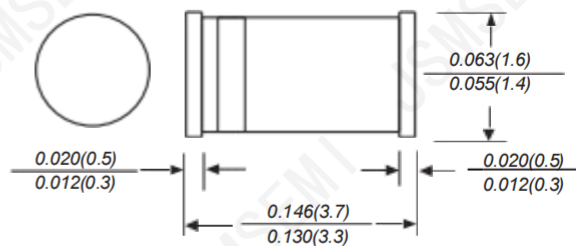


## FEATURE

In MiniMELF case especially for automatic insertion.



**MiniMELF**

Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

**Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )**

| Parameter                 | Symbol           | Value             | Unit             |
|---------------------------|------------------|-------------------|------------------|
| Power Dissipation         | $P_{\text{tot}}$ | 500 <sup>1)</sup> | mW               |
| Junction Temperature      | $T_j$            | 175               | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{\text{stg}}$ | - 55 to + 175     | $^\circ\text{C}$ |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature

## Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                  | Symbol          | Max.              | Unit |
|--------------------------------------------|-----------------|-------------------|------|
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 0.3 <sup>1)</sup> | K/mW |
| Forward Voltage at $I_F = 100\text{ mA}$   | $V_F$           | 1                 | V    |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature

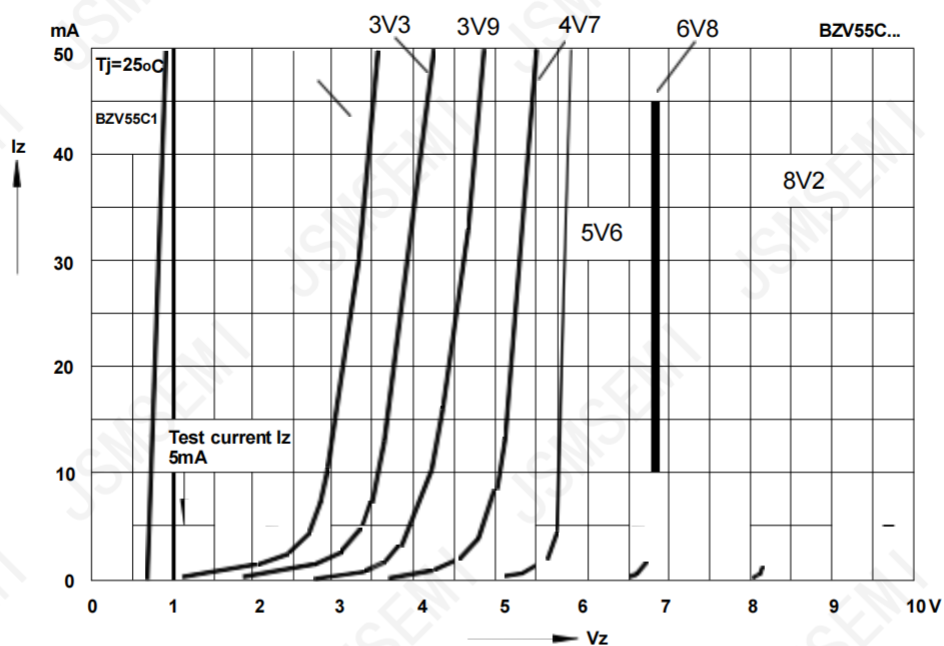
**Electrical Characteristics@AT=25°C unless otherwise specified**

