

## Silicon Zener Diodes 稳压二极管 ZENER

### 特性/机械性能:

### FEATURES/MECHANICAL DATE

◆ 小电流下的齐纳阻抗低 Zener shed little electric impedance is low

◆ 高可靠性 High reliability

◆ 耐焊接热: 250°C/10S, 引出端1.5mm处。

Welding heat resistance: 250 °C / 10S, terminal 1.5 mm.

◆ 封装: 模塑封装 Case: Molded plastic

◆ 端子: 镀锡,无铅, 电镀可焊性符合MIL-STD-202E, 方法208

Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, method 208

◆ 极性: 色环表示阴极 Polarity: Color band denotes cathode

◆ 安装位置: 任意 Mounting position: Any



SMA/DO-214AC

### 最大额定值及电气特性:

### MAXIMUM RATINGS AND CHARACTERISTICS

测量环境温度为25°C, 除非另有规定。

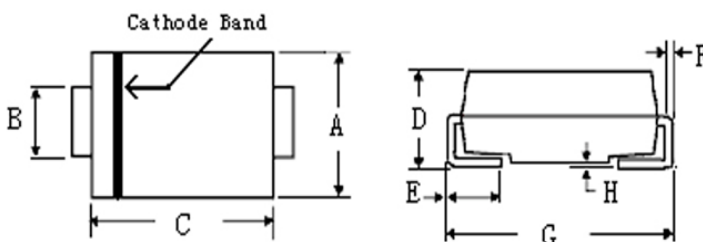
Rating at 25°C ambient temperature unless otherwise specified.

| 参数名称 Papt Number  | 符号Symbol                          | 数值Value     | 单位Unit |
|---|-----------------------------------|-------------|--------|
| 齐纳电流 The zener current  | I <sub>Z</sub> MAX                | 见表See table | mA     |
| 耗散功率R <sub>thJA</sub> <25K/W, @Ta=100°C Power Dissipation R <sub>thJA</sub> <25K/W, @Ta=100°C | P <sub>t</sub>                    | 3.0         | W      |
| 耗散功率R <sub>thJA</sub> <100K/W, @Ta=50°C Power Dissipation R <sub>thJA</sub> <100K/W, @Ta=50°C | P <sub>t</sub>                    | 1.25        | W      |
| 热阻抗 Thermal impedance   | R <sub>θ</sub> (ja)               | 25          | °C/W   |
| 正向电压@IF=0.5A Forward voltage@IF=0.5A  | V <sub>F</sub>                    | 1.2         | V      |
| 使用及储存温度范围 Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55~+150    | °C     |

### 产品外形尺寸:

### PRODUCT APPEARANCE SIZE

SMA/DO-214AC



| DIM | INCHES |       | MILLIMETERS |       |
|-----|--------|-------|-------------|-------|
|     | MIN    | MAX   | MIN         | MAX   |
| A   | 0.096  | 0.108 | 2.45        | 2.75  |
| B   | 0.049  | 0.061 | 1.25        | 1.55  |
| C   | 0.171  | 0.183 | 4.35        | 4.65  |
| D   | 0.075  | 0.091 | 1.90        | 2.30  |
| E   | 0.031  | 0.055 | 0.80        | 1.40  |
| F   | 0.005  | 0.011 | 0.13        | 0.27  |
| G   | 0.191  | 0.203 | 4.85        | 5.15  |
| H   |        | 0.008 |             | 0.203 |

