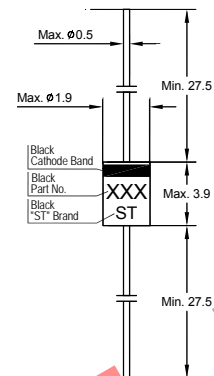


HS Series

Silicon Epitaxial Planar Zener Diodes



Glass Case DO-35
Dimensions in mm

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

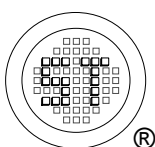
| Parameter | Symbol | Value | Unit |
|---------------------------|------------------|-------------------|------------------|
| Power Dissipation | P_{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 55 to + 175 | $^\circ\text{C}$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

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

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

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

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



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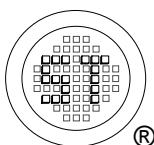


Dated : 18/07/2009

HS Series

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

| Type | Zener Voltage ¹⁾ | | | Dynamic Resistance | | Reverse Leakage Current | |
|--------|-----------------------------|----------|-------------|--------------------|-------------|-------------------------|----------|
| | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | I_R | at V_R |
| | Min. (V) | Max. (V) | (mA) | Max. (Ω) | (mA) | Max. (μA) | (V) |
| 2V0HS | 1.88 | 2.2 | 5 | 100 | 5 | 120 | 0.5 |
| 2V0HSA | 1.88 | 2.1 | 5 | 100 | 5 | 120 | 0.5 |
| 2V0HSB | 2.02 | 2.2 | 5 | 100 | 5 | 120 | 0.5 |
| 2V2HS | 2.12 | 2.41 | 5 | 100 | 5 | 120 | 0.7 |
| 2V2HSA | 2.12 | 2.3 | 5 | 100 | 5 | 120 | 0.7 |
| 2V2HSB | 2.22 | 2.41 | 5 | 100 | 5 | 120 | 0.7 |
