



$V_Z : 10 \text{ -- } 270 \text{ V}$

**POWER DISSIPATION: 3.0 W**

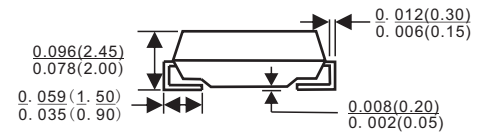
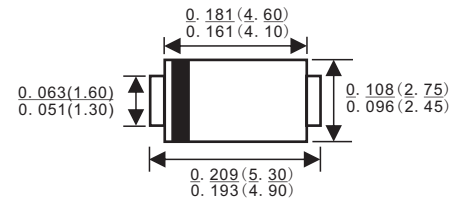
## Features

- ✧ High reliability
- ✧ Voltage range 10 V to 270 V
- ✧ Fits onto 5 mm SMD footpads
- ✧ Wave and reflow solderable
- ✧ Glass passivated junction

## Mechanical Data

- ✧ Case: JEDEC DO-214AC(SMA)
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.002 ounces, 0.064 grams
- ✧ Mounting position: any

## SMA/DO-214AC



Dimensions in inches and(millimeters)

## Maximum Ratings and Thermal Characteristics (T<sub>A</sub>=25 unless otherwise noted)

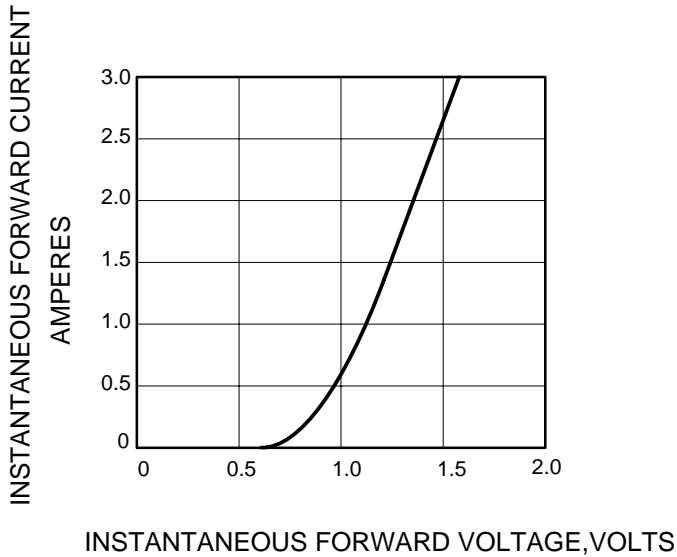
| Parameter   | Symbol           | Value       | Unit |
|---|------------------|-------------|------|
| Power dissipation at T <sub>ip</sub> =100                           | P <sub>tot</sub> | 3.0         | W    |
| Forward voltage @ I <sub>F</sub> =500mA                             | V <sub>F</sub>   | 1.2         | V    |
| Maximum thermal resistance junction to ambient                      | R <sub>θJA</sub> | 150         | K/W  |
| Peak reverse power dissipation(non-repetitive) tp=100μs square wave | P <sub>ZSM</sub> | 600         | W    |
| Junction temperature  | T <sub>J</sub>   | -65 to +150 |      |
| Storage temperature range   | T <sub>STG</sub> | -65 to +150 |      |

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25 °C)

