

DO-41 Plastic-Encapsulate Diodes

Features

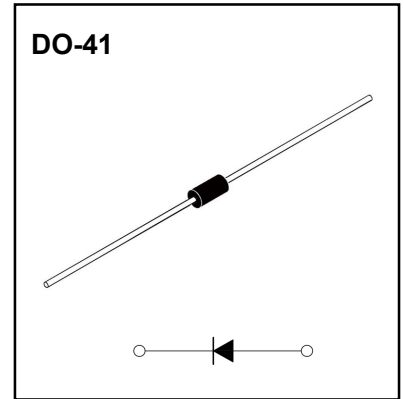
- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- 1N400X
- X : From 1 To 7



Limiting Values(Absolute Maximum Rating)

| Item | Symbol | Unit | Test Conditions | 1N40 | | | | | | |
|--------------------------------------|-------------|------------------|--|------------|-----|-----|-----|-----|-----|------|
| | | | | 01 | 02 | 03 | 04 | 05 | 06 | 07 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V_{RMS} | V | | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC Blocking Voltage | V_{DC} | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Forward Current | $I_{F(AV)}$ | A | 60Hz Half-sine wave, Resistance load, $T_a=75^\circ\text{C}$ | 1 | | | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | A | 60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$ | 30 | | | | | | |
| Junction Temperature | T_J | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |
| Storage Temperature | T_{STG} | $^\circ\text{C}$ | | -55 ~ +150 | | | | | | |

Electrical Characteristics (T=25°C Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | Max | |
|------------------------------|------------------|---------------------------|---|-------------------------|----|
| Maximum Peak Forward Voltage | V_{FM} | V | $I_{FM}=1.0\text{A}$ | 1.1 | |
| Maximum Peak Reverse Current | I_{RRM1} | μA | $V_{RM}=V_{RRM}$ | $T_a=25^\circ\text{C}$ | 5 |
| | I_{RRM2} | | | $T_a=100^\circ\text{C}$ | 50 |
| Typical junction capacitance | C_J | pF | Measured at 1MHz and applied reverse voltage of 4.0V D.C. | 15 | |
| Typical Thermal Resistance | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient | 50 | |
| | $R_{\theta J-L}$ | | Between junction and Lead | 8 | |

Notes:

Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length,P.C.B. mounted

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

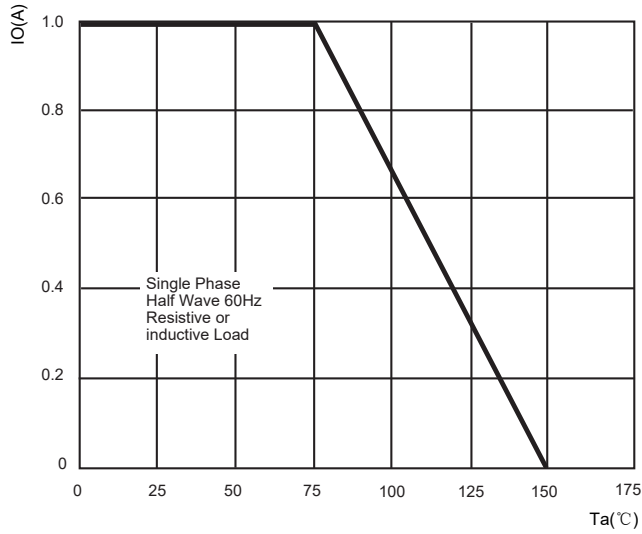


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

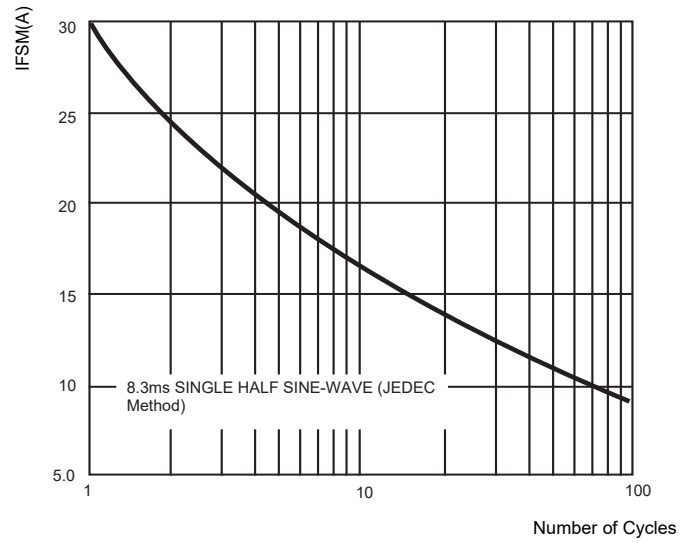


FIG.3: TYPICAL FORWARD CHARACTERISTICS

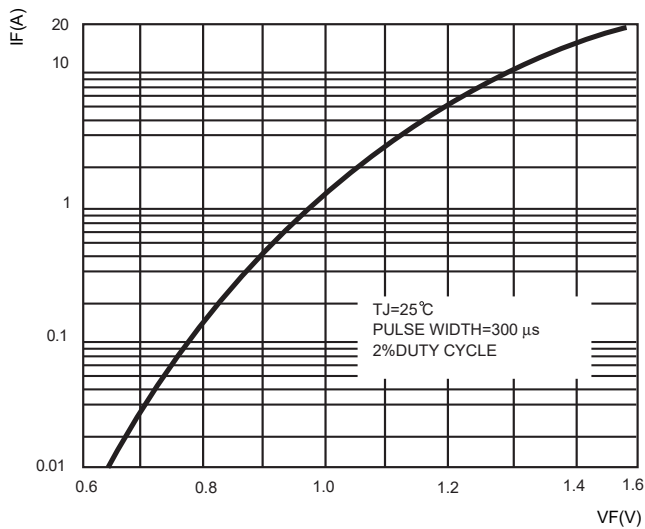
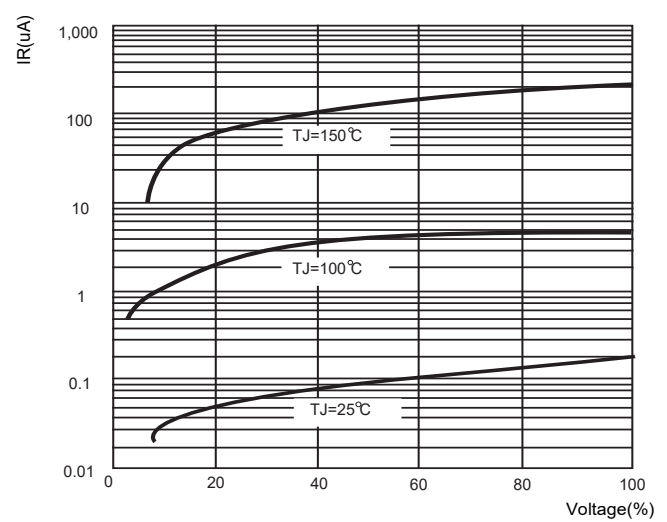
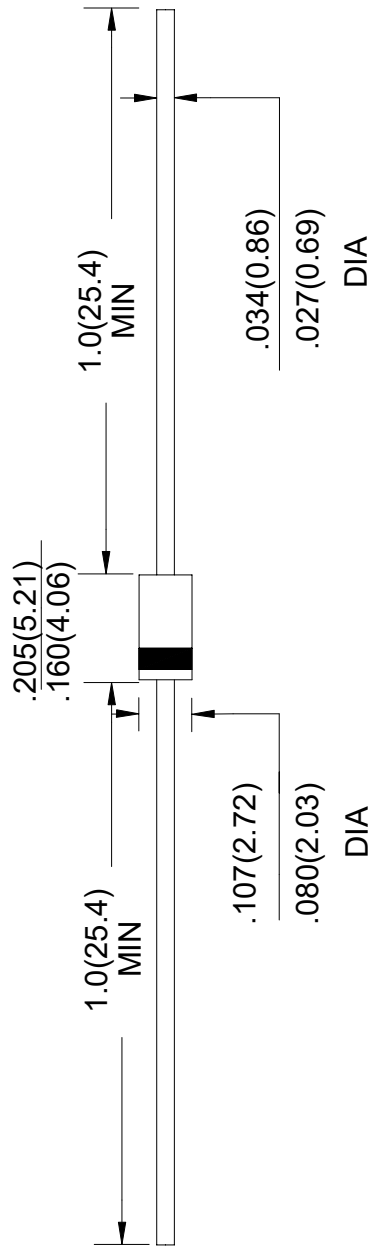


FIG.4: TYPICAL REVERSE CHARACTERISTICS





Unit: in inches (millimeters)