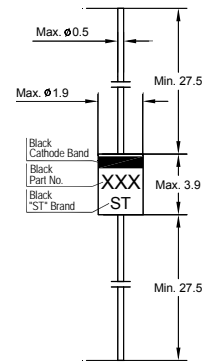


# RD2V0E...RD200E

## ZENER DIODES

### Applications

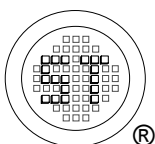
Circuits for Constant Voltage, Constant Current, Waveform clipper, Surge absorber, etc.



Glass Case DO-35  
Dimensions in mm

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

| Parameter                 | Symbol           | Value         | Unit             |
|---------------------------|------------------|---------------|------------------|
| Power Dissipation         | $P_{\text{tot}}$ | 500           | mW               |
| Forward Current           | $I_F$            | 200           | mA               |
| Junction Temperature      | $T_j$            | 175           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_s$            | - 65 to + 175 | $^\circ\text{C}$ |



## SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7118

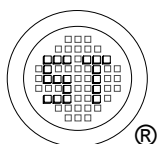


ISO 9001:2000  
Certificate No. 0506098

# RD2V0E...RD200E

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

| Type     | Zener Voltage           |      |            | Dynamic Impedance                |            | Knee Dynamic Impedance              |            | Reverse Current         |           |
|----------|-------------------------|------|------------|----------------------------------|------------|-------------------------------------|------------|-------------------------|-----------|
|          | $V_Z$ (V) <sup>1)</sup> |      |            | $Z_Z$ ( $\Omega$ ) <sup>2)</sup> |            | $Z_{ZK}$ ( $\Omega$ ) <sup>2)</sup> |            | $I_R$ ( $\mu\text{A}$ ) |           |
|          | Min.                    | Max. | $I_Z$ (mA) | Max.                             | $I_Z$ (mA) | Max.                                | $I_Z$ (mA) | Max.                    | $V_R$ (V) |
| RD2V0EB  | 1.88                    | 2.2  | 20         | 140                              | 20         | 2000                                | 1          | 120                     | 0.5       |
| RD2V0EB1 | 1.88                    | 2.1  |            |                                  |            |                                     |            |                         |           |
| RD2V0EB2 | 2.02                    | 2.2  |            |                                  |            |                                     |            |                         |           |
| RD2V2EB  | 2.12                    | 2.41 | 20         | 120                              | 20         | 2000                                | 1          | 120                     | 0.7       |
| RD2V2EB1 | 2.12                    | 2.3  |            |                                  |            |                                     |            |                         |           |
| RD2V2EB2 | 2.22                    | 2.41 |            |                                  |            |                                     |            |                         |           |
| RD2V4EB  | 2.33                    | 2.63 | 20         | 100                              | 20         | 2000                                | 1          | 120                     | 1         |
| RD2V4EB1 | 2.33                    | 2.52 |            |                                  |            |                                     |            |                         |           |
| RD2V4EB2 | 2.43                    | 2.63 |            |                                  |            |                                     |            |                         |           |
| RD2V7EB  | 2.54                    | 2.91 | 20         | 100                              | 20         | 1000                                | 1          | 100                     | 1         |
| RD2V7EB1 | 2.54                    | 2.75 |            |                                  |            |                                     |            |                         |           |
| RD2V7EB2 | 2.69                    | 2.91 |            |                                  |            |                                     |            |                         |           |
| RD3V0EB  | 2.85                    | 3.22 | 20         | 80                               | 20         | 1000                                | 1          | 50                      | 1         |
| RD3V0EB1 | 2.85                    | 3.07 |            |                                  |            |                                     |            |                         |           |
| RD3V0EB2 | 3.01                    | 3.22 |            |                                  |            |                                     |            |                         |           |
| RD3V3EB  | 3.16                    | 3.53 | 20         | 70                               | 20         | 1000                                | 1          | 20                      | 1         |
| RD3V3EB1 | 3.16                    | 3.38 |            |                                  |            |                                     |            |                         |           |
| RD3V3EB2 | 3.32                    | 3.53 |            |                                  |            |                                     |            |                         |           |
| RD3V6EB  | 3.47                    | 3.83 | 20         | 60                               | 20         | 1000                                | 1          | 10                      | 1         |
| RD3V6EB1 | 3.47                    | 3.68 |            |                                  |            |                                     |            |                         |           |
| RD3V6EB2 | 3.62                    | 3.83 |            |                                  |            |                                     |            |                         |           |
| RD3V9EB  | 3.77                    | 4.14 | 20         | 50                               | 20         | 1000                                | 1          | 5                       | 1         |
