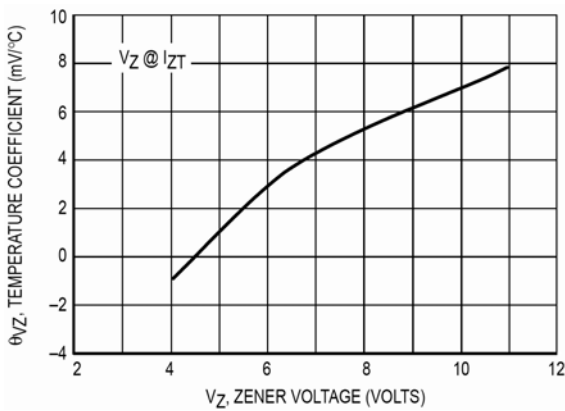


Figure 4. Zener voltage – 3.3 to 4.7 volts

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

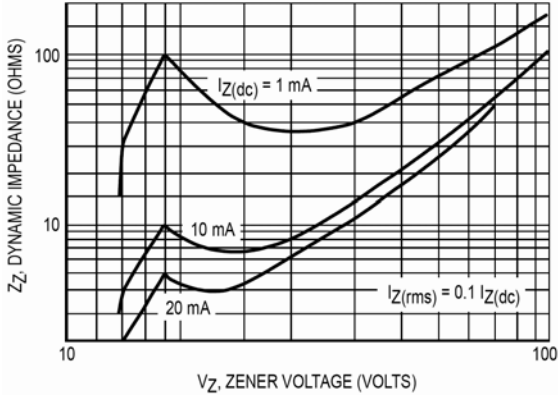


Figure 6. Effect of zener voltage

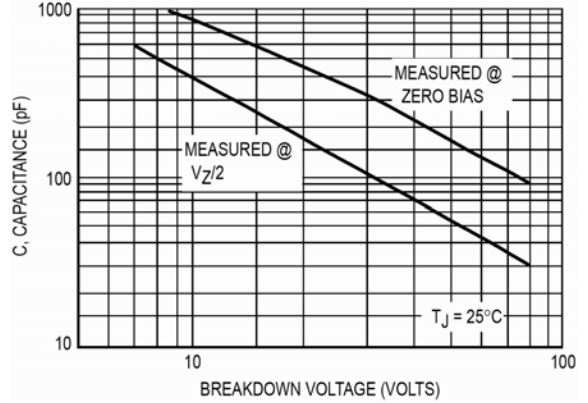


Figure 7. Capacitance curve

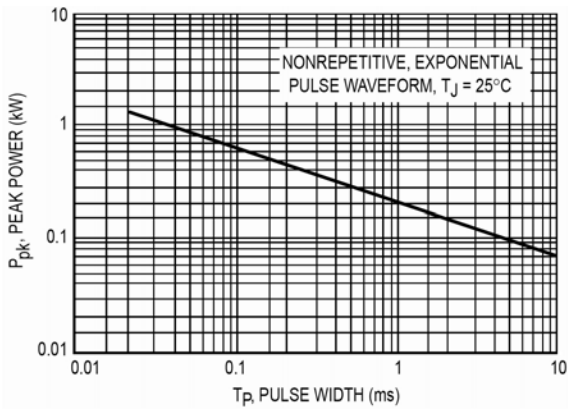


Figure 8. Typical pulse rating curve

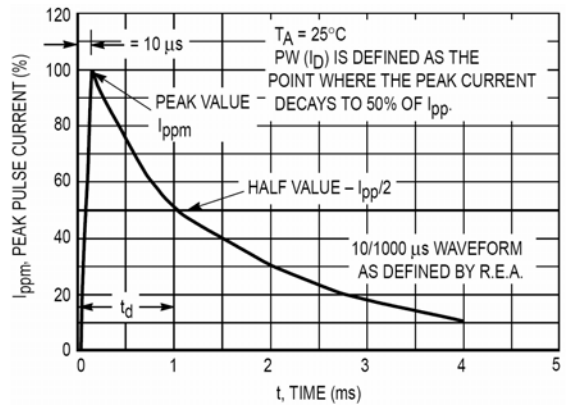


Figure 9. Pulse waveform

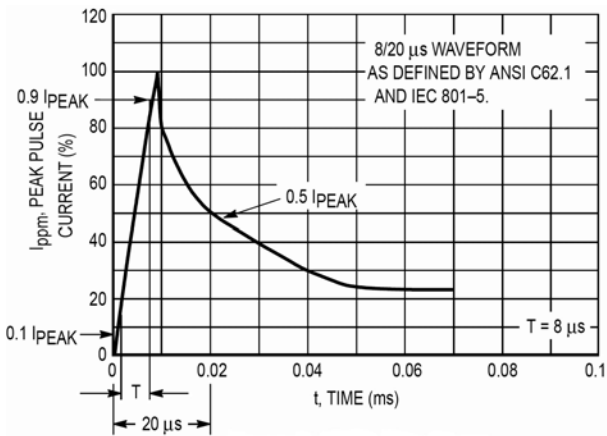


Figure 10. Pulse waveform



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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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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