

# BZY95/BZY96/Z2 SERIES

**Hermetically Sealed Metal Package ■ Voltage Regulator Diode**  
**Released to BS/CECC 9305-F082 ■ Voltage Range 3.0 to 400 Volts**  
**1.5 Watt Steady State ■ 400 Watt Peak Power**

## APPLICATIONS

- A range of medium power zener and avalanche diodes available to BS 9305-F-082 in a hermetically sealed DO1 package with both unipolar and bipolar configurations.

## FEATURES

- T operating  $-55^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- Metal and glass package DO13 or DO1
- 400 Watt surge capability at 1 mS
- Excellent clamping capability
- Typical  $I_R$  less than  $10 \mu\text{A}$  above 10V
- Fast response time: typically less than 1.0pS from 0 volts to BV min.
- High temperature soldering guaranteed 300 C/  
 .375" (9.5mm) lead length/5lb (2.3Kg) tension

## MECHANICAL DATA

- Case: Hermetically sealed DO1 outline (alternative DO13)
- Finish: All external surfaces are corrosion resistant and leads solderable
- Identification: Body marked with Type No. and logo
- Weight: 1.9 grammes (approximately)

## ELECTRICAL CHARACTERISTICS

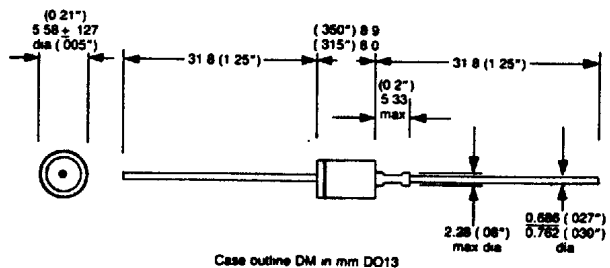
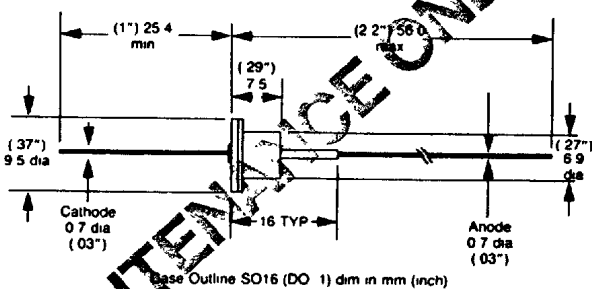
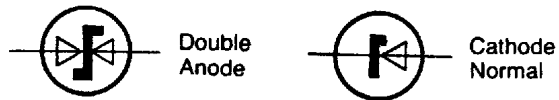
- Forward Voltage  $V_f$  1.5V max. at  $I_f = 1\text{A}$
- $V_z$  measured with pulse = 20mS
- $R_z$  determined with DC plus 10% superimposed AC @ 1KHz

## OTHER TYPES AVAILABLE

IN1507 Thru IN1517\* BS9300-C405 Thru C429 } For DO13 package add  
 IN1518 Thru IN1528 BS9300-C841 Thru C849 } suffix A (BS9300-C405A)  
 IN1765 Thru IN1802\* IS4006 Thru IS4200  
 IN2032 Thru IN2040 BZY95C10 Thru C75  
 IN2214 BZY96C4V7 Thru C10  
 IN3732

All electrical characteristics  $25^{\circ}\text{C}$  unless otherwise stated.