| RD3V9EB1 | 3.77                    | 3.98 |            |                                  |            |                                     |            |                         |           |
| RD3V9EB2 | 3.92                    | 4.14 |            |                                  |            |                                     |            |                         |           |
| RD4V3EB  | 4.05                    | 4.53 | 20         | 40                               | 20         | 1000                                | 1          | 5                       | 1         |
| RD4V3EB1 | 4.05                    | 4.26 |            |                                  |            |                                     |            |                         |           |
| RD4V3EB2 | 4.2                     | 4.4  |            |                                  |            |                                     |            |                         |           |
| RD4V3EB3 | 4.34                    | 4.53 | 20         | 25                               | 20         | 900                                 | 1          | 5                       | 1         |
| RD4V7EB  | 4.47                    | 4.91 |            |                                  |            |                                     |            |                         |           |
| RD4V7EB1 | 4.47                    | 4.65 |            |                                  |            |                                     |            |                         |           |
| RD4V7EB2 | 4.59                    | 4.77 | 20         | 20                               | 20         | 800                                 | 1          | 5                       | 1.5       |
| RD4V7EB3 | 4.71                    | 4.91 |            |                                  |            |                                     |            |                         |           |
| RD5V1EB  | 4.85                    | 5.35 |            |                                  |            |                                     |            |                         |           |
| RD5V1EB1 | 4.85                    | 5.03 | 20         | 20                               | 20         | 500                                 | 1          | 5                       | 2.5       |
| RD5V1EB2 | 4.97                    | 5.18 |            |                                  |            |                                     |            |                         |           |
| RD5V1EB3 | 5.12                    | 5.35 |            |                                  |            |                                     |            |                         |           |
| RD5V6EB  | 5.29                    | 5.88 | 20         | 13                               | 20         | 300                                 | 1          | 5                       | 3         |
| RD5V6EB1 | 5.29                    | 5.52 |            |                                  |            |                                     |            |                         |           |
| RD5V6EB2 | 5.46                    | 5.7  |            |                                  |            |                                     |            |                         |           |
| RD5V6EB3 | 5.64                    | 5.88 | 20         | 10                               | 20         | 150                                 | 0.5        | 2                       | 3.5       |
| RD6V2EB  | 5.81                    | 6.4  |            |                                  |            |                                     |            |                         |           |
| RD6V2EB1 | 5.81                    | 6.06 |            |                                  |            |                                     |            |                         |           |
| RD6V2EB2 | 5.99                    | 6.24 | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 4         |
| RD6V2EB3 | 6.16                    | 6.4  |            |                                  |            |                                     |            |                         |           |
| RD6V8EB  | 6.32                    | 6.97 |            |                                  |            |                                     |            |                         |           |
| RD6V8EB1 | 6.32                    | 6.59 | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 5         |
| RD6V8EB2 | 6.52                    | 6.79 |            |                                  |            |                                     |            |                         |           |
| RD6V8EB3 | 6.7                     | 6.97 |            |                                  |            |                                     |            |                         |           |
| RD7V5EB  | 6.88                    | 7.64 | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 5         |
| RD7V5EB1 | 6.88                    | 7.19 |            |                                  |            |                                     |            |                         |           |
| RD7V5EB2 | 7.11                    | 7.41 |            |                                  |            |                                     |            |                         |           |
| RD7V5EB3 | 7.33                    | 7.64 | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 5         |
| RD8V2EB  | 7.56                    | 8.41 |            |                                  |            |                                     |            |                         |           |
| RD8V2EB1 | 7.56                    | 7.9  |            |                                  |            |                                     |            |                         |           |
| RD8V2EB2 | 7.82                    | 8.15 | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 5         |
| RD8V2EB3 | 8.07                    | 8.41 |            |                                  |            |                                     |            |                         |           |



## SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116

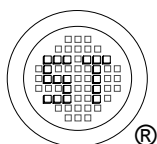


ISO 9001:2000  
Certificate No. 0506098

# RD2V0E...RD200E

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

| Type     | Zener Voltage           |       |            | Dynamic Impedance                |            | Knee Dynamic Impedance              |            | Reverse Current         |           |
|----------|-------------------------|-------|------------|----------------------------------|------------|-------------------------------------|------------|-------------------------|-----------|
|          | $V_Z$ (V) <sup>1)</sup> |       |            | $Z_Z$ ( $\Omega$ ) <sup>2)</sup> |            | $Z_{ZK}$ ( $\Omega$ ) <sup>2)</sup> |            | $I_R$ ( $\mu\text{A}$ ) |           |
|          | Min.                    | Max.  | $I_Z$ (mA) | Max.                             | $I_Z$ (mA) | Max.                                | $I_Z$ (mA) | Max.                    | $V_R$ (V) |
| RD9V1EB  | 8.33                    | 9.29  | 20         | 8                                | 20         | 120                                 | 0.5        | 0.5                     | 6         |
| RD9V1EB1 | 8.33                    | 8.7   |            |                                  |            |                                     |            |                         |           |
| RD9V1EB2 | 8.61                    | 8.99  |            |                                  |            |                                     |            |                         |           |
| RD9V1EB3 | 8.89                    | 9.29  |            |                                  |            |                                     |            |                         |           |
| RD10EB   | 9.19                    | 10.3  | 20         | 8                                | 20         | 120                                 | 0.5        | 0.2                     | 7         |
| RD10EB1  | 9.19                    | 9.59  |            |                                  |            |                                     |            |                         |           |
| RD10EB2  | 9.48                    | 9.9   |            |                                  |            |                                     |            |                         |           |
| RD10EB3  | 9.82                    | 10.3  |            |                                  |            |                                     |            |                         |           |
| RD11EB   | 10.18                   | 11.26 | 10         | 10                               | 10         | 120                                 | 0.5        | 0.2                     | 8         |
| RD11EB1  | 10.18                   | 10.63 |            |                                  |            |                                     |            |                         |           |
| RD11EB2  | 10.5                    | 10.95 |            |                                  |            |                                     |            |                         |           |
| RD11EB3  | 10.82                   | 11.26 |            |                                  |            |                                     |            |                         |           |
| RD12EB   | 11.13                   | 12.3  | 10         | 12                               | 10         | 110                                 | 0.5        | 0.2                     | 9         |
| RD12EB1  | 11.13                   | 11.63 |            |                                  |            |                                     |            |                         |           |
| RD12EB2  | 11.5                    | 11.92 |            |                                  |            |                                     |            |                         |           |
| RD12EB3  | 11.8                    | 12.3  |            |                                  |            |                                     |            |                         |           |
| RD13EB   | 12.18                   | 13.62 | 10         | 14                               | 10         | 110                                 | 0.5        | 0.2                     | 10        |
| RD13EB1  | 12.18                   | 12.71 |            |                                  |            |                                     |            |                         |           |
| RD13EB2  | 12.59                   | 13.16 |            |                                  |            |                                     |            |                         |           |
| RD13EB3  | 13.03                   | 13.62 |            |                                  |            |                                     |            |                         |           |
| RD15EB   | 13.48                   | 15.02 | 10         | 16                               | 10         | 110                                 | 0.5        | 0.2                     | 11        |
| RD15EB1  | 13.48                   | 14.09 |            |                                  |            |                                     |            |                         |           |
| RD15EB2  | 13.95                   | 14.56 |            |                                  |            |                                     |            |                         |           |
| RD15EB3  | 14.42                   | 15.02 |            |                                  |            |                                     |            |                         |           |
| RD16EB   | 14.87                   | 16.5  | 10         | 18                               | 10         | 150                                 | 0.5        | 0.2                     | 12        |
| RD16EB1  | 14.87                   | 15.5  |            |                                  |            |                                     |            |                         |           |
| RD16EB2  | 15.33                   | 15.96 |            |                                  |            |                                     |            |                         |           |
| RD16EB3  | 15.79                   | 16.5  |            |                                  |            |                                     |            |                         |           |
| RD18EB   | 16.34                   | 18.3  | 10         | 23                               | 10         | 150                                 | 0.5        | 0.2                     | 13        |
| RD18EB1  | 16.34                   | 17.06 |            |                                  |            |                                     |            |                         |           |
| RD18EB2  | 16.9                    | 17.67 |            |                                  |            |                                     |            |                         |           |
| RD18EB3  | 17.51                   | 18.3  |            |                                  |            |                                     |            |                         |           |
| RD20EB   | 18.11                   | 20.72 | 10         | 28                               | 10         | 200                                 | 0.5        | 0.2                     | 15        |
| RD20EB1  | 18.11                   | 18.92 |            |                                  |            |                                     |            |                         |           |
| RD20EB2  | 18.73                   | 19.57 |            |                                  |            |                                     |            |                         |           |
| RD20EB3  | 19.38                   | 20.22 |            |                                  |            |                                     |            |                         |           |
| RD20EB4  | 19.88                   | 20.72 | 5          | 30                               | 5          | 200                                 | 0.5        | 0.2                     | 17        |
| RD22EB   | 20.23                   | 22.61 |            |                                  |            |                                     |            |                         |           |
| RD22EB1  | 20.23                   | 21.08 |            |                                  |            |                                     |            |                         |           |
| RD22EB2  | 20.76                   | 21.65 |            |                                  |            |                                     |            |                         |           |
| RD22EB3  | 21.22                   | 22.09 |            |                                  |            |                                     |            |                         |           |
| RD22EB4  | 21.68                   | 22.61 | 5          | 35                               | 5          | 200                                 | 0.5        | 0.2                     | 19        |
| RD24EB   | 22.26                   | 24.81 |            |                                  |            |                                     |            |                         |           |
| RD24EB1  | 22.26                   | 23.12 |            |                                  |            |                                     |            |                         |           |
| RD24EB2  | 22.75                   | 23.73 |            |                                  |            |                                     |            |                         |           |
| RD24EB3  | 23.29                   | 24.27 |            |                                  |            |                                     |            |                         |           |
| RD24EB4  | 23.81                   | 24.81 | 5          | 45                               | 5          | 250                                 | 0.5        | 0.2                     | 21        |
| RD27EB   | 24.26                   | 27.64 |            |                                  |            |                                     |            |                         |           |
| RD27EB1  | 24.26                   | 25.52 |            |                                  |            |                                     |            |                         |           |
| RD27EB2  | 24.97                   | 26.26 |            |                                  |            |                                     |            |                         |           |
| RD27EB3  | 25.63                   | 26.95 |            |                                  |            |                                     |            |                         |           |
| RD27EB4  | 26.29                   | 27.64 | 5          | 55                               | 5          | 250                                 | 0.5        | 0.2                     | 23        |
| RD30EB   | 26.99                   | 30.51 |            |                                  |            |                                     |            |                         |           |
| RD30EB1  | 26.99                   | 28.39 |            |                                  |            |                                     |            |                         |           |
| RD30EB2  | 27.7                    | 29.13 |            |                                  |            |                                     |            |                         |           |
| RD30EB3  | 28.36                   | 29.82 |            |                                  |            |                                     |            |                         |           |
| RD30EB4  | 29.02                   | 30.51 |            |                                  |            |                                     |            |                         |           |