| 2V4HS | 2.33 | 2.63 | 5 | 100 | 5 | 120 | 1 |
| 2V4HSA | 2.33 | 2.52 | 5 | 100 | 5 | 120 | 1 |
| 2V4HSB | 2.43 | 2.63 | 5 | 100 | 5 | 120 | 1 |
| 2V7HS | 2.54 | 2.91 | 5 | 110 | 5 | 100 | 1 |
| 2V7HSA | 2.54 | 2.75 | 5 | 110 | 5 | 100 | 1 |
| 2V7HSB | 2.69 | 2.91 | 5 | 110 | 5 | 100 | 1 |
| 3V0HS | 2.85 | 3.22 | 5 | 120 | 5 | 50 | 1 |
| 3V0HSA | 2.85 | 3.07 | 5 | 120 | 5 | 50 | 1 |
| 3V0HSB | 3.01 | 3.22 | 5 | 120 | 5 | 50 | 1 |
| 3V3HS | 3.16 | 3.53 | 5 | 120 | 5 | 20 | 1 |
| 3V3HSA | 3.16 | 3.38 | 5 | 120 | 5 | 20 | 1 |
| 3V3HSB | 3.32 | 3.53 | 5 | 120 | 5 | 20 | 1 |
| 3V6HS | 3.47 | 3.83 | 5 | 120 | 5 | 10 | 1 |
| 3V6HSA | 3.47 | 3.68 | 5 | 120 | 5 | 10 | 1 |
| 3V6HSB | 3.62 | 3.83 | 5 | 120 | 5 | 10 | 1 |
| 3V9HS | 3.77 | 4.14 | 5 | 120 | 5 | 5 | 1 |
| 3V9HSA | 3.77 | 3.98 | 5 | 120 | 5 | 5 | 1 |
| 3V9HSB | 3.92 | 4.14 | 5 | 120 | 5 | 5 | 1 |
| 4V3HS | 4.05 | 4.53 | 5 | 120 | 5 | 5 | 1 |
| 4V3HSA | 4.05 | 4.26 | 5 | 120 | 5 | 5 | 1 |
| 4V3HSB | 4.2 | 4.4 | 5 | 120 | 5 | 5 | 1 |
| 4V3HSC | 4.34 | 4.53 | 5 | 120 | 5 | 5 | 1 |
| 4V7HS | 4.47 | 4.91 | 5 | 100 | 5 | 5 | 1 |
| 4V7HSA | 4.47 | 4.65 | 5 | 100 | 5 | 5 | 1 |
| 4V7HSB | 4.59 | 4.77 | 5 | 100 | 5 | 5 | 1 |
| 4V7HSC | 4.71 | 4.91 | 5 | 100 | 5 | 5 | 1 |
| 5V1HS | 4.85 | 5.35 | 5 | 70 | 5 | 5 | 1.5 |
| 5V1HSA | 4.85 | 5.03 | 5 | 70 | 5 | 5 | 1.5 |
| 5V1HSB | 4.97 | 5.18 | 5 | 70 | 5 | 5 | 1.5 |
| 5V1HSC | 5.12 | 5.35 | 5 | 70 | 5 | 5 | 1.5 |
| 5V6HS | 5.29 | 5.88 | 5 | 40 | 5 | 5 | 2.5 |
| 5V6HSA | 5.29 | 5.52 | 5 | 40 | 5 | 5 | 2.5 |
| 5V6HSB | 5.46 | 5.7 | 5 | 40 | 5 | 5 | 2.5 |
| 5V6HSC | 5.64 | 5.88 | 5 | 40 | 5 | 5 | 2.5 |



