



FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts
FORWARD CURRENT - 1.5 Amperes

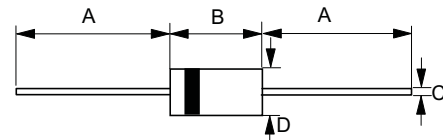
FEATURES

- Fast switching for high efficiency
- Low cost
- Diffused junction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

MECHANICAL DATA

- Case : JEDEC DO-15 molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.015 ounces, 0.4 grams
- Mounting position : Any

DO-15



| DO-15 | | |
|------------------------------|--------------------|--------------------|
| Dim. | Min. | Max. |
| A | 25.4 | - |
| B | 5.80 | 7.60 |
| C | 0.70 \varnothing | 0.90 \varnothing |
| D | 2.60 \varnothing | 3.60 \varnothing |
| All Dimensions in millimeter | | |

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| CHARACTERISTICS | SYMBOL | PR 1501 | PR 1502 | PR 1503 | PR 1504 | PR 1505 | PR 1506 | PR 1507 | UNIT |
|--|-------------------|-------------|---------|---------|---------|---------|---------|---------|----------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @T _A =50°C | I _(AV) | 1.5 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC Method) | I _{FSM} | 50 | | | | | | | A |
| Maximum forward Voltage at 1.5A DC | V _F | 1.3 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =100°C | I _R | 5 100 | | | | | | | uA uA |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | 150 | | | 250 | | 500 | | ns |
| Typical Junction Capacitance (Note 2) | C _J | 30 | | | 20 | | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 50 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | °C |

NOTES : 1.Measured with I_F=0.5A,I_R=1A,I_{RR}=0.25A.
2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal Resistance Junction to Ambient.

RATINGS AND CHARACTERISTIC CURVES

FIG . 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

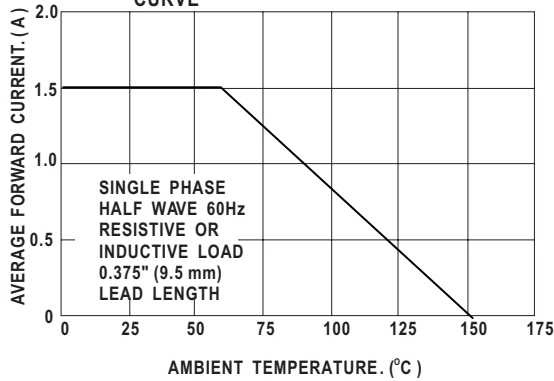


FIG . 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

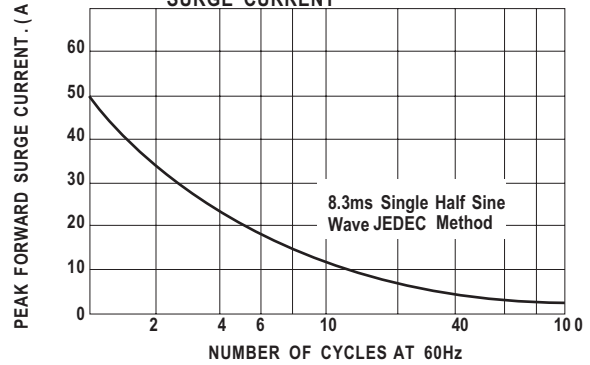


FIG 3 . - TYPICAL FORWARD CHARACTERISTICS

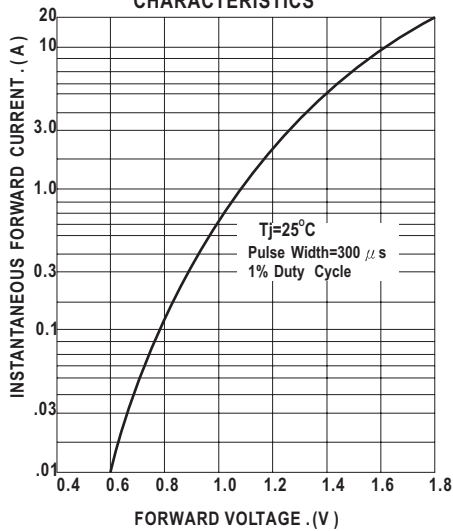


FIG . 4 - TYPICAL HUNCTION CAPACITANCE

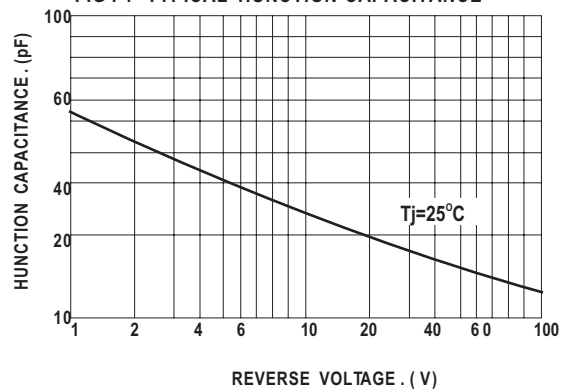
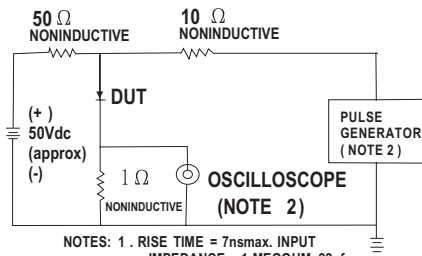


FIG . 5 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1 . RISE TIME = 7nsmax. INPUT IMPEDANCE= 1 MEGOHM 22pf
 2 . RISETIME = 10ns max.SOURCE IMPEDANCE = 50ohmsf