## ZENER 稳压二极管 Silicon Zener Diodes

### 电特性:

### ELECTRICAL CHARACTERISTICS

| 型号<br>TYPE | 变位电压<br>Stand-off voltage |                     | 最小击穿电压<br>Minimum breakdown voltage |    | 温度系数<br>Temperature coefficient |      | 最大箝位电压<br>Maximum clamping voltage |                  | 典型结电容<br>Typical junction capacitance |
|------------|---------------------------|---------------------|-------------------------------------|----|---------------------------------|------|------------------------------------|------------------|---------------------------------------|
|            | V <sub>R</sub>            | I <sub>R(max)</sub> | V <sub>(BR)</sub> @I <sub>R</sub>   |    | % / K                           |      | V <sub>CL@IPP</sub>                | @I <sub>ZT</sub> | @V <sub>R</sub> =0V<br>f=1MHz         |
|            | V                         | μA                  | V                                   | mA | TYP                             | Max  | V                                  | A                | C <sub>J</sub> (pF)                   |
| BZG04-8V2  | 8.2                       | 20                  | 9.4                                 | 50 | 0.05                            | 0.09 | 14.8                               | 20.3             | 1200                                  |
| BZG04-9V1  | 9.1                       | 5                   | 10.4                                | 50 | 0.05                            | 0.10 | 15.7                               | 19.1             | 1100                                  |
| BZG04-10   | 10                        | 5                   | 11.4                                | 50 | 0.05                            | 0.10 | 17.0                               | 17.7             | 1000                                  |
| BZG04-11   | 11                        | 5                   | 12.4                                | 50 | 0.05                            | 0.10 | 18.9                               | 15.9             | 850                                   |
| BZG04-12   | 12                        | 5                   | 13.8                                | 50 | 0.05                            | 0.10 | 20.9                               | 14.4             | 815                                   |
| BZG04-13   | 13                        | 5                   | 15.3                                | 25 | 0.06                            | 0.11 | 22.9                               | 13.1             | 785                                   |
| BZG04-15   | 15                        | 5                   | 16.8                                | 25 | 0.06                            | 0.11 | 25.6                               | 11.7             | 710                                   |
| BZG04-16   | 16                        | 5                   | 18.8                                | 25 | 0.06                            | 0.11 | 28.4                               | 10.6             | 655                                   |
| BZG04-18   | 18                        | 5                   | 20.8                                | 25 | 0.06                            | 0.11 | 31.0                               | 9.7              | 610                                   |
| BZG04-20   | 20                        | 5                   | 22.8                                | 25 | 0.06                            | 0.11 | 33.8                               | 8.9              | 570                                   |
| BZG04-22   | 22                        | 5                   | 25.1                                | 25 | 0.06                            | 0.11 | 38.1                               | 7.9              | 545                                   |
| BZG04-24   | 24                        | 5                   | 28                                  | 25 | 0.06                            | 0.11 | 42.2                               | 7.1              | 505                                   |
| BZG04-27   | 27                        | 5                   | 31                                  | 25 | 0.06                            | 0.11 | 46.2                               | 6.5              | 475                                   |
| BZG04-30   | 30                        | 5                   | 34                                  | 10 | 0.06                            | 0.11 | 50.1                               | 6.0              | 450                                   |
| BZG04-33   | 33                        | 5                   | 37                                  | 10 | 0.06                            | 0.11 | 54.1                               | 5.5              | 420                                   |
| BZG04-36   | 36                        | 5                   | 40                                  | 10 | 0.07                            | 0.12 | 60.7                               | 4.9              | 390                                   |
| BZG04-39   | 39                        | 5                   | 44                                  | 10 | 0.07                            | 0.12 | 65.5                               | 4.6              | 370                                   |
| BZG04-43   | 43                        | 5                   | 48                                  | 10 | 0.07                            | 0.12 | 70.8                               | 4.2              | 350                                   |
| BZG04-47   | 47                        | 5                   | 52                                  | 10 | 0.07                            | 0.12 | 78.6                               | 3.8              | 330                                   |
| BZG04-51   | 51                        | 5                   | 58                                  | 10 | 0.08                            | 0.13 | 86.5                               | 3.5              | 310                                   |
| BZG04-56   | 56                        | 5                   | 64                                  | 10 | 0.08                            | 0.13 | 94.4                               | 3.2              | 291                                   |
| BZG04-62   | 62                        | 5                   | 70                                  | 10 | 0.08                            | 0.13 | 103.5                              | 2.9              | 280                                   |
| BZG04-68   | 68                        | 5                   | 77                                  | 10 | 0.08                            | 0.13 | 114                                | 2.6              | 275                                   |
| BZG04-75   | 75                        | 5                   | 85                                  | 5  | 0.09                            | 0.13 | 126                                | 2.4              | 260                                   |
| BZG04-82   | 82                        | 5                   | 94                                  | 5  | 0.09                            | 0.13 | 139                                | 2.2              | 250                                   |
| BZG04-91   | 91                        | 5                   | 104                                 | 5  | 0.09                            | 0.13 | 152                                | 2.0              | 243                                   |
| BZG04-100  | 100                       | 5                   | 114                                 | 5  | 0.09                            | 0.13 | 167                                | 1.8              | 170                                   |
| BZG04-110  | 110                       | 5                   | 124                                 | 5  | 0.09                            | 0.13 | 185                                | 1.6              | 153                                   |
| BZG04-120  | 120                       | 5                   | 138                                 | 5  | 0.09                            | 0.13 | 204                                | 1.5              | 150                                   |
| BZG04-130  | 130                       | 5                   | 153                                 | 5  | 0.09                            | 0.13 | 224                                | 1.3              | 145                                   |
| BZG04-150  | 150                       | 5                   | 168                                 | 5  | 0.09                            | 0.13 | 249                                | 1.2              | 140                                   |
| BZG04-160  | 160                       | 5                   | 188                                 | 5  | 0.09                            | 0.13 | 276                                | 1.1              | 135                                   |
| BZG04-180  | 180                       | 5                   | 208                                 | 2  | 0.09                            | 0.13 | 305                                | 1.0              | 131                                   |
| BZG04-200  | 200                       | 5                   | 228                                 | 2  | 0.09                            | 0.13 | 336                                | 0.9              | 122                                   |
| BZG04-220  | 220                       | 5                   | 251                                 | 2  | 0.09                            | 0.13 | 380                                | 0.8              | 120                                   |

