

BZV55C2V4
THRU
BZV55C75

SURFACE MOUNT
SILICON ZENER DIODE
0.5 WATT, 2.4 THRU 75 VOLTS
± 5% TOLERANCE



SOD-80 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BZV55C2V4 Series Surface Mount Silicon Zener Diode is a high quality, well constructed, highly reliable component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications.

MAXIMUM RATINGS: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| | <u>SYMBOL</u> | | <u>UNITS</u> |
|--|----------------|-------------|--------------------|
| Average Forward Current | I_O | 250 | mA |
| Peak Repetitive Forward Current | I_{FRM} | 250 | mA |
| Power Dissipation ($T_L=50^{\circ}\text{C}$) | P_D | 500 | mW |
| Operating and Storage | | | |
| Junction Temperature | T_J, T_{stg} | -65 to +200 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS: ($T_A=25^{\circ}\text{C}$), $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ FOR ALL TYPES.

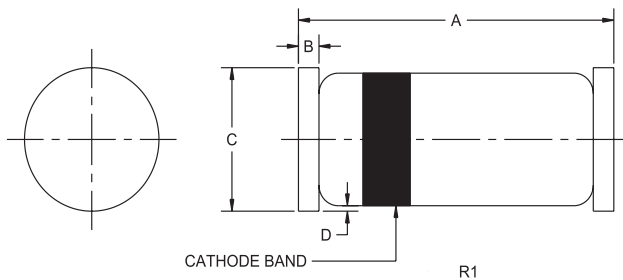
| TYPE NO. | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT I_{ZM} |
|-----------|---------------------------------|-------|-------|--------------------------|-------------------------|-------------------|-----|-------------------------|-------|-----------------------------------|
| | MIN | NOM | MAX | | $Z_{ZT}@I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | | $I_R @ V_R$ | | |
| | VOLTS | VOLTS | VOLTS | mA | Ω | Ω | mA | μA | VOLTS | mA |
| BZV55C2V4 | 2.280 | 2.4 | 2.520 | 5.0 | 100 | 600 | 1.0 | 50 | 1.0 | 208 |
| BZV55C2V7 | 2.565 | 2.7 | 2.835 | 5.0 | 100 | 600 | 1.0 | 20 | 1.0 | 185 |
| BZV55C3V0 | 2.850 | 3.0 | 3.150 | 5.0 | 95 | 600 | 1.0 | 10 | 1.0 | 167 |
| BZV55C3V3 | 3.135 | 3.3 | 3.465 | 5.0 | 95 | 600 | 1.0 | 5.0 | 1.0 | 152 |
| BZV55C3V6 | 3.420 | 3.6 | 3.780 | 5.0 | 90 | 600 | 1.0 | 5.0 | 1.0 | 139 |
| BZV55C3V9 | 3.705 | 3.9 | 4.095 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | 128 |
| BZV55C4V3 | 4.085 | 4.3 | 4.515 | 5.0 | 90 | 600 | 1.0 | 3.0 | 1.0 | 116 |
| BZV55C4V7 | 4.465 | 4.7 | 4.935 | 5.0 | 80 | 500 | 1.0 | 3.0 | 2.0 | 106 |
| BZV55C5V1 | 4.845 | 5.1 | 5.355 | 5.0 | 60 | 480 | 1.0 | 2.0 | 2.0 | 96 |
| BZV55C5V6 | 5.320 | 5.6 | 5.880 | 5.0 | 40 | 400 | 1.0 | 1.0 | 2.0 | 89 |
| BZV55C6V2 | 5.890 | 6.2 | 6.510 | 5.0 | 10 | 150 | 1.0 | 3.0 | 4.0 | 81 |
| BZV55C6V8 | 6.460 | 6.8 | 7.140 | 5.0 | 15 | 80 | 1.0 | 2.0 | 4.0 | 74 |
| BZV55C7V5 | 7.125 | 7.5 | 7.875 | 5.0 | 15 | 80 | 1.0 | 1.0 | 5.0 | 67 |
| BZV55C8V2 | 7.790 | 8.2 | 8.610 | 5.0 | 15 | 80 | 1.0 | 0.7 | 5.0 | 61 |
| BZV55C9V1 | 8.645 | 9.1 | 9.555 | 5.0 | 15 | 100 | 1.0 | 0.5 | 6.0 | 55 |
| BZV55C10 | 9.500 | 10 | 10.50 | 5.0 | 20 | 150 | 1.0 | 0.1 | 7.0 | 50 |
| BZV55C11 | 10.45 | 11 | 11.55 | 5.0 | 20 | 150 | 1.0 | 0.1 | 8.0 | 45 |

