



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

BZT52C2V4
THRU
BZT52C43

Features

- Planar Die Construction
500mW Power Dissipation on Ceramic PCB
General Purpose Medium Current
Ideally Suited for Automated Assembly Processes
Epoxy meets UL 94 V-0 flammability rating
Moisture Sensitivity Level 1
Lead Free Finish/RoHS Compliant("P" Suffix designates RoHS Compliant. See ordering information)
Halogen free available upon request by adding suffix "-HF"

500 mW
Zener Diode
2.4 to 43 Volts

Absolute Maximum Ratings

Table with 4 columns: Symbol, Rating, Rating, Unit. Rows include Power dissipation (500 mW), Junction Temperature (-65 to +150 °C), and Storage Temperature Range (-65 to +150 °C).

Absolute Maximum Ratings

Table with 4 columns: Symbol, Rating, Rating, Unit. Row includes Thermal Resistance Junction to Ambient\* (250 °C/W).

\* Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm²

Electrical Characteristics

Table with 4 columns: Symbol, Rating, Rating, Unit. Row includes Maximum Forward Voltage (VF) at IF=10mA dc (0.9 V).

SOD-123

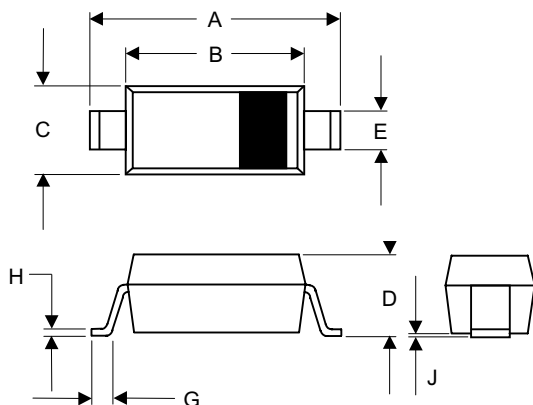
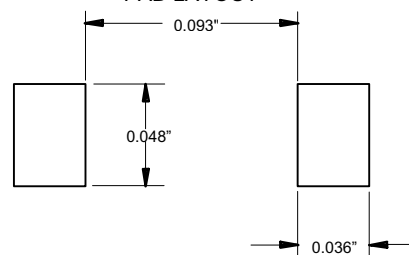


Table titled 'DIMENSIONS' with columns for DIM, INCHES (MIN, MAX), MM (MIN, MAX), and NOTE. Rows A through J provide specific dimension values.