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 050098

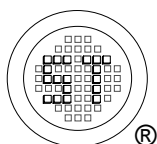
# RD2V0E...RD200E

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

| Type    | Zener Voltage           |       |            | Dynamic Impedance                |            | Knee Dynamic Impedance              |            | Reverse Current         |           |   |     |   |  |  |     |    |
|---------|-------------------------|-------|------------|----------------------------------|------------|-------------------------------------|------------|-------------------------|-----------|---|-----|---|--|--|-----|----|
|         | $V_Z$ (V) <sup>1)</sup> |       |            | $Z_Z$ ( $\Omega$ ) <sup>2)</sup> |            | $Z_{ZK}$ ( $\Omega$ ) <sup>2)</sup> |            | $I_R$ ( $\mu\text{A}$ ) |           |   |     |   |  |  |     |    |
|         | Min.                    | Max.  | $I_Z$ (mA) | Max.                             | $I_Z$ (mA) | Max.                                | $I_Z$ (mA) | Max.                    | $V_R$ (V) |   |     |   |  |  |     |    |
| RD33EB  | 29.68                   | 33.11 | 5          | 65                               | 5          | 250                                 | 0.5        | 0.2                     | 25        |   |     |   |  |  |     |    |
| RD33EB1 | 29.68                   | 31.22 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD33EB2 | 30.32                   | 31.88 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD33EB3 | 30.9                    | 32.5  |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD33EB4 | 31.49                   | 33.11 | 5          | 75                               | 5          | 250                                 | 0.5        | 0.2                     | 27        |   |     |   |  |  |     |    |
| RD36EB  | 32.14                   | 35.77 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD36EB1 | 32.14                   | 33.79 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD36EB2 | 32.79                   | 34.49 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD36EB3 | 33.4                    | 35.13 | 5          | 85                               | 5          | 250                                 | 0.5        | 0.2                     | 30        |   |     |   |  |  |     |    |
| RD36EB4 | 34.01                   | 35.77 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB  | 34.68                   | 40.8  |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB1 | 34.68                   | 36.47 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB2 | 35.36                   | 37.19 | 5          | 90                               | 5          |                                     |            | 0.2                     | 33        |   |     |   |  |  |     |    |
| RD39EB3 | 36                      | 37.85 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB4 | 36.63                   | 38.52 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB5 | 37.36                   | 39.29 |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD39EB6 | 38.14                   | 40.11 | 5          | 90                               | 5          |                                     |            | 0.2                     | 36        |   |     |   |  |  |     |    |
| RD39EB7 | 38.94                   | 40.8  |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD43EB  | 40                      | 45    |            |                                  |            |                                     |            |                         |           | 5 | 110 | 5 |  |  | 0.2 | 39 |
| RD47EB  | 44                      | 49    |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD51EB  | 48                      | 54    |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD56EB  | 53                      | 60    |            |                                  |            |                                     |            |                         |           |   |     |   |  |  |     |    |
| RD62EB  | 58                      | 66    | 2          | 200                              | 2          |                                     |            | 0.2                     | 47        |   |     |   |  |  |     |    |
| RD68EB  | 64                      | 72    | 2          | 200                              | 2          |                                     |            | 0.2                     | 52        |   |     |   |  |  |     |    |
| RD75EB  | 70                      | 79    | 2          | 300                              | 2          |                                     |            | 0.2                     | 57        |   |     |   |  |  |     |    |
| RD82EB  | 77                      | 87    | 2          | 300                              | 2          |                                     |            | 0.2                     | 63        |   |     |   |  |  |     |    |
| RD91EB  | 85                      | 96    | 2          | 400                              | 2          |                                     |            | 0.2                     | 69        |   |     |   |  |  |     |    |
| RD100EB | 94                      | 106   | 2          | 400                              | 2          |                                     |            | 0.2                     | 76        |   |     |   |  |  |     |    |
| RD110EB | 104                     | 116   | 1          | 750                              | 1          |                                     |            | 0.2                     | 84        |   |     |   |  |  |     |    |
| RD120EB | 114                     | 126   | 1          | 900                              | 1          |                                     |            | 0.2                     | 91        |   |     |   |  |  |     |    |
| RD130EB | 120                     | 140   | 1          | 1100                             | 1          |                                     |            | 0.2                     | 100       |   |     |   |  |  |     |    |
| RD140EB | 130                     | 150   | 1          | 1300                             | 1          |                                     |            | 0.2                     | 110       |   |     |   |  |  |     |    |
| RD150EB | 140                     | 160   | 1          | 1500                             | 1          |                                     |            | 0.2                     | 120       |   |     |   |  |  |     |    |
| RD160EB | 150                     | 170   | 1          | 1700                             | 1          |                                     |            | 0.2                     | 130       |   |     |   |  |  |     |    |
| RD170EB | 160                     | 180   | 1          | 1900                             | 1          |                                     |            | 0.2                     | 140       |   |     |   |  |  |     |    |
| RD180EB | 170                     | 190   | 1          | 2200                             | 1          |                                     |            | 0.2                     | 140       |   |     |   |  |  |     |    |
| RD190EB | 180                     | 200   | 1          | 2400                             | 1          |                                     |            | 0.2                     | 150       |   |     |   |  |  |     |    |
| RD200EB | 190                     | 210   | 1          | 2500                             | 1          |                                     |            | 0.2                     | 160       |   |     |   |  |  |     |    |

<sup>1)</sup> Tested with pulse (20 ms)

<sup>2)</sup>  $Z_Z$  and  $Z_{ZK}$  are measured at  $I_Z$  by given a very small A.C. Current Signal.