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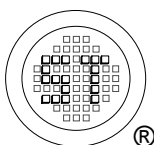


Dated : 18/07/2009

HS Series

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

| Type | Zener Voltage ¹⁾ | | | Dynamic Resistance | | Reverse Leakage Current | |
|--------|-----------------------------|----------|-------------|--------------------|-------------|-------------------------|----------|
| | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | I_R | at V_R |
| | Min. (V) | Max. (V) | (mA) | Max. (Ω) | (mA) | Max. (μA) | (V) |
| 6V2HS | 5.81 | 6.4 | 5 | 30 | 5 | 5 | 3 |
| 6V2HSA | 5.81 | 6.06 | 5 | 30 | 5 | 5 | 3 |
| 6V2HSB | 5.99 | 6.24 | 5 | 30 | 5 | 5 | 3 |
| 6V2HSC | 6.16 | 6.4 | 5 | 30 | 5 | 5 | 3 |
| 6V8HS | 6.32 | 6.97 | 5 | 25 | 5 | 2 | 3.5 |
| 6V8HSA | 6.32 | 6.59 | 5 | 25 | 5 | 2 | 3.5 |
| 6V8HSB | 6.52 | 6.79 | 5 | 25 | 5 | 2 | 3.5 |
| 6V8HSC | 6.7 | 6.97 | 5 | 25 | 5 | 2 | 3.5 |
| 7V5HS | 6.88 | 7.64 | 5 | 25 | 5 | 0.5 | 4 |
| 7V5HSA | 6.88 | 7.19 | 5 | 25 | 5 | 0.5 | 4 |
| 7V5HSB | 7.11 | 7.41 | 5 | 25 | 5 | 0.5 | 4 |
| 7V5HSC | 7.33 | 7.64 | 5 | 25 | 5 | 0.5 | 4 |
| 8V2HS | 7.56 | 8.41 | 5 | 20 | 5 | 0.5 | 5 |
| 8V2HSA | 7.56 | 7.9 | 5 | 20 | 5 | 0.5 | 5 |
| 8V2HSB | 7.82 | 8.15 | 5 | 20 | 5 | 0.5 | 5 |
| 8V2HSC | 8.07 | 8.41 | 5 | 20 | 5 | 0.5 | 5 |
| 9V1HS | 8.33 | 9.29 | 5 | 20 | 5 | 0.5 | 6 |
| 9V1HSA | 8.33 | 8.7 | 5 | 20 | 5 | 0.5 | 6 |
| 9V1HSB | 8.61 | 8.99 | 5 | 20 | 5 | 0.5 | 6 |
| 9V1HSC | 8.89 | 9.29 | 5 | 20 | 5 | 0.5 | 6 |
| 10HS | 9.19 | 10.3 | 5 | 20 | 5 | 0.2 | 7 |
| 10HSA | 9.19 | 9.59 | 5 | 20 | 5 | 0.2 | 7 |
| 10HSB | 9.48 | 9.9 | 5 | 20 | 5 | 0.2 | 7 |
| 10HSC | 9.82 | 10.3 | 5 | 20 | 5 | 0.2 | 7 |
| 11HS | 10.18 | 11.26 | 5 | 20 | 5 | 0.2 | 8 |
| 11HSA | 10.18 | 10.63 | 5 | 20 | 5 | 0.2 | 8 |
| 11HSB | 10.5 | 10.95 | 5 | 20 | 5 | 0.2 | 8 |
| 11HSC | 10.82 | 11.26 | 5 | 20 | 5 | 0.2 | 8 |
| 12HS | 11.13 | 12.3 | 5 | 25 | 5 | 0.2 | 9 |
| 12HSA | 11.13 | 11.63 | 5 | 25 | 5 | 0.2 | 9 |
| 12HSB | 11.5 | 11.92 | 5 | 25 | 5 | 0.2 | 9 |
| 12HSC | 11.8 | 12.3 | 5 | 25 | 5 | 0.2 | 9 |
| 13HS | 12.18 | 13.62 | 5 | 25 | 5 | 0.2 | 10 |
| 13HSA | 12.18 | 12.71 | 5 | 25 | 5 | 0.2 | 10 |
| 13HSB | 12.59 | 13.16 | 5 | 25 | 5 | 0.2 | 10 |
| 13HSC | 13.03 | 13.62 | 5 | 25 | 5 | 0.2 | 10 |
| 15HS | 13.48 | 15.02 | 5 | 25 | 5 | 0.2 | 11 |
| 15HSA | 13.48 | 14.09 | 5 | 25 | 5 | 0.2 | 11 |
| 15HSB | 13.95 | 14.56 | 5 | 25 | 5 | 0.2 | 11 |
| 15HSC | 14.42 | 15.02 | 5 | 25 | 5 | 0.2 | 11 |



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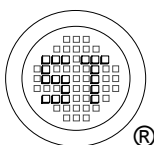


