

## Features

- ✧ Silicon zener diodes
- ✧ Low profile surface-mount package
- ✧ Zener and surge current specification
- ✧ Low leakage current
- ✧ Excellent stability
- ✧ High temperature soldering: 260°C / 10 sec at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

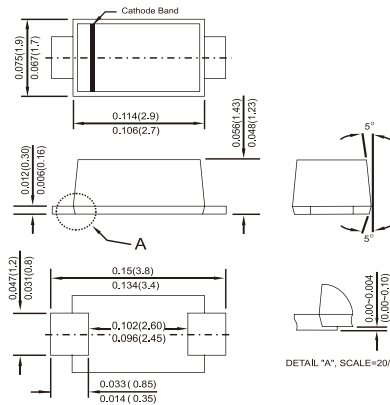
## Mechanical Data

- ✧ Case: Sub SMA Plastic
- ✧ Terminal : Pure tin plated lead free,
- ✧ Packaging method: refer to package code
- ✧ Marking code: as table
- ✧ Weight: 0.01 grams

# BZD17C SERIES

## 0.8 Watts Voltage Regulator Diodes

### Sub SMA



Dimensions in inches and (millimeters)

Marking Diagram



XX = Specific Device Code  
G = Green Compound  
Y = Year  
M = Work Month

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Type Number                                                                | Symbol                            | Value        | Units |
|----------------------------------------------------------------------------|-----------------------------------|--------------|-------|
| Forward Voltage @ IF = 0.2A                                                | V <sub>F</sub>                    | 1.2          | Volts |
| Power Dissipation TL=80°C<br>TA=25°C (Note 1)                              | P <sub>tot</sub>                  | 2.3<br>0.8   | Watts |
| Non-Repetitive Peak Pulse Power Dissipation<br>100us square pulse (Note 2) | P <sub>ZSM</sub>                  | 300          | Watts |
| Thermal Resistance Junction to Ambient Air (Note 1)                        | R <sub>θJA</sub>                  | 180          | °C/W  |
| Thermal Resistance Junction to Lead                                        | R <sub>θJL</sub>                  | 30           | °C/W  |
| Operating and Storage Temperature Range                                    | T <sub>J</sub> , T <sub>STG</sub> | -65 to + 175 | °C    |

Notes: 1. Mounted on Epoxy-Glass PCB with 3 x 3 mm Cu pads (≥ 40um thick)

2. T<sub>J</sub>=25°C Prior to Surge.

## RATINGS AND CHARACTERISTIC CURVES (BZD17C SERIES)

FIG.1- FORWARD CURRENT vs FORWARD VOLTAGE

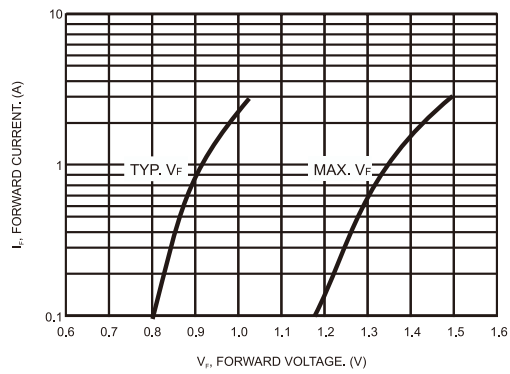


FIG.2- TYP. DIODE CAPACITANCE vs REVERSE VOLTAGE

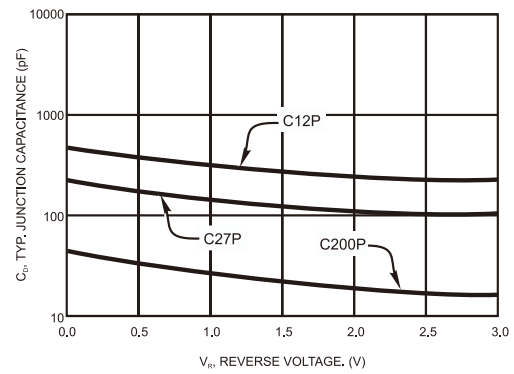
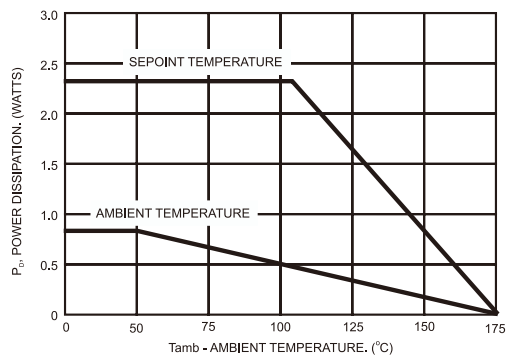


