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1N4454

Features

- Low Current Leakage
- Compression Bond Construction
- Low Cost

400mW 75 Volt Silicon Epitaxial Diode

Maximum Ratings

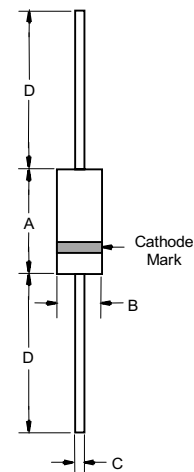
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 400K/W Junction To Ambient

DO-35

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---------------------------------------------------------|-----------|-------|-----------------------------------------------------------|
| Reverse Voltage | V_R | 50V | |
| Peak Reverse Voltage | V_{RM} | 75V | |
| Average Rectified Current | I_O | 150mA | Resistive Load $f > 50\text{Hz}$ |
| Power Dissipation | P_{TOT} | 400mW | |
| Maximum Junction Temperature | T_J | 150°C | |
| Peak Forward Surge Current | I_{FSM} | 400mA | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.0V | $I_{FM} = 10\text{mA};$ $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 100nA | $V_R=50\text{Volts}$ $T_J = 25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 4.0pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |
| Reverse Recovery Time | T_{rr} | 4.0nS | $I_F=10\text{mA}$ $V_R = 6\text{V}$ $R_L=100\Omega$ |

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

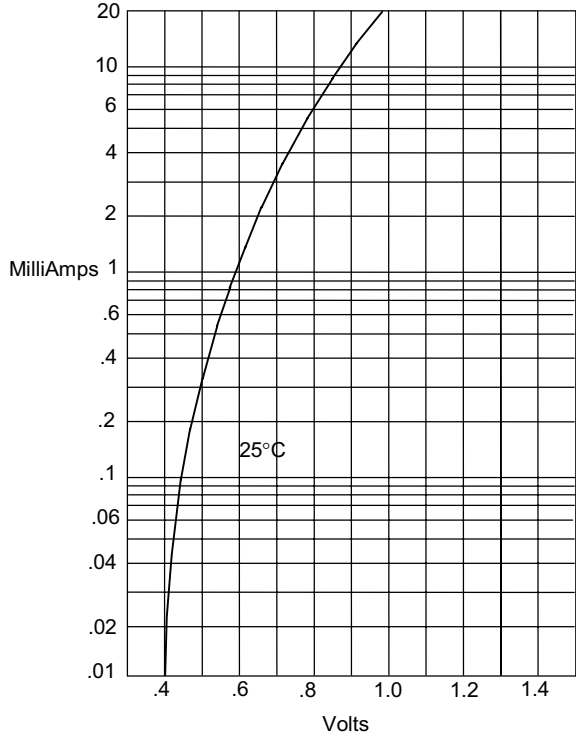


| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | --- | .166 | --- | 4.2 | |
| B | --- | .079 | --- | 2.00 | |
| C | --- | .020 | --- | .52 | |
| D | 1.000 | --- | 25.40 | --- | |



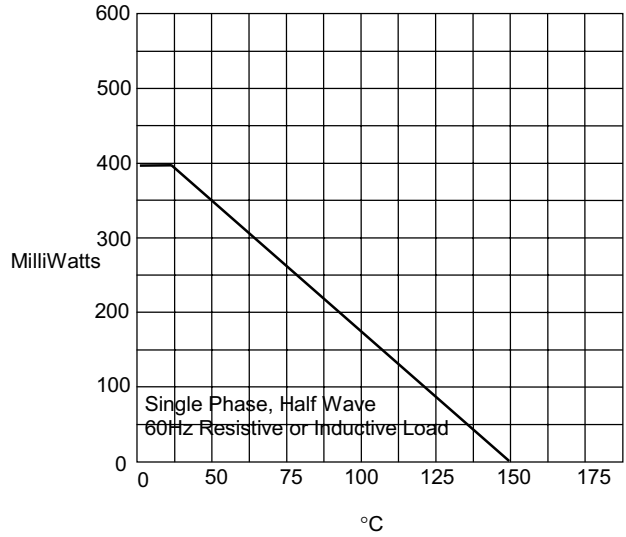
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Figure 1
Typical Forward Characteristics