Dated : 18/07/2009

HS Series

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

| Type | Zener Voltage ¹⁾ | | | Dynamic Resistance | | Reverse Leakage Current | |
|-------|-----------------------------|----------|-------------|--------------------|-------------|-------------------------|----------|
| | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | I_R | at V_R |
| | Min. (V) | Max. (V) | (mA) | Max. (Ω) | (mA) | Max. (μA) | (V) |
| 16HS | 14.87 | 16.5 | 5 | 25 | 5 | 0.2 | 12 |
| 16HSA | 14.87 | 15.5 | 5 | 25 | 5 | 0.2 | 12 |
| 16HSB | 15.33 | 15.96 | 5 | 25 | 5 | 0.2 | 12 |
| 16HSC | 15.79 | 16.5 | 5 | 25 | 5 | 0.2 | 12 |
| 18HS | 16.34 | 18.30 | 5 | 30 | 5 | 0.2 | 13 |
| 18HSA | 16.34 | 17.06 | 5 | 30 | 5 | 0.2 | 13 |
| 18HSB | 16.9 | 17.67 | 5 | 30 | 5 | 0.2 | 13 |
| 18HSC | 17.51 | 18.3 | 5 | 30 | 5 | 0.2 | 13 |
| 20HS | 18.14 | 20.45 | 5 | 30 | 5 | 0.2 | 15 |
| 20HSA | 18.14 | 18.96 | 5 | 30 | 5 | 0.2 | 15 |
| 20HSB | 18.8 | 19.68 | 5 | 30 | 5 | 0.2 | 15 |
| 20HSC | 19.52 | 20.45 | 5 | 30 | 5 | 0.2 | 15 |
| 22HS | 20.23 | 22.61 | 5 | 30 | 5 | 0.2 | 17 |
| 22HSA | 20.23 | 21.08 | 5 | 30 | 5 | 0.2 | 17 |
| 22HSB | 20.76 | 21.65 | 5 | 30 | 5 | 0.2 | 17 |
| 22HSC | 21.22 | 22.09 | 5 | 30 | 5 | 0.2 | 17 |
| 22HSD | 21.68 | 22.61 | 5 | 30 | 5 | 0.2 | 17 |
| 24HS | 22.26 | 24.81 | 5 | 35 | 5 | 0.2 | 19 |
| 24HSA | 22.26 | 23.12 | 5 | 35 | 5 | 0.2 | 19 |
| 24HSB | 22.75 | 23.73 | 5 | 35 | 5 | 0.2 | 19 |
| 24HSC | 23.29 | 24.27 | 5 | 35 | 5 | 0.2 | 19 |
| 24HSD | 23.81 | 24.81 | 5 | 35 | 5 | 0.2 | 19 |
| 27HS | 24.26 | 27.64 | 5 | 45 | 5 | 0.2 | 21 |
| 27HSA | 24.26 | 25.52 | 5 | 45 | 5 | 0.2 | 21 |
| 27HSB | 24.97 | 26.26 | 5 | 45 | 5 | 0.2 | 21 |
| 27HSC | 25.63 | 26.95 | 5 | 45 | 5 | 0.2 | 21 |
| 27HSD | 26.29 | 27.64 | 5 | 45 | 5 | 0.2 | 21 |
| 30HS | 26.99 | 30.51 | 5 | 55 | 5 | 0.2 | 23 |
| 30HSA | 26.99 | 28.39 | 5 | 55 | 5 | 0.2 | 23 |
| 30HSB | 27.7 | 29.13 | 5 | 55 | 5 | 0.2 | 23 |
| 30HSC | 28.36 | 29.82 | 5 | 55 | 5 | 0.2 | 23 |
| 30HSD | 29.02 | 30.51 | 5 | 55 | 5 | 0.2 | 23 |
| 33HS | 29.68 | 33.11 | 5 | 65 | 5 | 0.2 | 25 |
| 33HSA | 29.68 | 31.22 | 5 | 65 | 5 | 0.2 | 25 |
| 33HSB | 30.32 | 31.88 | 5 | 65 | 5 | 0.2 | 25 |
| 33HSC | 30.9 | 32.5 | 5 | 65 | 5 | 0.2 | 25 |
| 33HSD | 31.49 | 33.11 | 5 | 65 | 5 | 0.2 | 25 |
| 36HS | 32.14 | 35.77 | 5 | 75 | 5 | 0.2 | 27 |
| 36HSA | 32.14 | 33.79 | 5 | 75 | 5 | 0.2 | 27 |
| 36HSB | 32.79 | 34.49 | 5 | 75 | 5 | 0.2 | 27 |