R0 (13-November 2001)

ELECTRICAL CHARACTERISTICS CONTINUED: ($T_A=25^\circ\text{C}$), $V_F=0.9\text{V MAX @ } I_F=10\text{mA}$ FOR ALL TYPES.

| TYPE NO. | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM ZENER CURRENT |
|----------|---------------------------------|-------|-------|--------------|-------------------------|-------------------|---------------|-------------------------|---------------------|-----------------------|
| | MIN | NOM | MAX | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_R @ V_R | I_{ZM} | | |
| | VOLTS | VOLTS | VOLTS | mA | Ω | Ω mA | | | μA VOLTS | mA |
| BZV55C12 | 11.40 | 12 | 12.60 | 5.0 | 25 | 150 | 1.0 | 0.1 | 8.0 | 42 |
| BZV55C13 | 12.35 | 13 | 13.65 | 5.0 | 30 | 170 | 1.0 | 0.1 | 8.0 | 38 |
| BZV55C15 | 14.25 | 15 | 15.75 | 5.0 | 30 | 200 | 1.0 | 0.05 | 10.5 | 33 |
| BZV55C16 | 15.20 | 16 | 16.80 | 5.0 | 40 | 200 | 1.0 | 0.05 | 11.2 | 31 |
| BZV55C18 | 17.10 | 18 | 18.90 | 5.0 | 45 | 225 | 1.0 | 0.05 | 12.6 | 28 |
| BZV55C20 | 19.00 | 20 | 21.00 | 5.0 | 55 | 225 | 1.0 | 0.05 | 14.0 | 25 |
| BZV55C22 | 20.90 | 22 | 23.10 | 5.0 | 55 | 250 | 1.0 | 0.05 | 15.4 | 23 |
| BZV55C24 | 22.80 | 24 | 25.20 | 5.0 | 70 | 250 | 1.0 | 0.05 | 16.8 | 21 |
| BZV55C27 | 25.65 | 27 | 28.35 | 2.0 | 80 | 300 | 0.5 | 0.05 | 18.9 | 19 |
| BZV55C30 | 28.50 | 30 | 31.50 | 2.0 | 80 | 300 | 0.5 | 0.05 | 21.0 | 17 |
| BZV55C33 | 31.35 | 33 | 34.65 | 2.0 | 80 | 325 | 0.5 | 0.05 | 23.1 | 15 |
| BZV55C36 | 34.20 | 36 | 37.80 | 2.0 | 90 | 350 | 0.5 | 0.05 | 25.2 | 14 |
| BZV55C39 | 37.05 | 39 | 40.95 | 2.0 | 130 | 350 | 0.5 | 0.05 | 27.3 | 13 |
| BZV55C43 | 40.85 | 43 | 45.15 | 2.0 | 150 | 375 | 0.5 | 0.05 | 30.1 | 12 |
| BZV55C47 | 44.65 | 47 | 49.35 | 2.0 | 170 | 375 | 0.5 | 0.05 | 32.9 | 11 |
| BZV55C51 | 48.45 | 51 | 53.55 | 2.0 | 180 | 400 | 0.5 | 0.05 | 35.7 | 9.9 |
| BZV55C56 | 53.20 | 56 | 58.80 | 2.0 | 200 | 425 | 0.5 | 0.05 | 39.2 | 8.9 |
| BZV55C62 | 58.90 | 62 | 65.10 | 2.0 | 215 | 450 | 0.5 | 0.05 | 43.4 | 8.0 |
| BZV55C68 | 64.60 | 68 | 71.40 | 2.0 | 240 | 475 | 0.5 | 0.05 | 47.6 | 7.4 |
| BZV55C75 | 71.25 | 75 | 78.75 | 2.0 | 255 | 500 | 0.5 | 0.05 | 52.5 | 6.7 |

SOD-80 CASE - MECHANICAL OUTLINE



| SYMBOL | INCHES | | MILLIMETERS | |
|---------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.130 | 0.146 | 3.30 | 3.71 |
| B | 0.016 | | 0.41 | |
| C (DIA) | 0.051 | 0.067 | 1.30 | 1.70 |
| D | - | 0.004 | - | 0.10 |

SOD-80 (REV:R1)

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