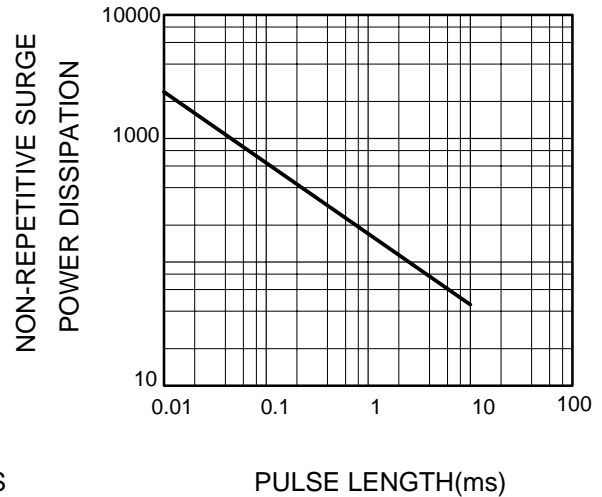
| Type      | Device marking code | Zener voltage range V <sub>Z</sub> |      |      | Dynamic resistance               |      |                 | Temperature coefficient of zener voltage |      | Reverse leakage current I <sub>R</sub> @V <sub>R</sub> |     |
|-----------|---------------------|------------------------------------|------|------|----------------------------------|------|-----------------|--|------|--|-----|
|           |                     |                                    |      |      | r <sub>zj</sub> @I <sub>ZT</sub> |      | I <sub>ZT</sub> | TK <sub>VZ</sub> @I <sub>ZT</sub>        |      |  |     |
|           |                     | V                                  | V    | V    | Ω                                | Ω    | m A             | %/K                                      | %/K  | μ A  | V   |
|           |                     | Min.                               | Typ. | Max. | Typ.                             | Max. |                 | Typ.                                     | Max. | Max.   |     |
| BZG03C10  | G10                 | 9.4                                | 10   | 10.6 | 2.0                              | 4.0  | 50              | 0.05                                     | 0.09 | 10   | 7.5 |
| BZG03C11  | G11                 | 10.4                               | 11   | 11.6 | 4.0                              | 7.0  | 50              | 0.05                                     | 0.10 | 4.0  | 8.2 |
| BZG03C12  | G12                 | 11.4                               | 12   | 12.7 | 4.0                              | 7.0  | 50              | 0.05                                     | 0.10 | 3.0  | 9.1 |
| BZG03C13  | G13                 | 12.4                               | 13   | 14.1 | 5.0                              | 10   | 50              | 0.05                                     | 0.10 | 2.0  | 10  |
| BZG03C15  | G15                 | 13.8                               | 15   | 15.6 | 5.0                              | 10   | 50              | 0.05                                     | 0.10 | 1.0  | 11  |
| BZG03C16  | G16                 | 15.3                               | 16   | 17.1 | 6.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 12  |
| BZG03C18  | G18                 | 16.8                               | 18   | 19.1 | 6.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 13  |
| BZG03C20  | G20                 | 18.8                               | 20   | 21.2 | 6.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 15  |
| BZG03C22  | G22                 | 20.8                               | 22   | 23.3 | 6.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 16  |
| BZG03C24  | G24                 | 22.8                               | 24   | 25.6 | 7.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 18  |
| BZG03C27  | G27                 | 25.1                               | 27   | 28.9 | 7.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 20  |
| BZG03C30  | G30                 | 28                                 | 30   | 32   | 8.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 22  |
| BZG03C33  | G33                 | 31                                 | 33   | 35   | 8.0                              | 15   | 25              | 0.06                                     | 0.11 | 1.0  | 24  |
| BZG03C36  | G36                 | 34                                 | 36   | 38   | 21                               | 40   | 10              | 0.06                                     | 0.11 | 1.0  | 27  |
| BZG03C39  | G39                 | 37                                 | 39   | 41   | 21                               | 40   | 10              | 0.06                                     | 0.11 | 1.0  | 30  |
| BZG03C43  | G43                 | 40                                 | 43   | 46   | 24                               | 45   | 10              | 0.07                                     | 0.12 | 1.0  | 33  |
| BZG03C47  | G47                 | 44                                 | 47   | 50   | 24                               | 45   | 10              | 0.07                                     | 0.12 | 1.0  | 36  |
| BZG03C51  | G51                 | 48                                 | 51   | 54   | 25                               | 60   | 10              | 0.07                                     | 0.12 | 1.0  | 39  |
| BZG03C56  | G56                 | 52                                 | 56   | 60   | 25                               | 60   | 10              | 0.07                                     | 0.12 | 1.0  | 43  |
| BZG03C62  | G62                 | 58                                 | 62   | 66   | 25                               | 80   | 10              | 0.08                                     | 0.13 | 1.0  | 47  |
| BZG03C68  | G68                 | 64                                 | 68   | 72   | 25                               | 80   | 10              | 0.08                                     | 0.13 | 1.0  | 51  |
| BZG03C75  | G75                 | 70                                 | 75   | 79   | 30                               | 100  | 10              | 0.08                                     | 0.13 | 1.0  | 56  |
| BZG03C82  | G82                 | 77                                 | 82   | 87   | 30                               | 100  | 10              | 0.08                                     | 0.13 | 1.0  | 62  |
| BZG03C91  | G91                 | 85                                 | 91   | 96   | 60                               | 200  | 5               | 0.09                                     | 0.13 | 1.0  | 68  |
| BZG03C100 | G100                | 94                                 | 100  | 106  | 60                               | 200  | 5               | 0.09                                     | 0.13 | 1.0  | 75  |
| BZG03C110 | G110                | 104                                | 110  | 116  | 80                               | 250  | 5               | 0.09                                     | 0.13 | 1.0  | 82  |
| BZG03C120 | G120                | 114                                | 120  | 127  | 80                               | 250  | 5               | 0.09                                     | 0.13 | 1.0  | 91  |
| BZG03C130 | G130                | 124                                | 130  | 141  | 110                              | 300  | 5               | 0.09                                     | 0.13 | 1.0  | 100 |
| BZG03C150 | G150                | 138                                | 150  | 156  | 130                              | 300  | 5               | 0.09                                     | 0.13 | 1.0  | 110 |
| BZG03C160 | G160                | 153                                | 160  | 171  | 150                              | 350  | 5               | 0.09                                     | 0.13 | 1.0  | 120 |
| BZG03C180 | G180                | 168                                | 180  | 191  | 180                              | 400  | 5               | 0.09                                     | 0.13 | 1.0  | 130 |
| BZG03C200 | G200                | 188                                | 200  | 212  | 200                              | 500  | 5               | 0.09                                     | 0.13 | 1.0  | 150 |
| BZG03C220 | G220                | 208                                | 220  | 233  | 350                              | 750  | 2               | 0.09                                     | 0.13 | 1.0  | 160 |
| BZG03C240 | G240                | 228                                | 240  | 256  | 400                              | 850  | 2               | 0.09                                     | 0.13 | 1.0  | 180 |
| BZG03C270 | G270                | 251                                | 270  | 289  | 450                              | 1000 | 2               | 0.09                                     | 0.13 | 1.0  | 200 |