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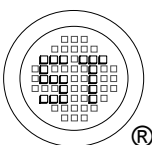
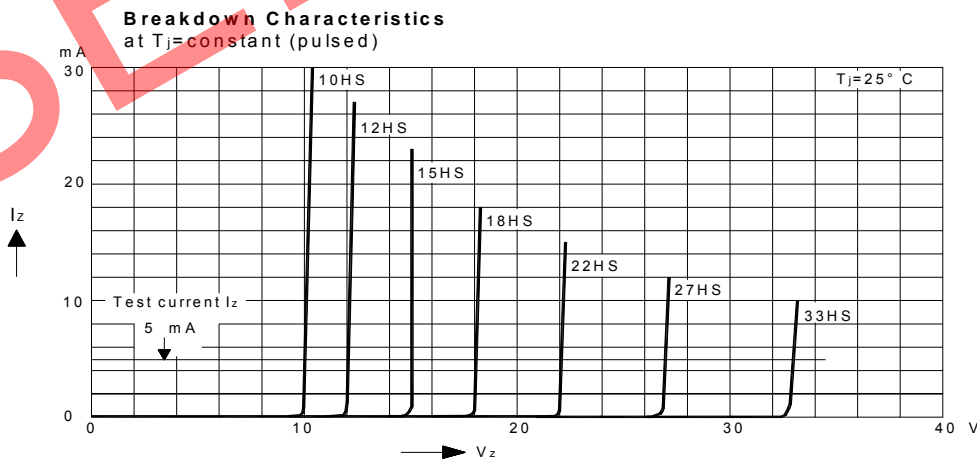
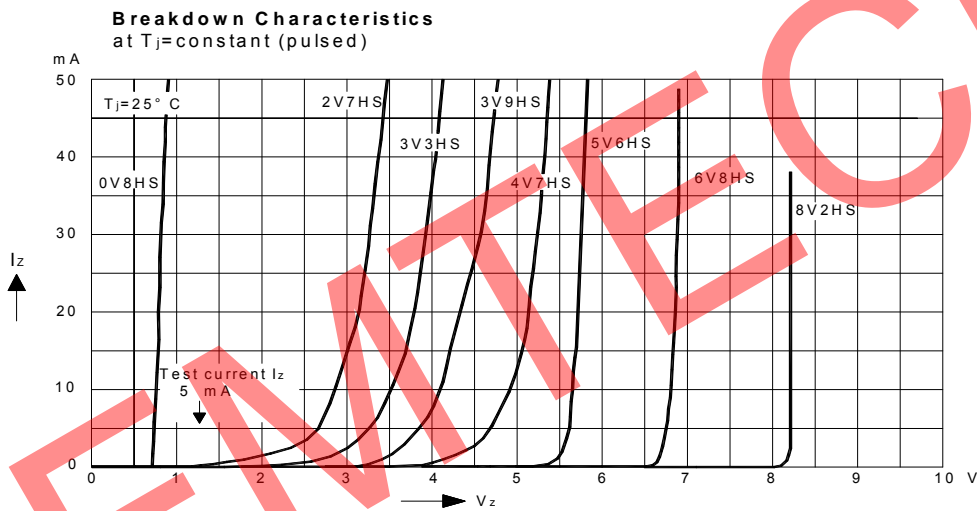
Dated : 18/07/2009

HS Series

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

| Type | Zener Voltage ¹⁾ | | | Dynamic Resistance | | Reverse Leakage Current | |
|-------|-----------------------------|----------|-------------|--------------------|-------------|-------------------------|----------|
| | V_Z | | at I_{ZT} | Z_{ZT} | at I_{ZT} | I_R | at V_R |
| | Min. (V) | Max. (V) | (mA) | Max. (Ω) | (mA) | Max. (μA) | (V) |
| 36HSC | 33.4 | 35.13 | 5 | 75 | 5 | 0.2 | 27 |
| 36HSD | 34.01 | 35.77 | 5 | 75 | 5 | 0.2 | 27 |
| 39HS | 34.68 | 38.52 | 5 | 85 | 5 | 0.2 | 30 |
| 39HSA | 34.68 | 36.47 | 5 | 85 | 5 | 0.2 | 30 |
| 39HSB | 35.36 | 37.19 | 5 | 85 | 5 | 0.2 | 30 |
| 39HSC | 36 | 37.85 | 5 | 85 | 5 | 0.2 | 30 |
| 39HSD | 36.63 | 38.52 | 5 | 85 | 5 | 0.2 | 30 |

¹⁾ Tested with pulse tp = 20 ms



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