



**AZ23C2V7  
 THRU  
 AZ23C51**

**Features**

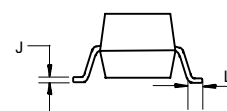
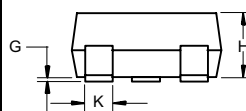
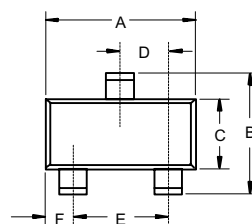
- Dual zeners in common anode configuration.
- 300mW power dissipation rating.
- Ideally suited for automatic insertion.
- $\Delta v_z$  for both diodes in one case is  $\leq 5\%$ .
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

**300 mW  
 Zener Diode  
 2.7 to 51 Volts**

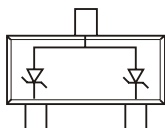
**Absolute Maximum Ratings**

| Symbol     | Parameter                                   | Rating      | Unit          |
|------------|---|-------------|---------------|
| $P_D$      | Power dissipation                           | 300         | mW            |
| $R_{thJA}$ | Thermal Resistance, Junction to Ambient Air | 417         | $^{\circ}C/W$ |
| $T_{STG}$  | Storage Temperature Range                   | -65 to +175 | $^{\circ}C$   |

**SOT-23**



\*Pin Configuration - Top View



DIMENSIONS

| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | .110   | .120  | 2.80 | 3.04 |      |
| B   | .083   | .104  | 2.10 | 2.64 |      |
| C   | .047   | .055  | 1.20 | 1.40 |      |
| D   | .035   | .041  | .89  | 1.03 |      |
| E   | .070   | .081  | 1.78 | 2.05 |      |
| F   | .018   | .024  | .45  | .60  |      |
| G   | .0005  | .0039 | .013 | .100 |      |
| H   | .035   | .044  | .89  | 1.12 |      |
| J   | .003   | .007  | .085 | .180 |      |
| K   | .015   | .020  | .37  | .51  |      |
| L   | .007   | .020  | .20  | .50  |      |