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



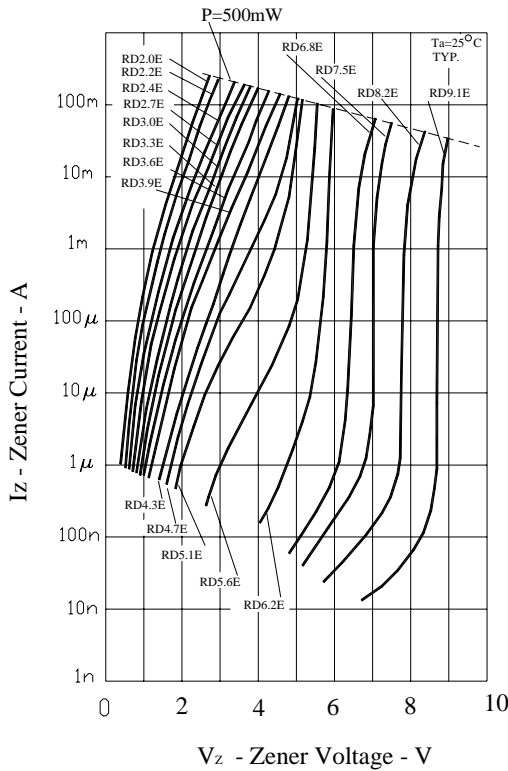
ISO 14001:2004  
Certificate No. 7118



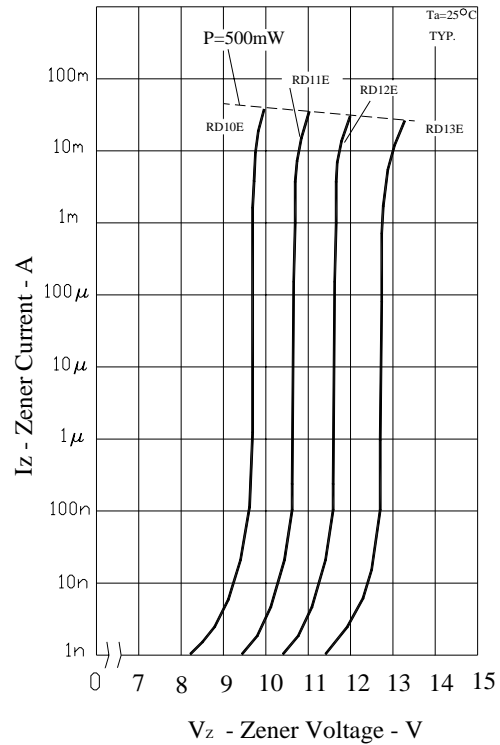
ISO 9001:2000  
Certificate No. 050098

Dated : 23/06/2007

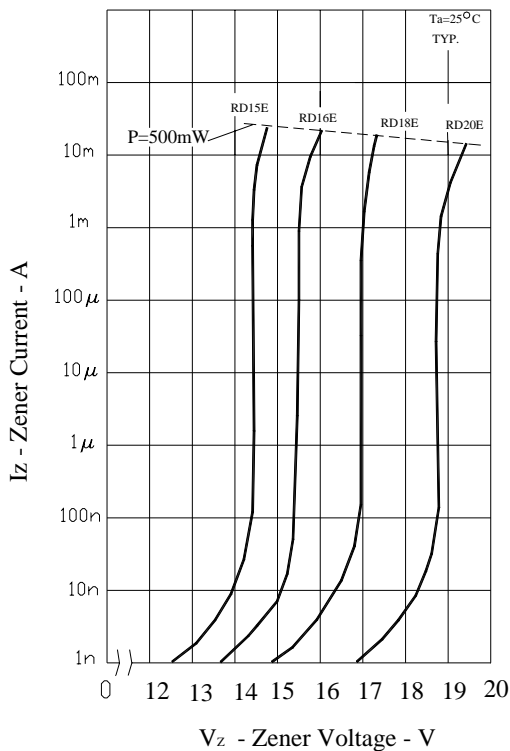
## Iz - Vz CHARACTERISTICS



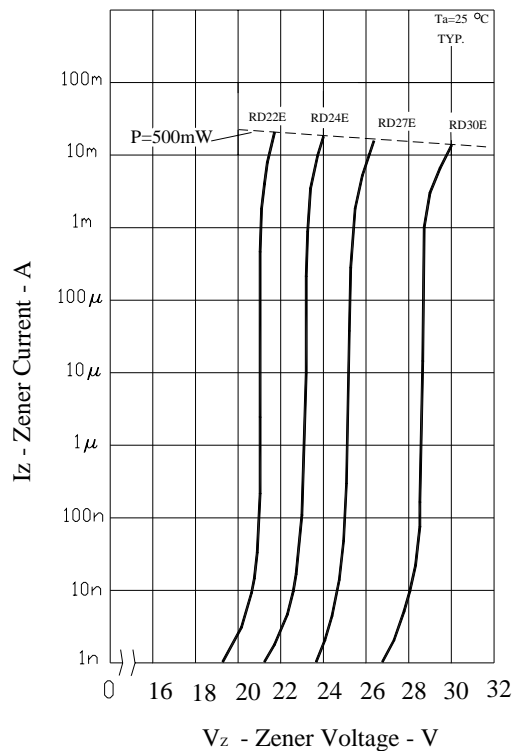
(a)