| Type           | Zener Voltage Range(1) |             |        | Dynamic Resistance |        |        | Reverse Leakage Curent |           |       | Temp.Coefficirof<br>Zener Voltage |
|----------------|------------------------|-------------|--------|--------------------|--------|--------|------------------------|-----------|-------|-----------------------------------|
|                | VZnom                  | VZ          | at IZT | ZZT                | ZZK    | at IZK | Ta=25℃                 | Ta=125℃   | at VR |                                   |
|                | (V)                    | (V)         | (mA)   | Max. (2)           | Max(2) | (mA)   | Max(μA)                | Max. (μA) | (V)   |                                   |
| BZV55-C2V0,115 | 2                      | 1.8...215   | 5      | 85                 | 600    | 1      | 100                    | 200       | 1     | -0.09...-0.06                     |
| BZV55-C2V2,115 | 2.2                    | 2.08...2.33 | 5      | 85                 | 600    | 1      | 75                     | 160       | 1     | -0.09...-0.06                     |
| BZV55-C2V4,115 | 2.4                    | 2.28...2.56 | 5      | 85                 | 600    | 1      | 50                     | 100       | 1     | -0.09...-0.06                     |
| BZV55-C2V7,115 | 2.7                    | 2.5...2.9   | 5      | 85                 | 600    | 1      | 10                     | 50        | 1     | -0.09...-0.06                     |
| BZV55-C3V0,115 | 3                      | 2.8...3.2   | 5      | 85                 | 600    | 1      | 4                      | 40        | 1     | -0.08...-0.05                     |
| BZV55-C3V3,115 | 3.3                    | 3.1...35    | 5      | 85                 | 600    | 1      | 2                      | 40        | 1     | -0.08...-0.05                     |
| BZV55-C3V6,115 | 3.6                    | 3.4...3.8   | 5      | 85                 | 600    | 1      | 2                      | 40        | 1     | -0.08...-0.05                     |
| BZV55-C3V9,115 | 3.9                    | 3.7...4.1   | 5      | 85                 | 600    | 1      | 2                      | 40        | 1     | -0.08...-0.05                     |
| BZV55-C4V3,115 | 4.3                    | 4...4.6     | 5      | 75                 | 600    | 1      | 1                      | 20        | 1     | -0.06.0.03                        |
| BZV55-C4V7,115 | 4.7                    | 4.4...5     | 5      | 60                 | 600    | 1      | 0.5                    | 10        | 1     | -0.05...+0.02                     |
| BZV55-C5V1,115 | 5.1                    | 4.8...5.4   | 5      | 35                 | 550    | 1      | 0.1                    | 2         | 1     | -0.02+0.02                        |
| BZV55-C5V6,115 | 5.6                    | 5.2...6     | 5      | 25                 | 450    | 1      | 0.1                    | 2         | 1     | -0.05...+0.05                     |
| BZV55-C6V2,115 | 6.2                    | 5.8...6.6   | 5      | 10                 | 200    | 1      | 0.1                    | 2         | 2     | 0.03...0.06                       |
| BZV55-C6V8,115 | 6.8                    | 6.4...7.2   | 5      | 8                  | 150    | 1      | 0.1                    | 2         | 3     | 0.03...0.07                       |
| BZV55-C7V5,115 | 7.5                    | 7.7...9     | 5      | 7                  | 50     | 1      | 0.1                    | 2         | 5     | 0.03...0.07                       |
| BZV55-C8V2,115 | 8.2                    | 7.7...8.7   | 5      | 7                  | 50     | 1      | 0.1                    | 2         | 6.2   | 0.03...0.08                       |
| BZV55-C9V1,115 | 9.1                    | 8.5...9.6   | 5      | 10                 | 50     | 1      | 0.1                    | 2         | 6.8   | 0.03...0.09                       |
| BZV55-C10,115  | 10                     | 9.4...10.6  | 5      | 15                 | 70     | 1      | 0.1                    | 2         | 7.5   | 0.03.0.1                          |