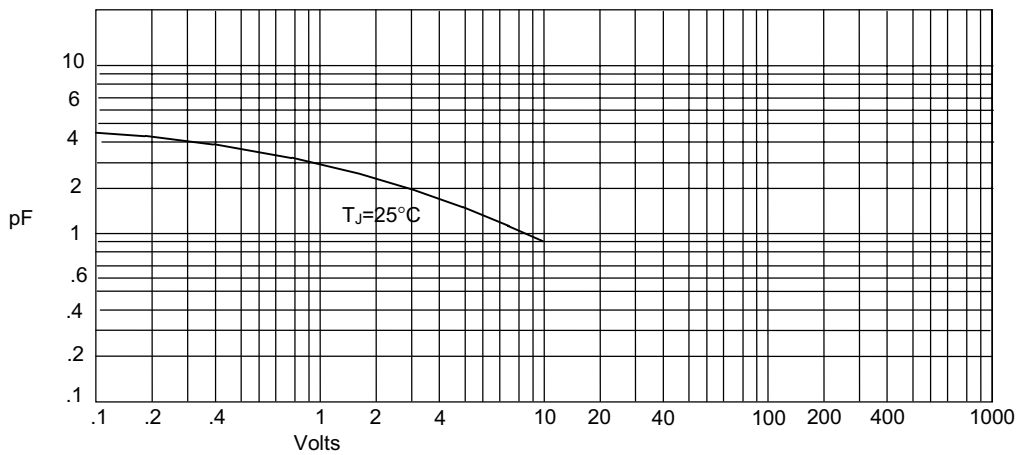
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Admissible Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance

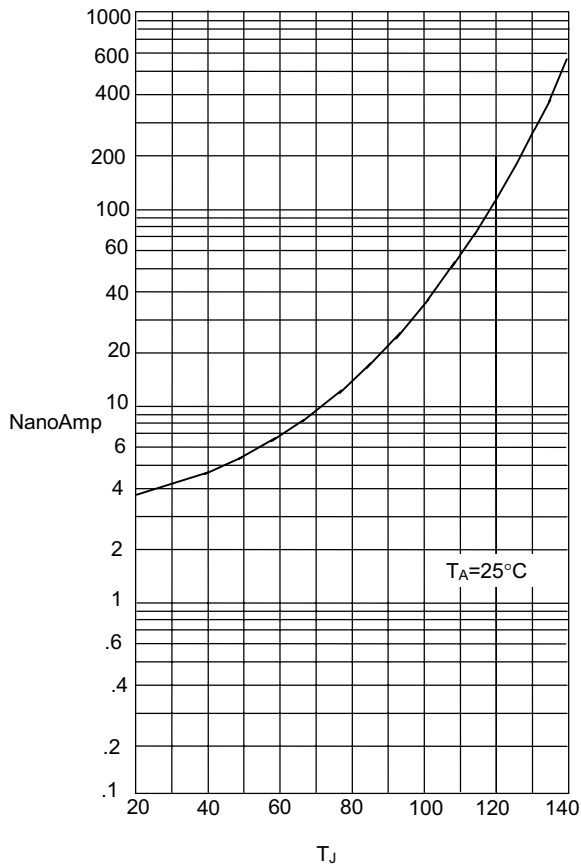


Junction Capacitance - pF *versus*
Reverse Voltage - Volts

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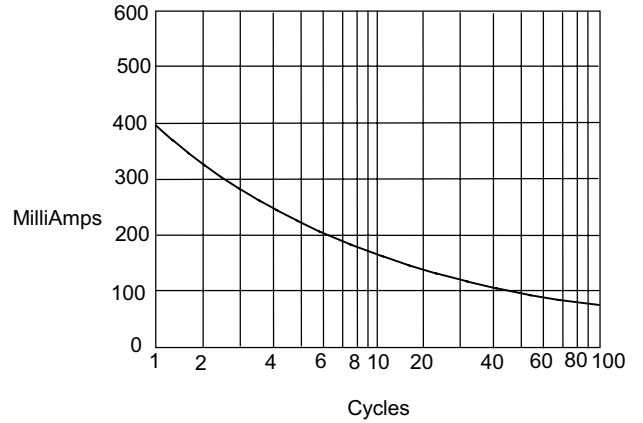


Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes versus Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles