



1 AMP GENERAL PURPOSE SILICON DIODES

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Easily cleaned with freon, alcohol, chloroethene and similar solvents
- **RoHS COMPLIANT**

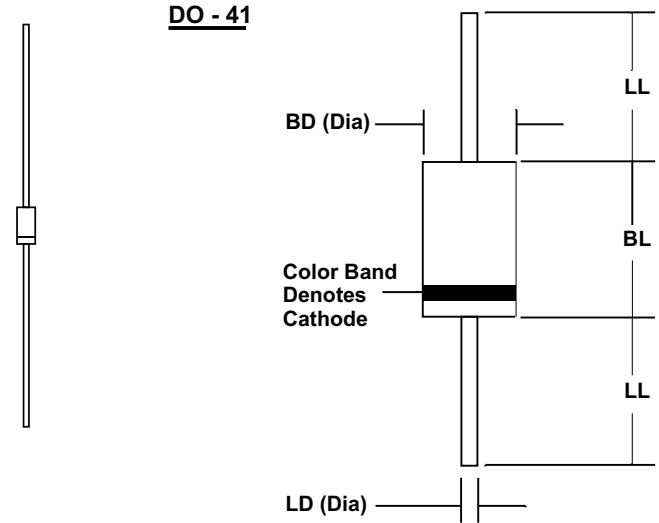
MECHANICAL DATA

- Case: JEDEC DO-41, molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-41 PACKAGE

SERIES 1N4001 - 1N4007



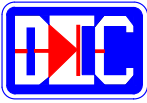
| Sym | Minimum | | Maximum | |
|-----|---------|------|---------|------|
| | In | mm | In | mm |
| BL | 0.160 | 4.1 | 0.205 | 5.2 |
| BD | 0.103 | 2.6 | 0.107 | 2.7 |
| LL | 1.00 | 25.4 | | |
| LD | 0.028 | 0.71 | 0.034 | 0.86 |

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive loads, derate current by 20%.

| PARAMETER (TEST CONDITIONS) | SYMBOL | RATINGS | | | | | | | UNITS |
|--|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|-------|
| | | 1N4001 | 1N4002 | 1N4003 | 1N4004 | 1N4005 | 1N4006 | 1N4007 | |
| Series Number | | | | | | | | | |
| Maximum DC Blocking Voltage | V _{RM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | |
| Maximum Peak Recurrent Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| Average Forward Rectified Current @ T _A = 75 °C (Lead length = 0.375 in. (9.5 mm)) | I _O | 1 | | | | | | | AMPS |
| Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load) | I _{FSM} | 50 | | | | | | | |
| Maximum Forward Voltage at 1 Amp DC | V _{FM} | 1 | | | | | | | VOLTS |
| Maximum Full Cycle Reverse Current @ T _L = 75 °C (Note 1) | I _{RM(AV)} | 30 | | | | | | | μA |
| Maximum Average DC Reverse Current At Rated DC Blocking Voltage | I _{RM} | 50 | | | | | | | |
| Typical Thermal Resistance, Junction to Ambient (Note 1) | R _{θJA} | 30 | | | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C _J | 26 | | | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +175 | | | | | | | °C |

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
 (2) Measured at 1MHz & applied reverse voltage of 4 volts