| BZV55-C11,115  | 11                     | 10.4...11.6 | 5      | 20                 | 70     | 1      | 0.1                    | 2         | 8.2   | 0.03...0.11                       |
| BZV55-C12,115  | 12                     | 11.4...12.7 | 5      | 20                 | 90     | 1      | 0.1                    | 2         | 9.1   | 0.03...0.11                       |
| BZV55-C13,115  | 13                     | 12.4...14.1 | 5      | 26                 | 110    | 1      | 0.1                    | 2         | 10    | 0.03...0.11                       |
| BZV55-C15,115  | 15                     | 13.8...15.6 | 5      | 30                 | 110    | 1      | 0.1                    | 2         | 11    | 0.03...0.11                       |
| BZV55-C16,115  | 16                     | 15.3...17.1 | 5      | 40                 | 170    | 1      | 0.1                    | 2         | 12    | 0.03...0.11                       |
| BZV55-C18,115  | 18                     | 16.8.19.1   | 5      | 50                 | 170    | 1      | 0.1                    | 2         | 13    | 0.03...0.11                       |
| BZV55-C20,115  | 20                     | 18.8...21.2 | 5      | 55                 | 220    | 1      | 0.1                    | 2         | 15    | 0.03...0.11                       |
| BZV55-C22,115  | 22                     | 20.8...23.3 | 5      | 55                 | 220    | 1      | 0.1                    | 2         | 16    | 0.04...0.12                       |
| BZV55-C24,115  | 24                     | 22.8...25.6 | 5      | 80                 | 220    | 1      | 0.1                    | 2         | 18    | 0.04...0.12                       |
| BZV55-C27,115  | 27                     | 25.1...28.9 | 5      | 80                 | 220    | 1      | 0.1                    | 2         | 20    | 0.04...0.12                       |
| BZV55-C30,115  | 30                     | 28...32     | 5      | 80                 | 220    | 1      | 0.1                    | 2         | 22    | 0.04...0.12                       |
| BZV55-C33,115  | 33                     | 31...35     | 5      | 80                 | 220    | 1      | 0.1                    | 2         | 24    | 0.04...0.12                       |
| BZV55-C36,115  | 36                     | 34...38     | 5      | 80                 | 220    | 1      | 0.1                    | 2         | 27    | 0.04...0.12                       |
| BZV55-C39,115  | 39                     | 37...41     | 2.5    | 90                 | 500    | 0.5    | 0.1                    | 5         | 30    | 0.04...0.12                       |
| BZV55-C43,115  | 43                     | 40...46     | 2.5    | 90                 | 500    | 0.5    | 0.1                    | 5         | 33    | 0.04...0.12                       |
| BZV55-C47,115  | 47                     | 44...50     | 2.5    | 110                | 600    | 0.5    | 0.1                    | 5         | 36    | 0.04...0.12                       |
| BZV55-C51,115  | 51                     | 48...54     | 2.5    | 125                | 700    | 0.5    | 0.1                    | 10        | 39    | 0.04...0.12                       |
| BZV55-C56,115  | 56                     | 52...6      | 2.5    | 135                | 700    | 0.5    | 0.1                    | 10        | 43    | 0.04...0.12                       |
| BZV55-C62,115  | 62                     | 58...66     | 2.5    | 150                | 1000   | 0.5    | 0.1                    | 10        | 47    | 0.04...0.12                       |
| BZV55-C68,115  | 68                     | 64...72     | 2.5    | 200                | 1000   | 0.5    | 0.1                    | 10        | 51    | 0.04...0.12                       |
| BZV55-C75,115  | 75                     | 70...79     | 2.5    | 250                | 1000   | 0.5    | 0.1                    | 10        | 56    | 0.04...0.12                       |

