

# Silicon Switching Diode

1N4454,  
1N4454-1

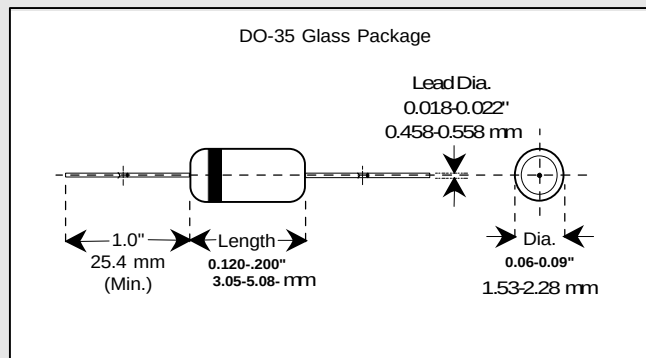
# DO-35 Glass Package

## Applications

Used in general purpose applications, where performance and switching speed are important.

## Features

- Six sigma quality
- Metallurgically bonded
- BKC's Sigma Bond™ plating for problem free solderability
- LL-34/35 MELF SMD available
- Full approval to Mil-S-19500 /144
- Available up to JANTXV-1 levels
- "S" level screening available to Source Control Drawings



| Maximum Ratings                                              | Symbol            | Value         | Unit    |
|--------------------------------------------------------------|-------------------|---------------|---------|
| Peak Inverse Voltage @ 5 $\mu$ A & 0.1 $\mu$ A @ -55°C       | PIV               | 75 (Min.)     | Volts   |
| Average Rectified Current                                    | I <sub>Avg</sub>  | 200           | mAmps   |
| Continuous Forward Current                                   | I <sub>Fdc</sub>  | 300           | mAmps   |
| Peak Surge Current (t <sub>peak</sub> = 1 sec.)              | I <sub>peak</sub> | 1.0           | Amp     |
| Power Dissipation T <sub>L</sub> = 50 °C, L = 3/8" from body | P <sub>tot</sub>  | 500           | mWatts  |
| Operating Temperature Range                                  | T <sub>Op</sub>   | 200           | ° C     |
| Storage Temperature Range                                    | T <sub>St</sub>   | -65 to +200   | ° C     |
| Electrical Characteristics @ 25 °C*                          | Symbol            | Limits        | Unit    |
| Forward Voltage @ I <sub>F</sub> = 10 mA                     | V <sub>F</sub>    | 1.0(max)      | Volts   |
| Breakdown Voltage @ I <sub>R</sub> = 5 $\mu$ A               | PIV               | 75 (min)      | Volts   |
| Reverse Leakage Current @ V <sub>R</sub> = 50 V              | I <sub>R</sub>    | 0.1 (max)     | $\mu$ A |
| Reverse Leakage Current @ V <sub>R</sub> = 50 V, T=150 °C    | I <sub>R</sub>    | 100 (max)     | $\mu$ A |
| Capacitance @ V <sub>R</sub> = 0 V, f = 1mHz                 | C <sub>T</sub>    | 2.0 (max)     | pF      |
| Reverse Recovery Time (note 1)/(note 2)                      | t <sub>rr</sub>   | 2.0/4.0 (max) | nSecs   |
| Forward Recovery Voltage (note 3)                            | V <sub>fr</sub>   | 3.0 (max)     | Volts   |

Note 1: Per Method 4031-A with I<sub>F</sub> = I<sub>R</sub> = 10 mA, R<sub>L</sub> = 100 Ohms, C = 3 Pf.

Note 2: Per Method 4031-A with I<sub>F</sub> = 10 mA, R<sub>L</sub> = 100 Ohms, V<sub>r</sub> = 6 V, Recover to 1.0 mA.

Note 3: Per Method 4026 with I<sub>F</sub> = 100 mA, R<sub>L</sub> = 50 Ohms, Peak Square wave, 100 nSec Pulse Width, tr<30 nSec, repetition Rate = 5 - 100 KHz.

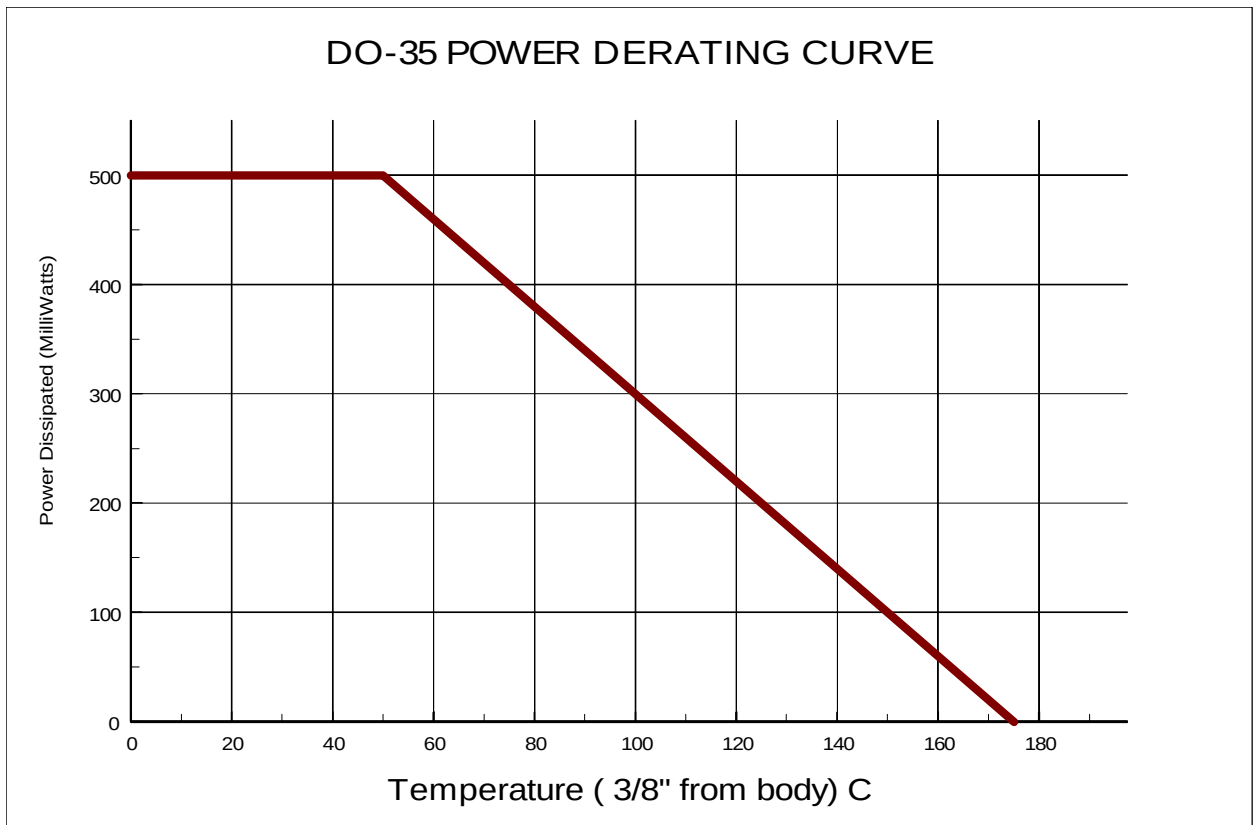
\* Unless Otherwise Specified



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# DO-35 DERATING (175 C Tj)



**Microsemi**

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