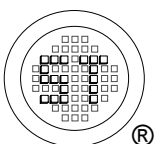
(b)



(c)



(d)



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103

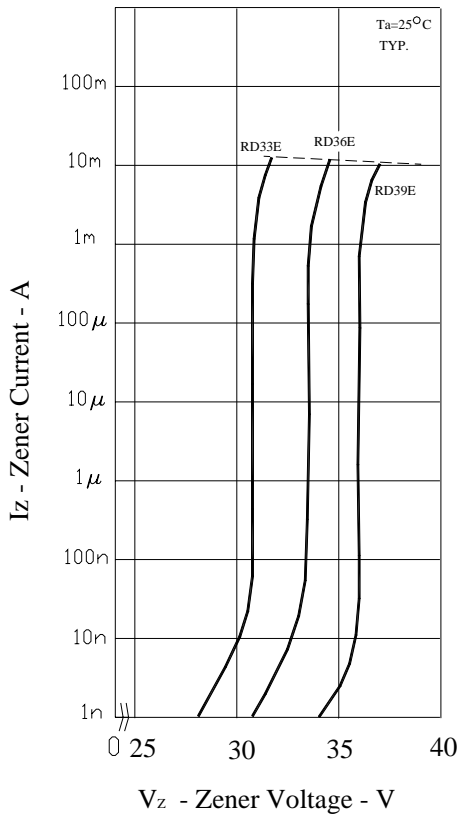


ISO 14001:2004  
Certificate No. 7118

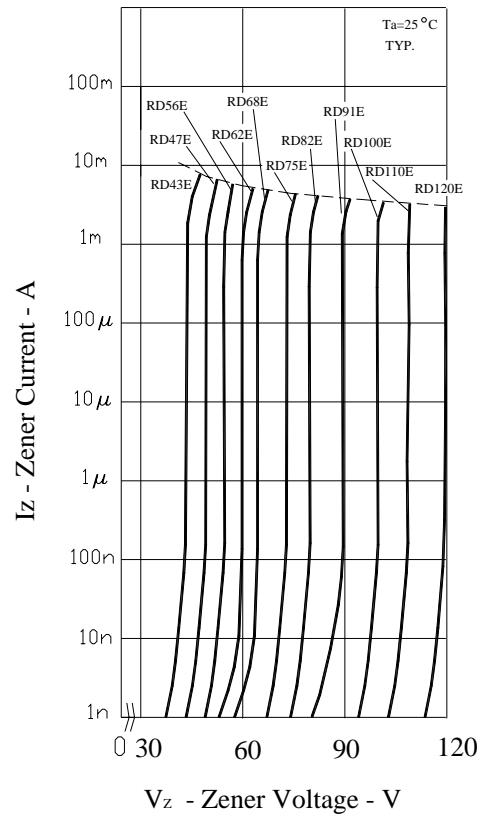


ISO 9001:2000  
Certificate No. 050098

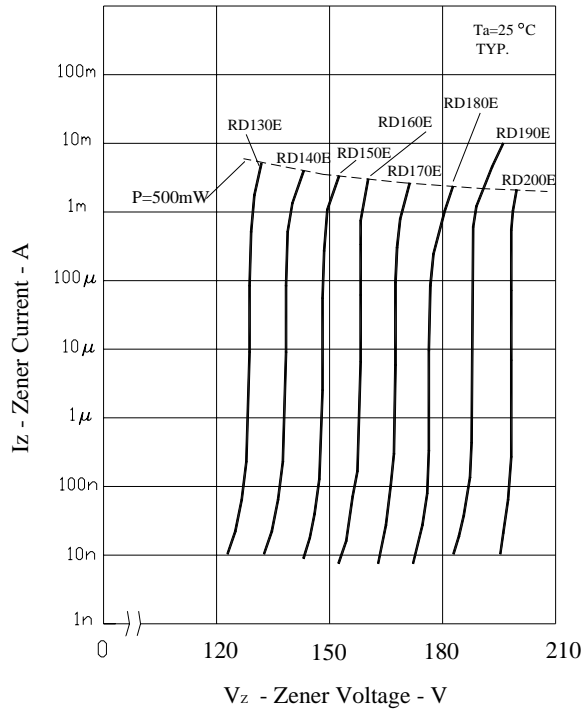
# RD2V0E...RD200E



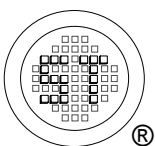
(e)