**AZ23C2V7 THRU AZ23C51**
**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

| Type Number | Marking Code | Zener voltage Range (note1) | Maximum zener Impedance (note 2) |                              | Typical Temperature coefficient | Min reverse Voltage (note1) |
|-------------|--------------|-----------------------------|----------------------------------|------------------------------|---------------------------------|-----------------------------|
|             |              | @ $I_{ZT}=5.0\text{mA}$     | $Z_{ZT}@I_{ZT}=5.0\text{mA}$     | $Z_{Zk}@I_{Zk}=1.0\text{mA}$ |                                 | @ $I_R=0.1\mu\text{A}$      |
|             |              | $V_Z$ (volts )              | Ohms                             | Ohms                         | $T_c$ (%/ $^\circ\text{C}$ )    | $V_R$ (volts)               |
| AZ23C2V7    | KD1          | 2.5-2.9                     | 83                               | 500                          | -0.065                          | —                           |
| AZ23C3V0    | KD2          | 2.8-3.2                     | 95                               | 500                          | -0.060                          | —                           |
| AZ23C3V3    | KD3          | 3.1-3.5                     | 95                               | 500                          | -0.055                          | —                           |
| AZ23C3V6    | KD4          | 3.4-3.8                     | 95                               | 500                          | -0.055                          | —                           |
| AZ23C3V9    | KD5          | 3.7-4.1                     | 95                               | 500                          | -0.050                          | —                           |
| AZ23C4V3    | KD6          | 4.0-4.6                     | 95                               | 500                          | -0.035                          | —                           |
| AZ23C4V7    | KD7          | 4.4-5.0                     | 78                               | 500                          | -0.015                          | —                           |
| AZ23C5V1    | KD8          | 4.8-5.4                     | 60                               | 480                          | +0.005                          | 0.8                         |
| AZ23C5V6    | KD9          | 5.2-6.0                     | 40                               | 400                          | +0.020                          | 1.0                         |
| AZ23C6V2    | KDA          | 5.8-6.6                     | 10                               | 200                          | +0.030                          | 2.0                         |
| AZ23C6V8    | KDB          | 6.4-7.2                     | 8.0                              | 150                          | +0.045                          | 3.0                         |
| AZ23C7V5    | KDC          | 7.0-7.9                     | 7.0                              | 50                           | +0.050                          | 5.0                         |
| AZ23C8V2    | KDD          | 7.7-8.7                     | 7.0                              | 50                           | +0.055                          | 6.0                         |
| AZ23C9V1    | KDE          | 8.5-9.6                     | 10                               | 50                           | +0.065                          | 7.0                         |
| AZ23C10     | KDF          | 9.4-10.6                    | 15                               | 70                           | +0.065                          | 7.5                         |
| AZ23C11     | KDG          | 10.4-11.6                   | 20                               | 70                           | +0.070                          | 8.5                         |
| AZ23C12     | KDH          | 11.4-12.7                   | 20                               | 90                           | +0.075                          | 9.0                         |
| AZ23C13     | KDI          | 12.4-14.1                   | 25                               | 110                          | +0.080                          | 10.0                        |
| AZ23C15     | KDJ          | 13.8-15.6                   | 30                               | 110                          | +0.080                          | 11.0                        |
| AZ23C16     | KDK          | 15.3-17.1                   | 40                               | 170                          | +0.090                          | 12.0                        |
| AZ23C18     | KDL          | 16.8-19.1                   | 50                               | 170                          | +0.090                          | 14.0                        |
| AZ23C20     | KDM          | 18.8-21.2                   | 50                               | 220                          | +0.090                          | 15.0                        |
| AZ23C22     | KDN          | 20.8-23.3                   | 55                               | 220                          | +0.090                          | 17.0                        |
| AZ23C24     | KDO          | 22.8-25.6                   | 80                               | 220                          | +0.090                          | 18.0                        |
| AZ23C27     | KDP          | 25.1-28.9                   | 80                               | 250                          | +0.090                          | 20.0                        |
| AZ23C30     | KDQ          | 28-32                       | 80                               | 250                          | +0.090                          | 22.5                        |
| AZ23C33     | KDR          | 31-35                       | 80                               | 250                          | +0.090                          | 25.0                        |
| AZ23C36     | KDS          | 34-38                       | 90                               | 250                          | +0.090                          | 27.0                        |
| AZ23C39     | KDT          | 37-41                       | 90                               | 300                          | +0.110                          | 29.0                        |
| AZ23C43     | D30          | 40-46                       | 100                              | 700                          | +0.110                          | 32.0                        |
| AZ23C47     | D31          | 44-50                       | 100                              | 750                          | +0.110                          | 35.0                        |
| AZ23C51     | D32          | 48-54                       | 100                              | 750                          | +0.110                          | 38.0                        |

Notes: 1. Short duration test pulse used to minimize self-heating effect.