## AVAILABLE IN THE FOLLOWING CONFIGURATIONS



MAINTENANCE ONLY

### Electrical Characteristics @ 25°C

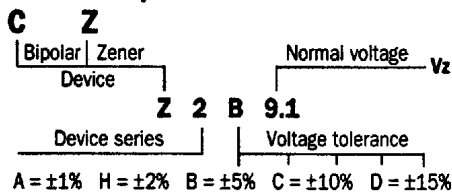
Industry Type	Semitron Type	Vz ± 5% Voltage Tolerance	Iz mA	Rz ohms		Max Ir at Vr		Temp Coef %/°C Typ
				Typ.	Max	µA	Volts	
	Z2B3.0	2.8-3.2	100	2	14	300	1.0	-0.08
	Z2B3.3	3.1-3.5	100	2	13	300	1.0	-0.07
	Z2B3.6	3.4-3.8	100	2	12	200	1.0	-0.06
	Z2B3.9	3.7-4.1	100	2	11	150	1.5	-0.05
	Z2B4.3	4.0-4.6	100	2	10	100	1.5	-0.04
	Z2B4.7	4.6-5.0	100	2	9	100	1.5	-0.015
BZY96C5V1	Z2B5.1	4.8-5.4	100	2	8	50	1.5	+0.01
BZY96C5V6	Z2B5.6	5.2-6.0	50	1.5	8	50	1.5	+0.02
BZY96C6V2	Z2B6.2	5.8-6.6	50	1.0	7	50	4.3	+0.03
BZY96C6V8	Z2B6.8	6.4-7.2	50	0.3	6	30	4.7	+0.04
BZY96C7V5	Z2B7.5	7.0-7.9	50	0.5	6	30	5.1	+0.05
BZY96C8V2	Z2B8.2	7.7-8.7	50	1.0	7	10	5.6	+0.06
BZY96C9V1	Z2B9.1	8.5-9.6	50	2	8	10	6.2	0 + .065
BZY96C10/BZY96C10	Z2B10	9.4-10.6	50	2	8	10	6.8	+0.07
BZY96C11	Z2B11	10.4-11.6	50	3	9	10	7.5	+0.07
BZY96C12	Z2B12	11.4-12.7	50	4	9	10	8.2	+0.075
BZY96C13	Z2B13	12.4-14.1	50	5	10	10	9.1	+0.075
BZY96C15	Z2B15	13.8-15.6	50	6	10	10	10.0	+0.08
BZY96C16	Z2B16	15.3-17.1	20	10	12	10	11.0	+0.08
BZY96C18	Z2B18	16.8-19.1	20	12	15	10	12.0	+0.08
BZY96C20	Z2B20	18.8-21.2	20	13	18	10	13.0	+0.085
BZY96C22	Z2B22	20.8-23.3	20	14	27	10	15.0	+0.09
BZY96C24	Z2B24	22.7-25.9	20	15	30	10	16.0	+0.09
BZY96C27	Z2B27	25.1-28.9	20	16	32	10	18.0	+0.095
BZY96C30	Z2B30	28.0-32.0	20	20	34	10	20.0	+0.095
BZY96C33	Z2B33	31.0-35.0	20	24	36	10	22.0	+0.10
BZY96C36	Z2B36	34.0-38.0	20	28	38	10	24.0	+0.10
BZY96C39	Z2B39	37.0-41.0	10	34	45	10	27.0	+0.10
BZY96C43	Z2B43	40.0-46.0	10	45	60	10	30.0	+0.105
BZY96C47	Z2B47	44.0-50.0	10	50	70	10	33.0	+0.105
BZY96C51	Z2B51	48.0-54.0	10	68	90	10	36.0	+0.105
BZY96C56	Z2B56	52.0-60.0	10	75	100	10	39.0	+0.105
BZY96C62	Z2B62	58.0-66.0	10	83	110	10	43.0	+0.11
BZY96C68	Z2B68	64.0-72.0	10	90	120	10	47.0	+0.11
BZY96C75	Z2B75	70.0-79.0	10	98	130	10	51.0	+0.11
	Z2B82	77.0-87.0	10	130	175	10	56.0	+0.11
	Z2B91	85.0-96.0	5	150	200	10	62.0	+0.11
	Z2B100	94.0-106	5	200	350	10	68.0	+0.11
	Z2B110	104.0-116.0	5	300	450	10	75.0	+0.11
	Z2B120	114.0-127.0	5	320	550	10	82.0	+0.11
	Z2B130	124.0-141.0	5	350	650	10	91.0	+0.11
	Z2B150	138.0-156.0	5	400	800	10	100.0	+0.11
	Z2B160	153.0-171.0	5	500	1000	10	110.0	+0.11
	Z2B180	168.0-191.0	5	700	1200	10	120.0	+0.11
	Z2B200	188.0-212.0	5	800	1700	10	130.0	+0.11
	Z2B400	380.0-420.0	1	2K	3K	10	300.0	+0.11

For BS device specify conforming to BS 9300 or BS 9305-F-082 issue 2.  
 Full specification available on request.

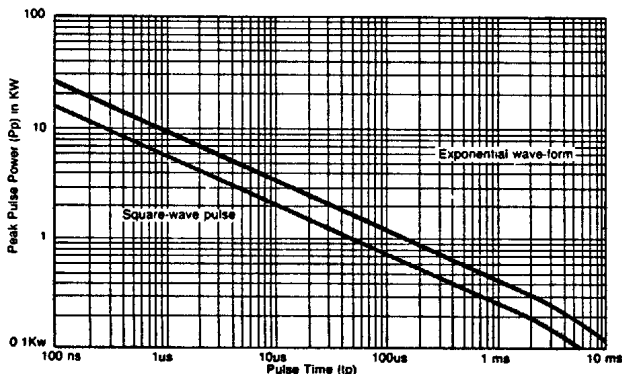
\*For D013 package to commercial spec. replace figure 2 with letter D.  
 i.e. ZDB9.1

FORWARD VOLTAGE Vf 1.5V max at If = 1A  
 Vz measured with pulse = 20ms  
 Rz determined with DC plus 10% superimposed AC @ 1KHz

### Code Interpretation



### NON-REPETITIVE PEAK PULSE POWER RATING CURVE



Note. Peak power defined as peak voltage times peak current

### MAXIMUM STEADY STATE DISSIPATION VERSUS CASE TEMPERATURE