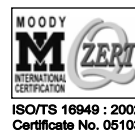
(f)



(g)

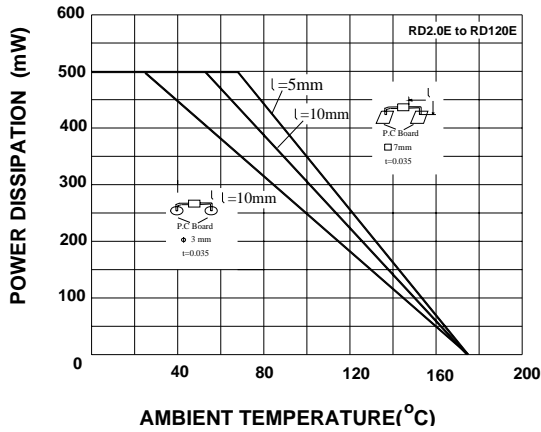


**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

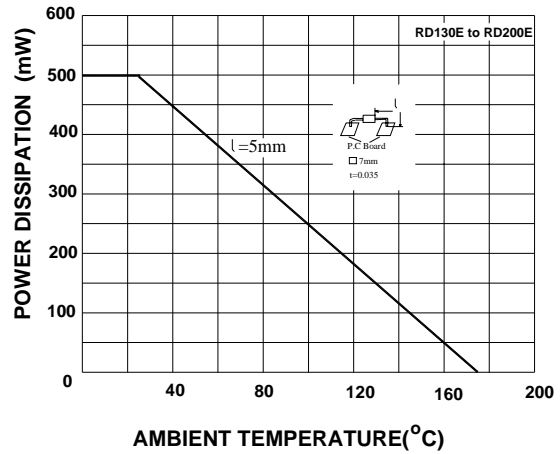


# RD2V0E...RD200E

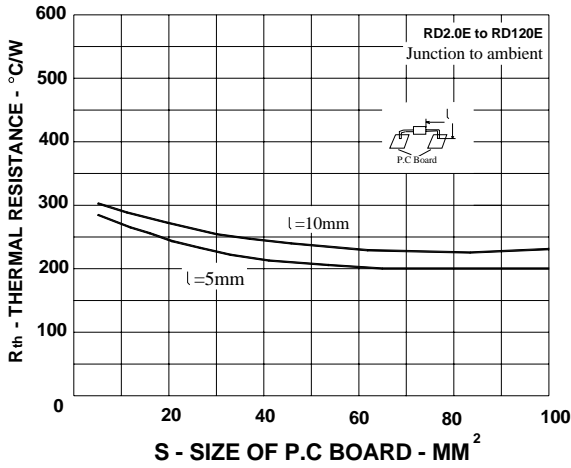
P - Ta Rating



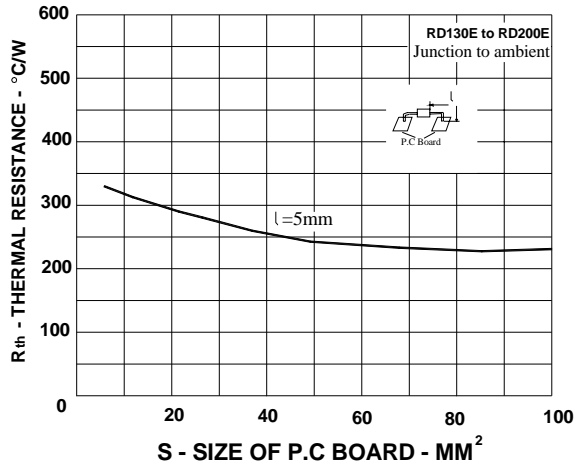
P - Ta Rating



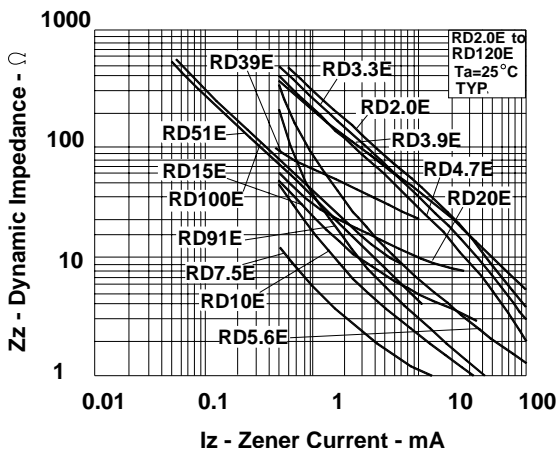
THERMAL RESISTANCE vs. SIZE OF P. C BOARD



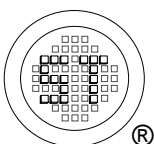
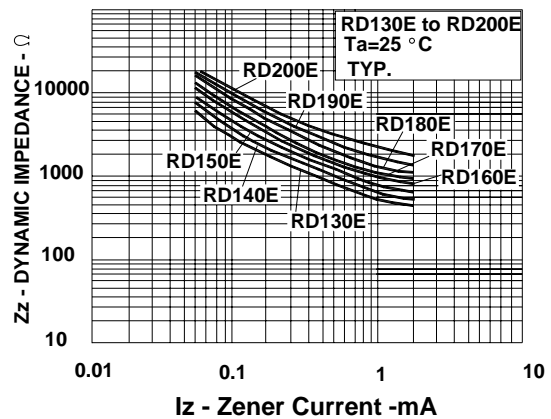
THERMAL RESISTANCE vs. SIZE OF P. C BOARD