Notes: 1. Tested with pulses  $t_p = 20$  ms.  
 2. Valid provided that electrodes are kept at ambient temperature.

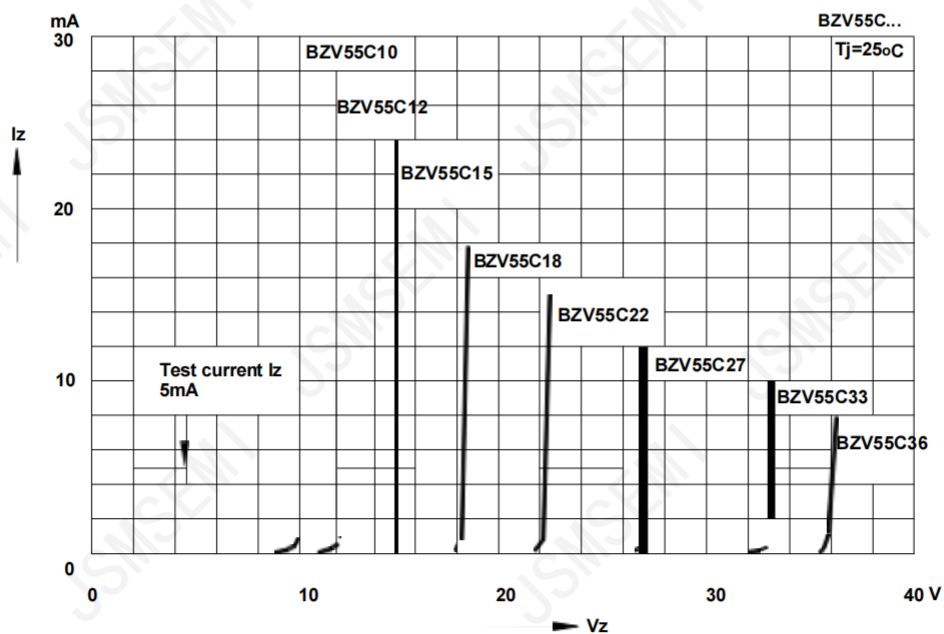
**Breakdown characteristics**

$T_j = \text{constant}$  (pulsed)

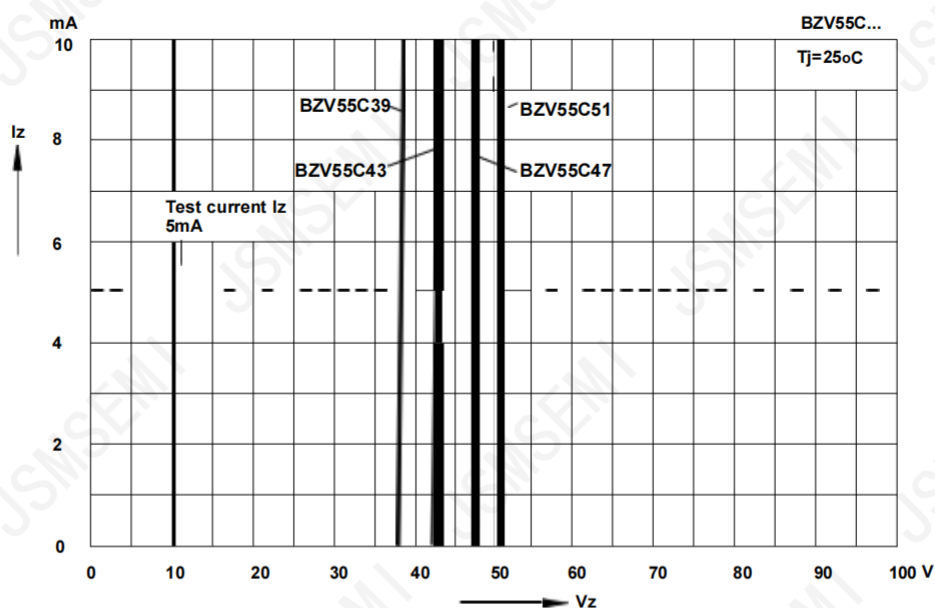


**Breakdown characteristics**

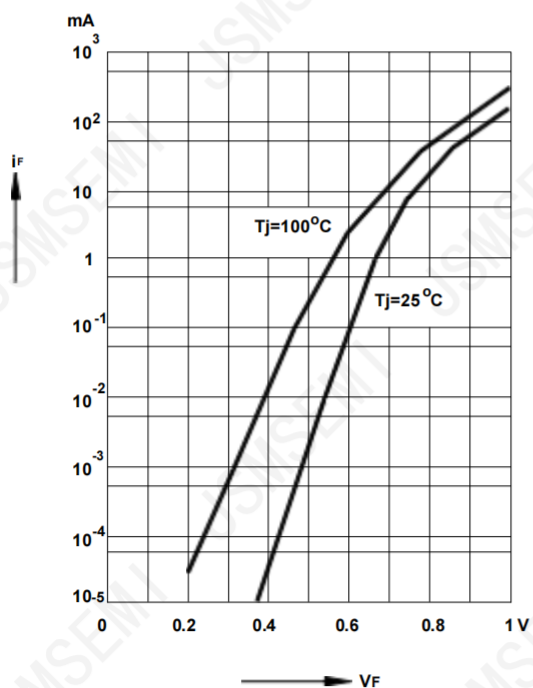
$T_j = \text{constant}$  (pulsed)