SUGGESTED SOLDER PAD LAYOUT



**ELECTRICAL CHARACTERISTICS @25°C**

| Type      | ZENER VOLTAGE<br>$V_Z^{(1)}$<br>VOLTS |     |      | Maximum Zener Impedance <sup>(2)</sup><br>$Z_{ZT}$ (OHMS) |      | Maximum Zener Impedance <sup>(2)</sup><br>$Z_{ZK}$ (OHMS) |      | REVERSE CURRENT<br>$I_R$ (Max) @ $V_R$ |      | Typical Temperature Coefficient<br>@ $I_{ZTC}$ |      | Marking |
|-----------|---------------------------------------|-----|------|---|------|---|------|--|------|--|------|---------|
|           | Min.                                  | Nom | Max. | $I_{ZT}$ (mA)   | Max. | $I_{ZK}$ (mA)   | Max. | $\mu A$                                | V    | mV/°C  |      |         |
| BZT52C2V4 | 2.28                                  | 2.4 | 2.56 | 5   | 100  | 1.0   | 600  | 50                                     | 1.0  | -3.5   | 0    | WX      |
| BZT52C2V7 | 2.5                                   | 2.7 | 2.9  | 5   | 100  | 1.0   | 600  | 20                                     | 1.0  | -3.5   | 0    | W1      |
| BZT52C3V0 | 2.8                                   | 3.0 | 3.2  | 5   | 95   | 1.0   | 600  | 10                                     | 1.0  | -3.5   | 0    | W2      |
| BZT52C3V3 | 3.1                                   | 3.3 | 3.5  | 5   | 95   | 1.0   | 600  | 5                                      | 1.0  | -3.5   | 0    | W3      |
| BZT52C3V6 | 3.4                                   | 3.6 | 3.8  | 5   | 90   | 1.0   | 600  | 5                                      | 1.0  | -3.5   | 0    | W4      |
| BZT52C3V9 | 3.7                                   | 3.9 | 4.1  | 5   | 90   | 1.0   | 600  | 3                                      | 1.0  | -3.5   | 0    | W5      |
| BZT52C4V3 | 4.0                                   | 4.3 | 4.6  | 5   | 90   | 1.0   | 600  | 3                                      | 1.0  | -3.5   | 0    | W6      |
| BZT52C4V7 | 4.4                                   | 4.7 | 5.0  | 5   | 80   | 1.0   | 500  | 3                                      | 2.0  | -3.5   | 0.2  | W7      |
| BZT52C5V1 | 4.8                                   | 5.1 | 5.4  | 5   | 60   | 1.0   | 480  | 2                                      | 2.0  | -2.7   | 1.2  | W8      |
| BZT52C5V6 | 5.2                                   | 5.6 | 6.0  | 5   | 40   | 1.0   | 400  | 1                                      | 2.0  | -2.0   | 2.5  | W9      |
| BZT52C6V2 | 5.8                                   | 6.2 | 6.6  | 5   | 10   | 1.0   | 150  | 3                                      | 4.0  | 0.4  | 3.7  | WA      |
| BZT52C6V8 | 6.4                                   | 6.8 | 7.2  | 5   | 15   | 1.0   | 80   | 2                                      | 4.0  | 1.2  | 4.5  | WB      |
| BZT52C7V5 | 7.0                                   | 7.5 | 7.9  | 5   | 15   | 1.0   | 80   | 1                                      | 5.0  | 2.5  | 5.3  | WC      |
| BZT52C8V2 | 7.7                                   | 8.2 | 8.7  | 5   | 15   | 1.0   | 80   | 0.7                                    | 5.0  | 3.2  | 6.2  | WD      |
| BZT52C9V1 | 8.5                                   | 9.1 | 9.6  | 5   | 15   | 1.0   | 100  | 0.5                                    | 6.0  | 3.8  | 7.0  | WE      |
| BZT52C10  | 9.4                                   | 10  | 10.6 | 5   | 20   | 1.0   | 150  | 0.2                                    | 7.0  | 4.5  | 8.0  | WF      |
| BZT52C11  | 10.4                                  | 11  | 11.6 | 5   | 20   | 1.0   | 150  | 0.1                                    | 8.0  | 5.4  | 9.0  | WG      |
| BZT52C12  | 11.4                                  | 12  | 12.7 | 5   | 25   | 1.0   | 150  | 0.1                                    | 8.0  | 6.0  | 10.0 | WH      |
| BZT52C13  | 12.4                                  | 13  | 14.1 | 5   | 30   | 1.0   | 170  | 0.1                                    | 8.0  | 7.0  | 11.0 | WI      |
| BZT52C15  | 13.8                                  | 15  | 15.6 | 5   | 30   | 1.0   | 200  | 0.1                                    | 10.5 | 9.2  | 13.0 | WJ      |
| BZT52C16  | 15.3                                  | 16  | 17.1 | 5   | 40   | 1.0   | 200  | 0.1                                    | 11.2 | 10.4   | 14.0 | WK      |
| BZT52C18  | 16.8                                  | 18  | 19.1 | 5   | 45   | 1.0   | 225  | 0.1                                    | 12.6 | 12.4   | 16.0 | WL      |
| BZT52C20  | 18.8                                  | 20  | 21.2 | 5   | 55   | 1.0   | 225  | 0.1                                    | 14.0 | 14.4   | 18.0 | WM      |
| BZT52C22  | 20.8                                  | 22  | 23.3 | 5   | 55   | 1.0   | 250  | 0.1                                    | 15.4 | 16.4   | 20.0 | WN      |
| BZT52C24  | 22.8                                  | 24  | 25.6 | 5   | 70   | 1.0   | 250  | 0.1                                    | 16.8 | 18.4   | 22.0 | WO      |
| BZT52C27  | 25.1                                  | 27  | 28.9 | 2   | 80   | 0.5   | 300  | 0.1                                    | 18.9 | 21.4   | 25.3 | WP      |
| BZT52C30  | 28                                    | 30  | 32   | 2   | 80   | 0.5   | 300  | 0.1                                    | 21.0 | 24.4   | 29.4 | WQ      |
| BZT52C33  | 31                                    | 33  | 35   | 2   | 80   | 0.5   | 325  | 0.1                                    | 23.1 | 27.4   | 33.4 | WR      |
| BZT52C36  | 34                                    | 36  | 38   | 2   | 90   | 0.5   | 350  | 0.1                                    | 25.2 | 30.4   | 37.4 | WS      |
| BZT52C39  | 37                                    | 39  | 41   | 2   | 130  | 0.5   | 350  | 0.1                                    | 27.3 | 33.4   | 41.2 | WT      |
| BZT52C43  | 40                                    | 43  | 46   | 5   | 100  | 1.0   | 700  | 0.1                                    | 32.0 | 10.0   | 12.0 | WU      |