特性曲线图:

RATINGS AND CHARACTERISTIC CURVES

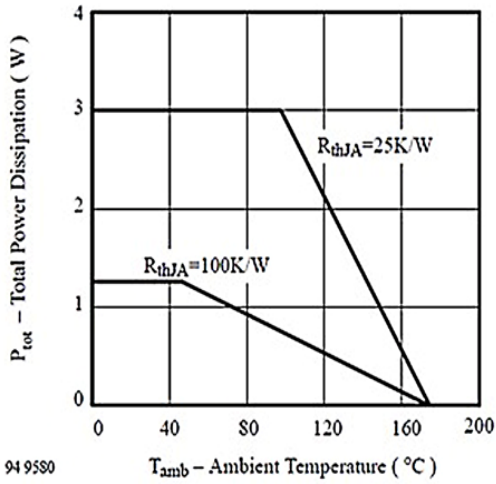


Figure 1. Total Power Dissipation vs. Ambient Temperature

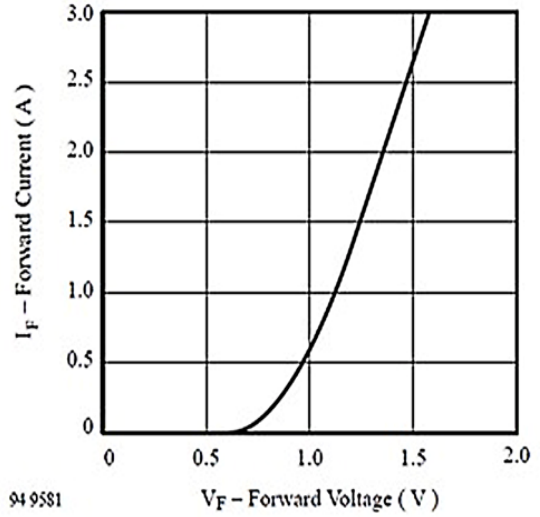


Figure 2. Forward Current vs. Forward Voltage