FIG.3- POWER DISSIPATION vs AMBIENT TEMPERATURE



ELECTRICAL CHARACTERISTICS (T<sub>A</sub> =25°C unless otherwise noted)

| Device     | Device Marking Code | Zener Voltage (Note 1)           |      | Differential Resistance           |      | Temperature Coefficient            |      | Test Current    | Reverse Current@ Reverse Voltage |                |
|------------|---------------------|----------------------------------|------|-----------------------------------|------|------------------------------------|------|-----------------|----------------------------------|----------------|
|            |                     | V <sub>Z</sub> @ I <sub>ZT</sub> |      | r <sub>dif</sub> @ I <sub>Z</sub> |      | ALPH <sub>Z</sub> @ I <sub>Z</sub> |      | I <sub>ZT</sub> | I <sub>R</sub>                   | V <sub>R</sub> |
|            |                     | V                                |      | Ω                                 |      | % / °C                             |      | mA              | uA                               | V              |
|            |                     | Min.                             | Max. | typ                               | Max. | Min.                               | Max. |                 | Max.                             |                |
| BZD17C11P  | J2                  | 10.4                             | 11.6 | 4                                 | 7    | 0.05                               | 0.10 | 50              | 4                                | 8.2            |
| BZD17C12P  | J3                  | 11.4                             | 12.7 | 4                                 | 7    | 0.05                               | 0.10 | 50              | 3                                | 9.1            |
| BZD17C13P  | J4                  | 12.4                             | 14.1 | 5                                 | 10   | 0.05                               | 0.10 | 50              | 2                                | 10             |
| BZD17C15P  | J5                  | 13.8                             | 15.6 | 5                                 | 10   | 0.05                               | 0.10 | 25              | 1                                | 11             |
| BZD17C16P  | J6                  | 15.3                             | 17.1 | 6                                 | 15   | 0.06                               | 0.11 | 25              | 1                                | 12             |
| BZD17C18P  | J7                  | 16.8                             | 19.1 | 6                                 | 15   | 0.06                               | 0.11 | 25              | 1                                | 13             |
| BZD17C24P  | K0                  | 22.8                             | 25.6 | 7                                 | 15   | 0.06                               | 0.11 | 25              | 1                                | 18             |
| BZD17C27P  | K1                  | 25.1                             | 28.9 | 7                                 | 15   | 0.06                               | 0.11 | 25              | 1                                | 20             |
| BZD17C33P  | K3                  | 31                               | 35   | 8                                 | 15   | 0.06                               | 0.11 | 25              | 1                                | 24             |
| BZD17C36P  | K4                  | 34                               | 38   | 21                                | 40   | 0.06                               | 0.11 | 10              | 1                                | 27             |
| BZD17C39P  | K5                  | 37                               | 41   | 21                                | 40   | 0.06                               | 0.11 | 10              | 1                                | 30             |
| BZD17C43P  | K6                  | 40                               | 46   | 24                                | 45   | 0.07                               | 0.12 | 10              | 1                                | 33             |
| BZD17C47P  | K7                  | 44                               | 50   | 24                                | 45   | 0.07                               | 0.12 | 10              | 1                                | 36             |
| BZD17C51P  | K8                  | 48                               | 54   | 25                                | 60   | 0.07                               | 0.12 | 10              | 1                                | 39             |
| BZD17C62P  | L0                  | 58                               | 66   | 25                                | 80   | 0.08                               | 0.13 | 10              | 1                                | 47             |
| BZD17C68P  | L1                  | 64                               | 72   | 25                                | 80   | 0.08                               | 0.13 | 10              | 1                                | 51             |
| BZD17C75P  | L2                  | 70                               | 79   | 30                                | 100  | 0.08                               | 0.13 | 10              | 1                                | 56             |
| BZD17C100P | L5                  | 94                               | 106  | 60                                | 200  | 0.09                               | 0.13 | 4               | 1                                | 75             |
| BZD17C120P | L7                  | 114                              | 127  | 150                               | 300  | 0.09                               | 0.13 | 4               | 1                                | 91             |
| BZD17C180P | M1                  | 168                              | 191  | 280                               | 450  | 0.09                               | 0.13 | 4               | 1                                | 130            |
| BZD17C200P | M2                  | 188                              | 212  | 350                               | 750  | 0.09                               | 0.13 | 4               | 1                                | 150            |
| BZD17C220P | M3                  | 208                              | 233  | 430                               | 900  | 0.09                               | 0.13 | 4               | 1                                | 160            |

Notes:1. Pulse test: tp ≤ 5ms.