DYNAMIC IMPEDANCE vs. ZENER CURRENT



DYNAMIC IMPEDANCE vs. ZENER CURRENT



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



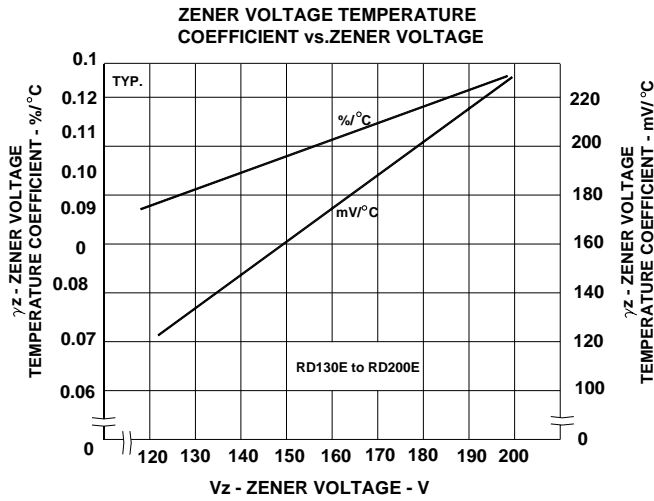
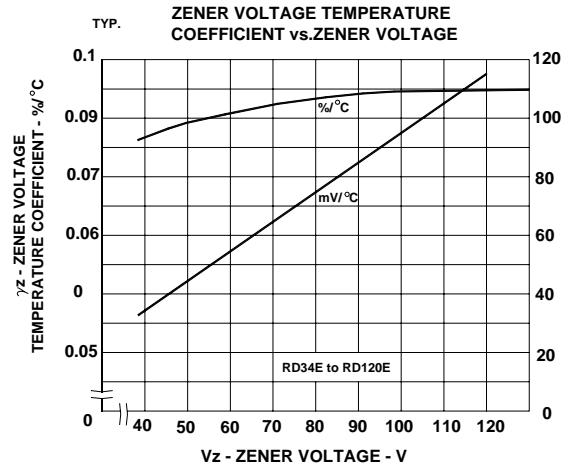
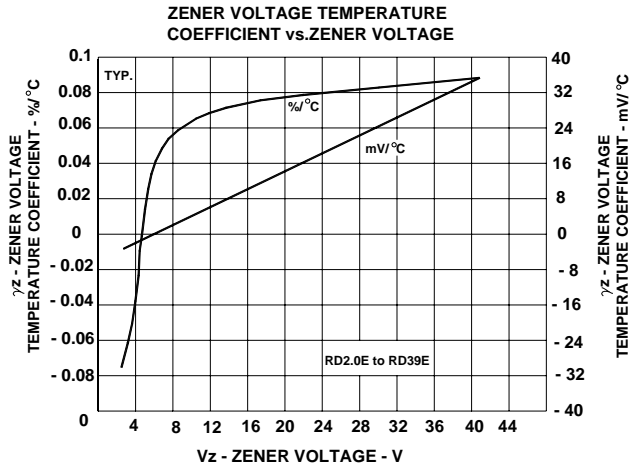
ISO/TS 16949 : 2002  
Certificate No. 05103



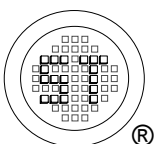
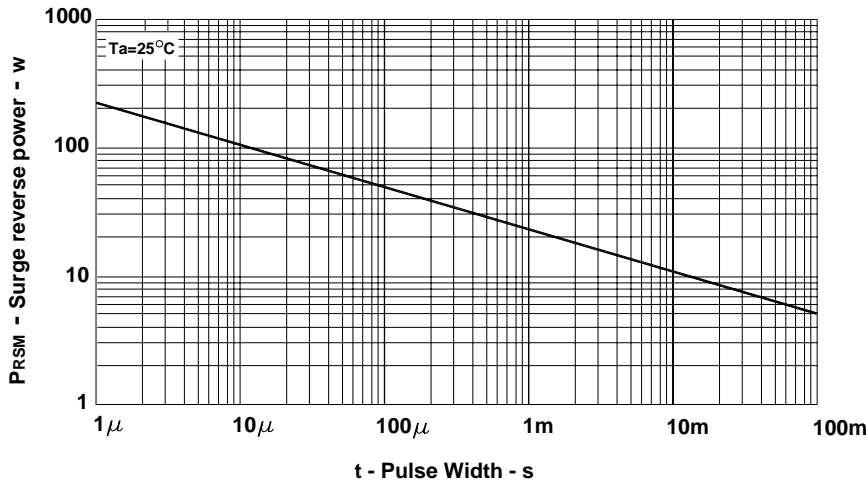
ISO 14001:2004  
Certificate No. 7118



ISO 9001:2000  
Certificate No. 050098



## SURGE REVERSE POWER RATINGS



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7118



ISO 9001:2000  
Certificate No. 0506098