 2.  $f=1\text{kHz}$

**AZ23C2V7-AZ23C51**

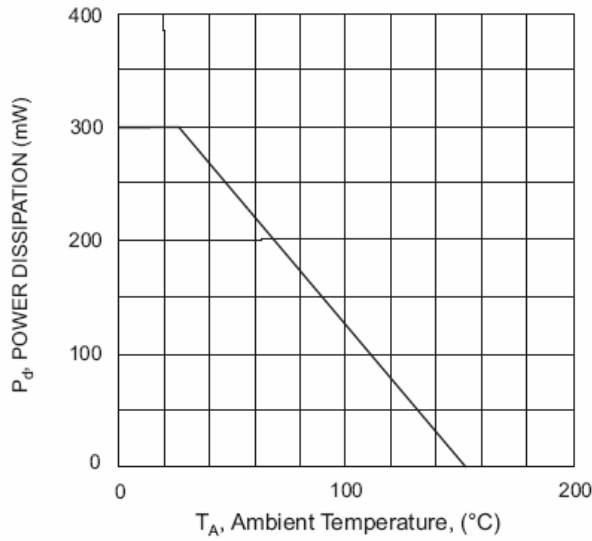


Fig. 1 Power Derating Curve

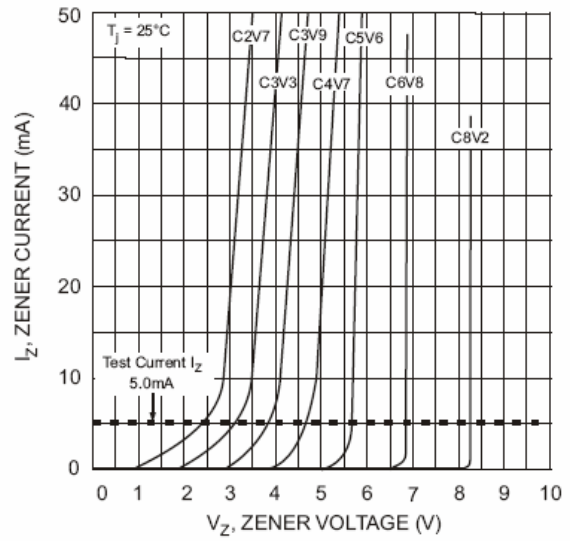


Fig. 2 Zener Breakdown Characteristics

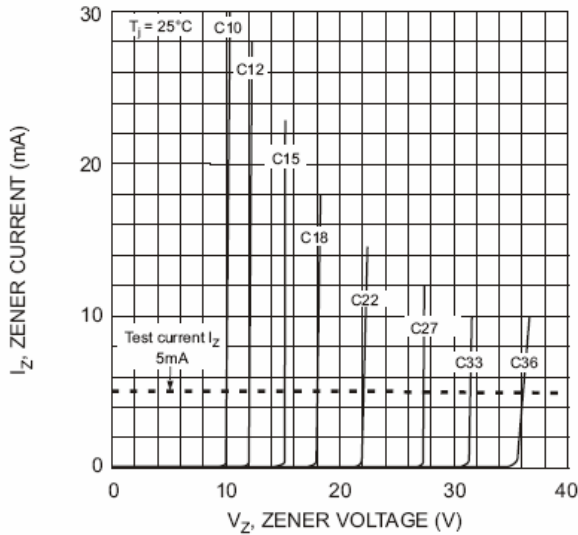


Fig. 3 Zener Breakdown Characteristics

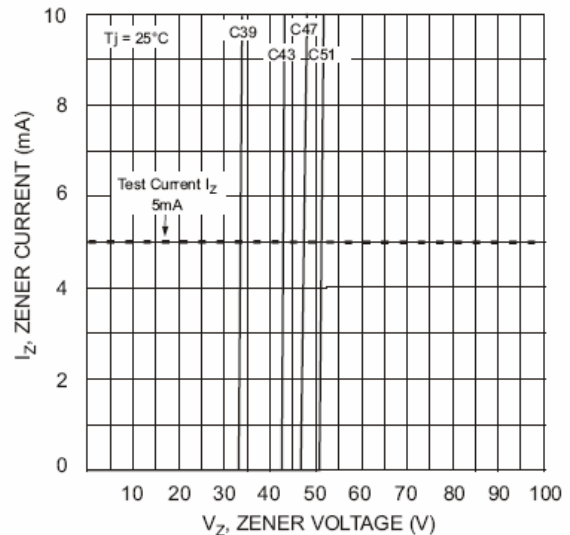


Fig. 4 Zener Breakdown Characteristics

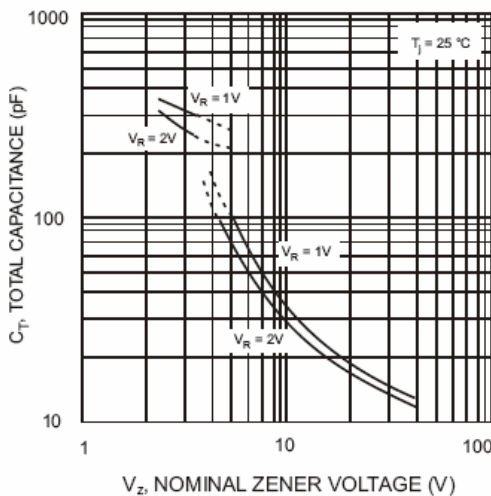


Fig. 5 Total Capacitance vs Nominal Zener Voltage



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### Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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

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