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RATING & CHARACTERISTIC CURVES FOR SERIES 1N4001 - 1N4007

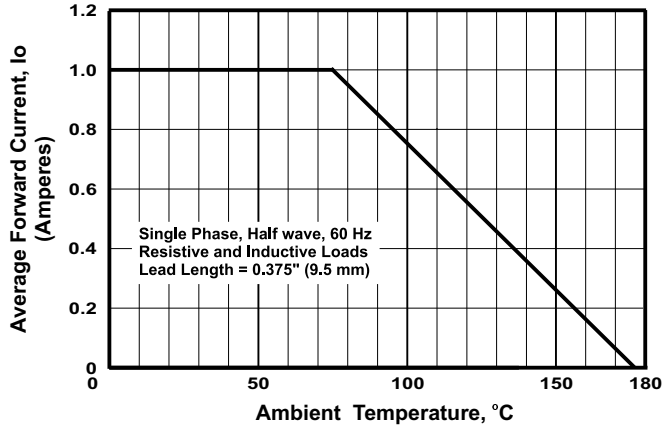


FIGURE 1. FORWARD CURRENT DERATING CURVE

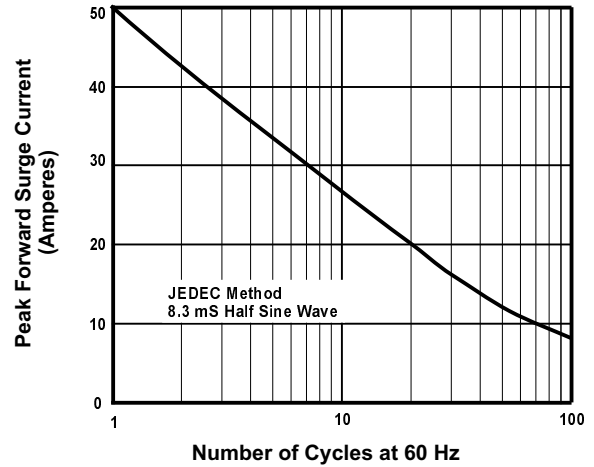


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

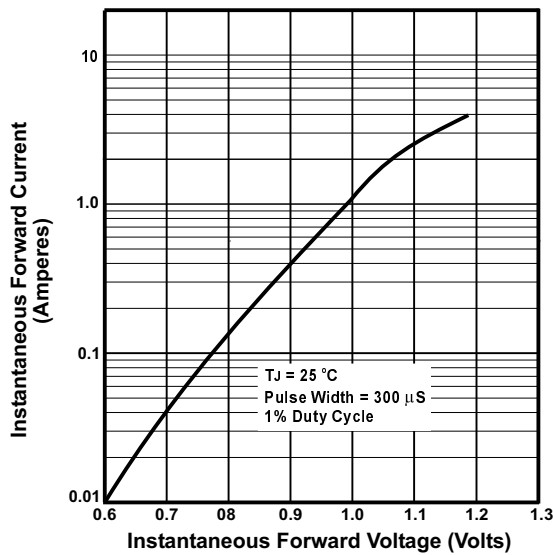


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

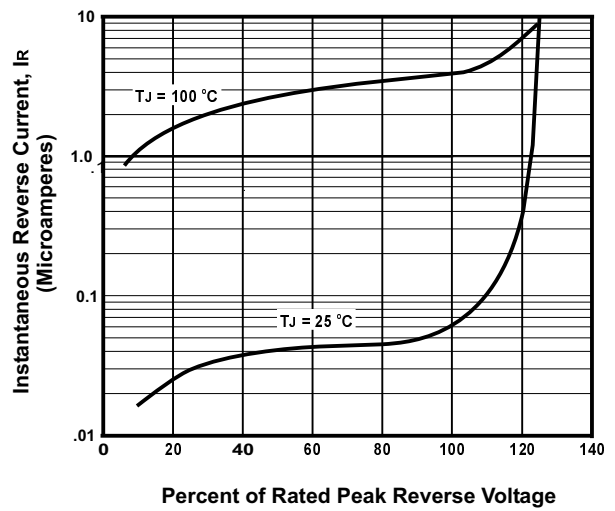


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

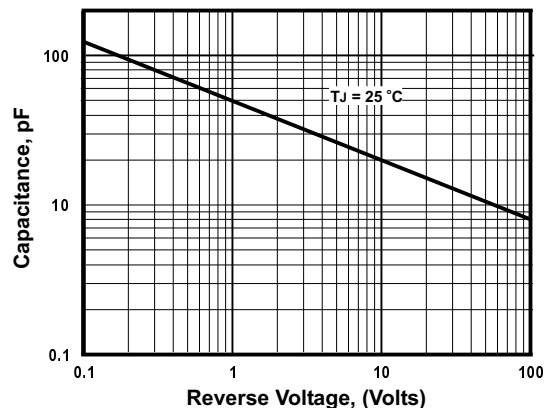


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

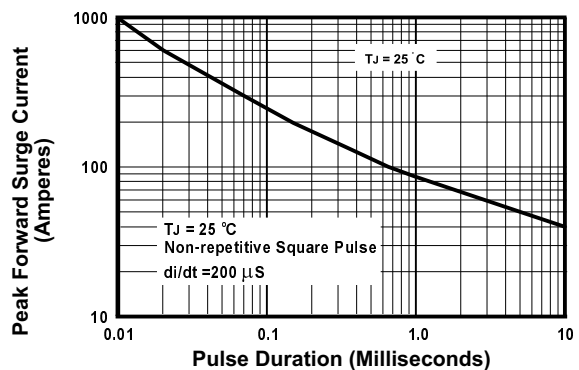


FIGURE 6. PEAK FORWARD SURGE CURRENT