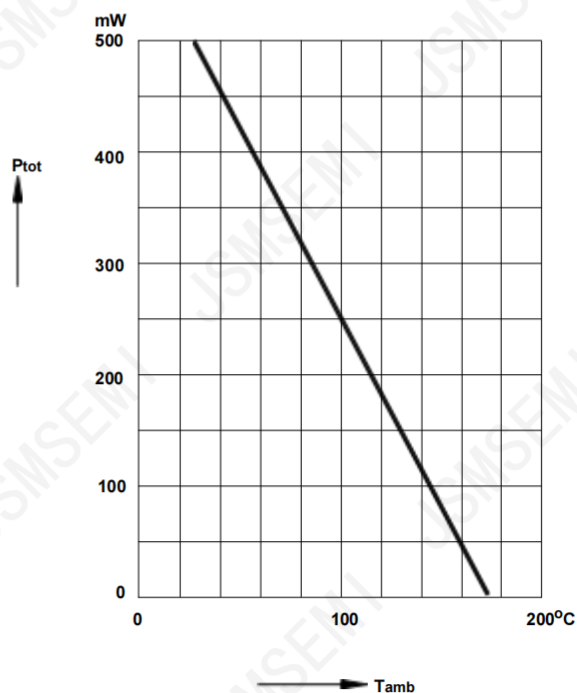
**Breakdown characteristics**  
 $T_j = \text{constant (pulsed)}$



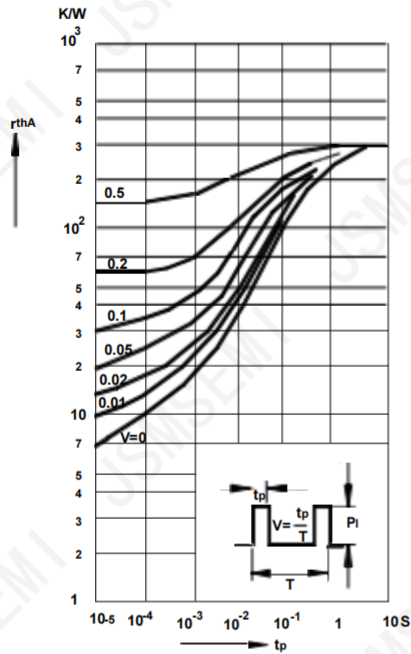
**Forward characteristics**



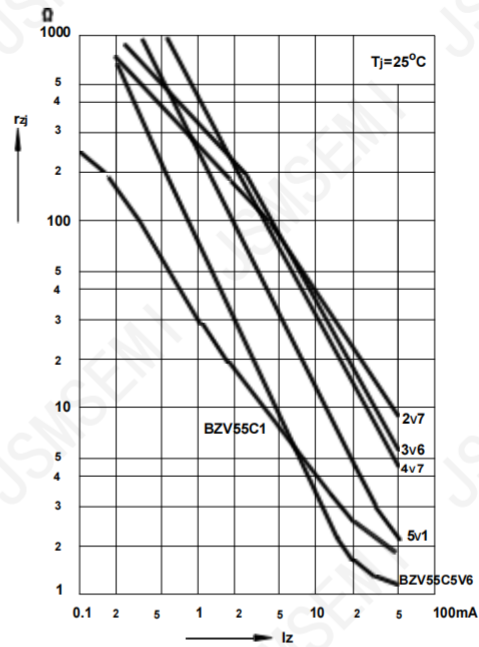
**Admissible power dissipation versus ambient temperature**  
Valid provided that electrodes are kept at ambient temperature.



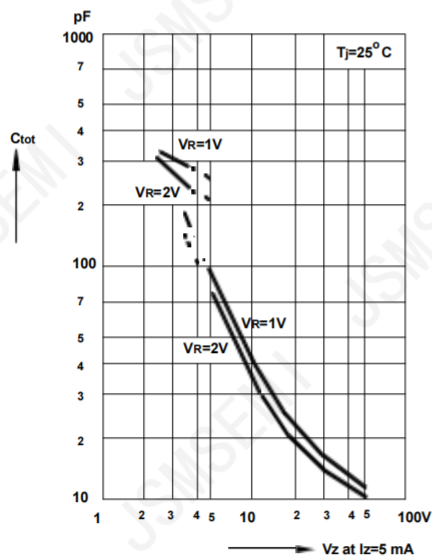
Pulse thermal resistance  
versus pulse duration  
Valid provided that the electrodes are kept  
at ambient temperature.



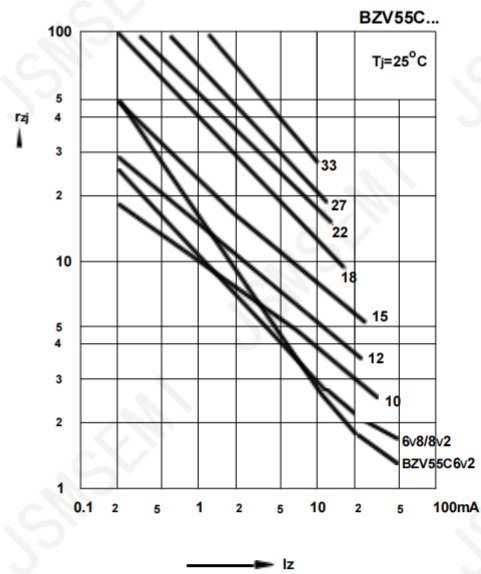
Dynamic resistance  
versus Zener current

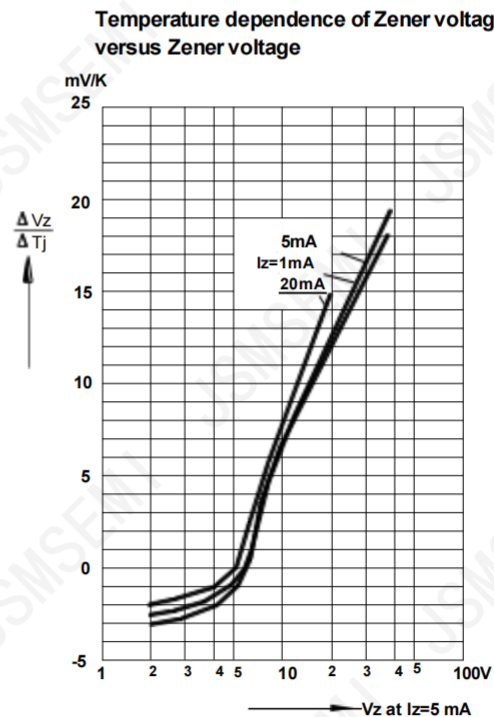
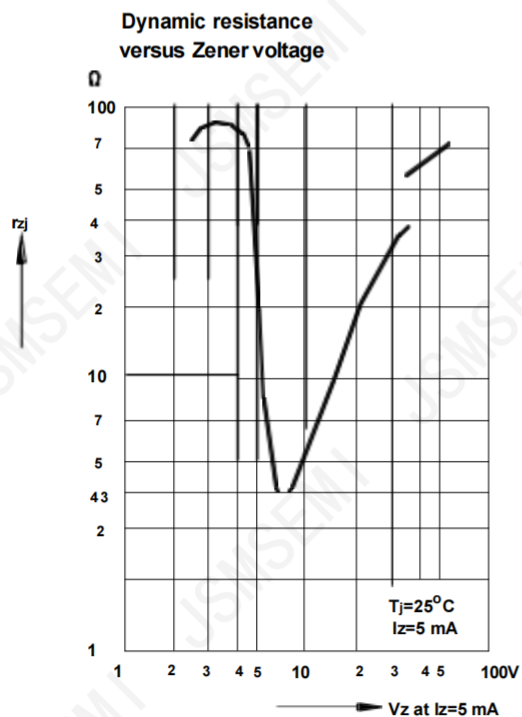
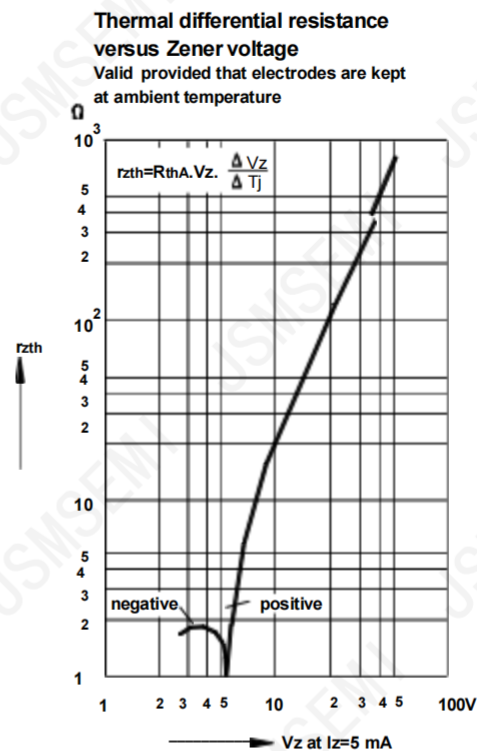
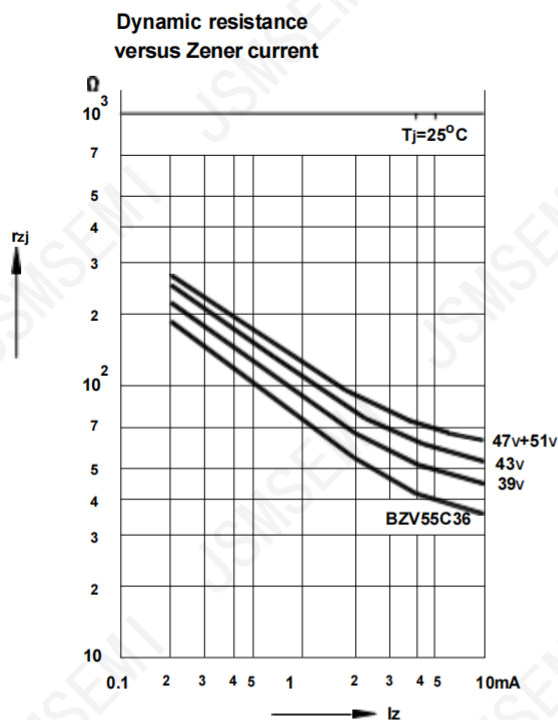


Capacitance versus  
Zener voltage

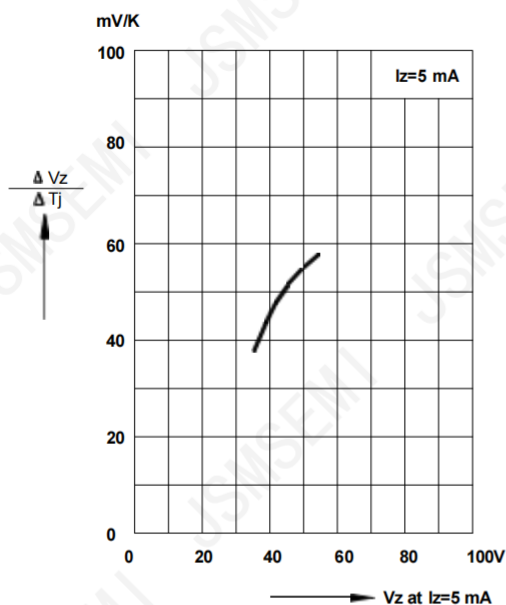


Dynamic resistance  
versus Zener current

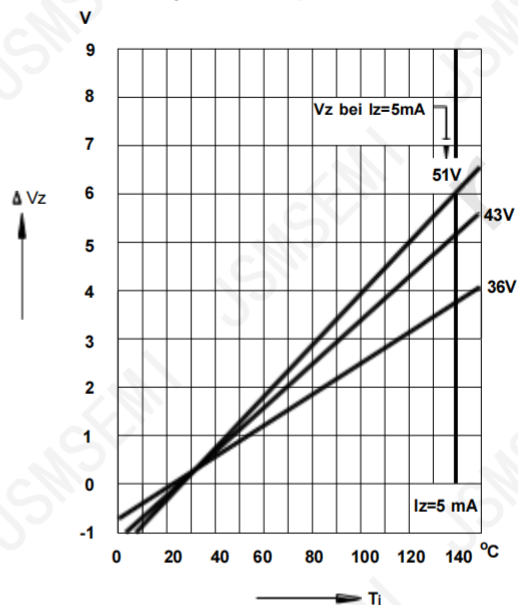




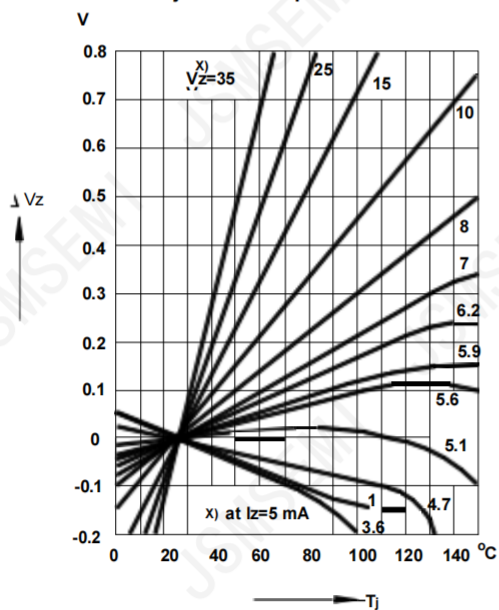
Temperature dependence of Zener voltage  
versus Zener voltage



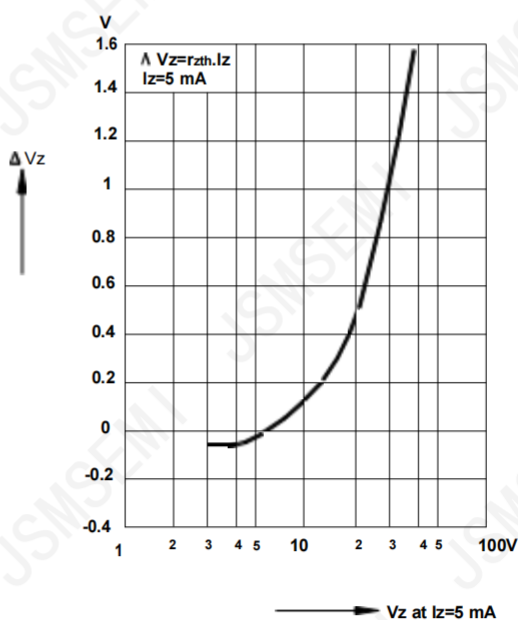
Change of Zener voltage  
versus junction temperature



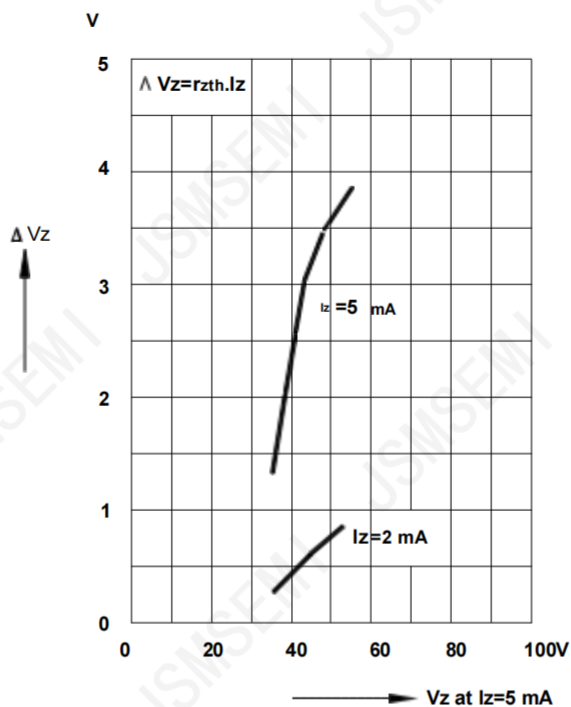
Change of Zener voltage  
versus junction temperature



Change of Zener voltage from turn-on  
up to the point of thermal equilibrium  
versus Zener voltage



Change of Zener voltage from turn-on  
up to the point of thermal equilibrium  
versus Zener voltage



## Revision History

| Rev. | Change          | Date      |
|------|-----------------|-----------|
| V1.0 | Initial version | 2/23/2024 |
|      |                 |           |

## Important Notice

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