## Ratings AND Characteristic Curves

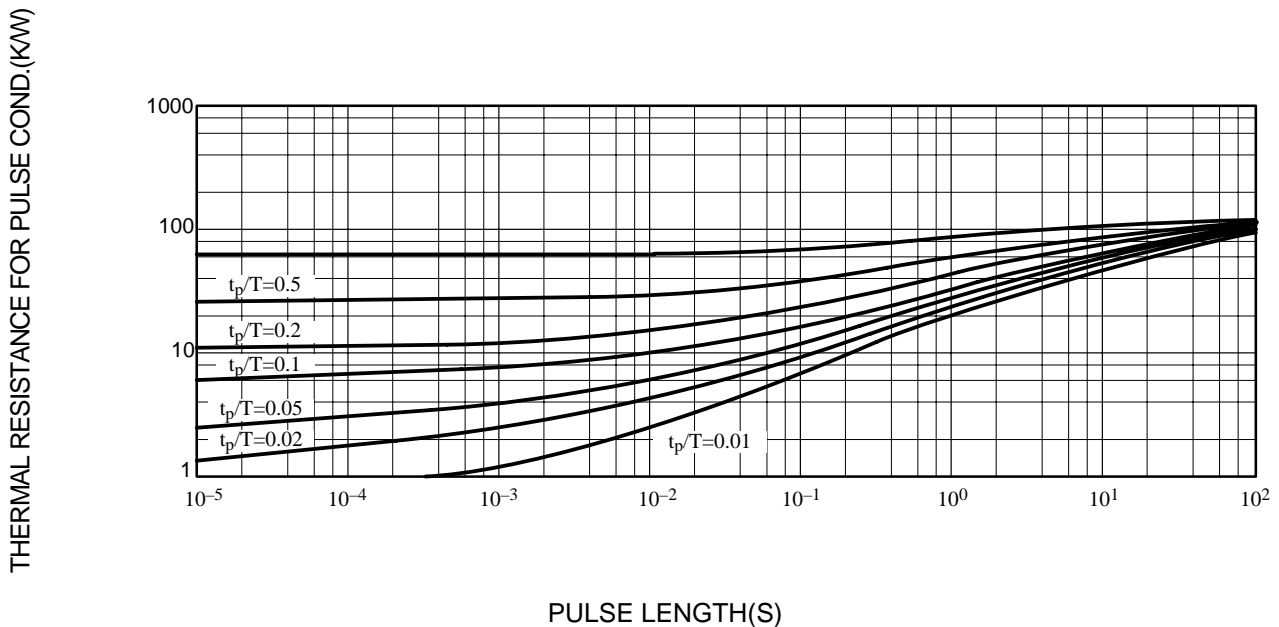
**FIG.1 –TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – NON REPETITIVE SURGE POWER DISSIPATION VS.PULSE LENGTH**



**FIG.3 – THERMAL RESPONSE**



| PACKAGE | SPQ/PCS   | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SMA     | 5000/REEL | 80000          | 36X30.6X31     | 12.00        | 11.00        |

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