(1) Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25 mm<sup>2</sup>  
 (2) f=1KHz

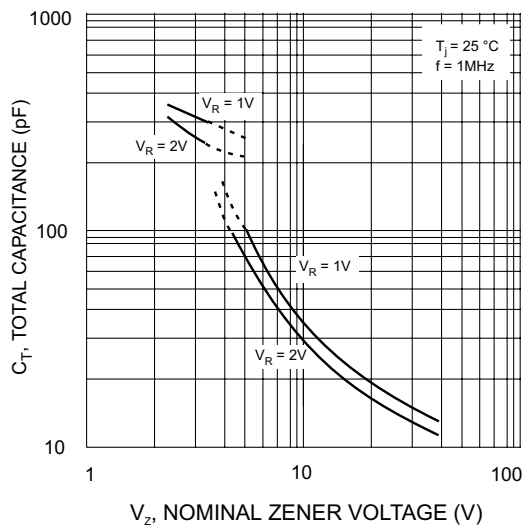


Fig. 1 Total Capacitance vs Nominal Zener Voltage

# BZT52C2V4 THRU BZT52C43



Fig. 2 Power Dissipation vs Ambient Temperature



Fig. 3 Zener Breakdown Characteristics

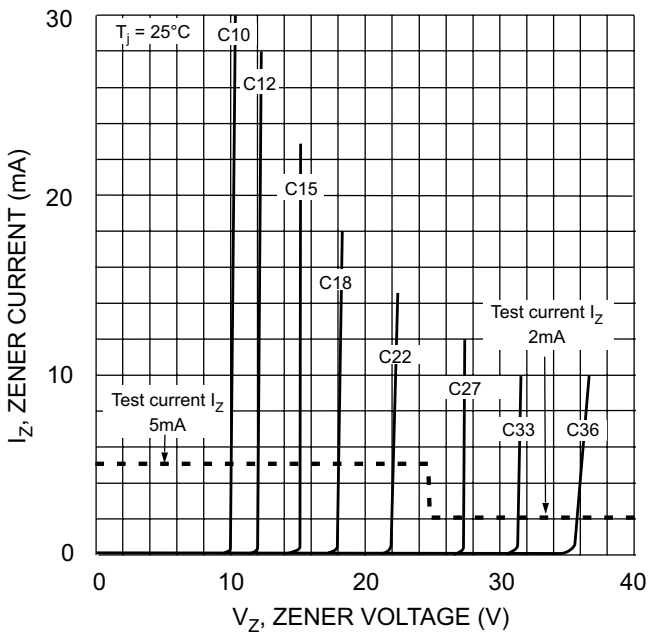


Fig. 4 Zener Breakdown Characteristics

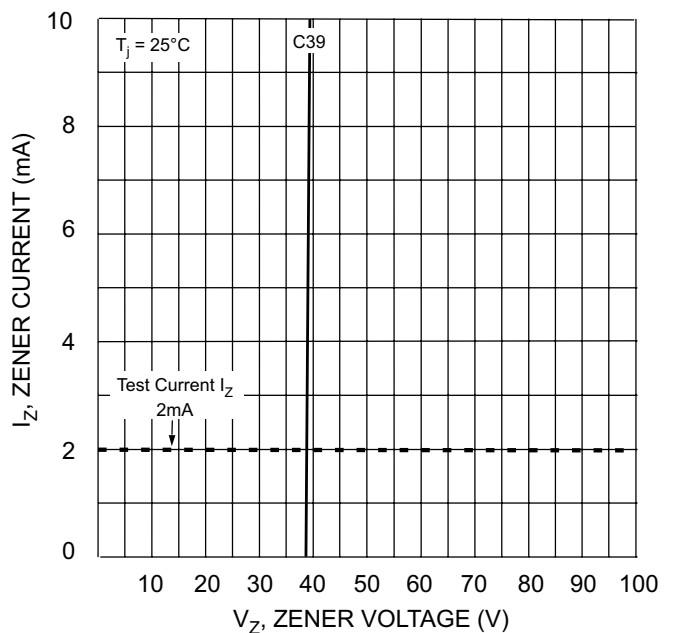


Fig. 5 Zener Breakdown Characteristics



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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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- Подбор аналогов;
- Консультации по применению компонента;
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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.