FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE 50 to 1000 Volts

FORWARD CURRENT 1.0 Ampere

0.107(2.7)

0 080(2 0

DIA.

0.034(0.9)

0.028(0.7,

DO-41

FR107

FR101 THRU

1.0 (25.4)

MIN.

0.205(5.2)

1.0 (25.4)

MIN.

FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 Fast switching for high efficiency Low reverse leakage High forward surge current capability High temperature soldering guaranteed: 250 °C/10 seconds,0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-41 molded plastic body Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026 Polarity: Color band denotes cathode end Mounting position: Any Weight: 0.27 grams

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%

| PARAMETER | SYMBOL | FR101 | FR102 | FR103 | FR104 | FR105 | FR106 | FR107 | UNIT |
|--|----------------------|-------------|-------|-------|-------|-------|-------|-------|--------------|
| Maximum Repetitive Peak Reverse Voltage | Vrrm | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS Voltage | Vrms | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current 0.375"(9.5mm) lead length at T _A =75 $^{\circ}$ C | I(AV) | 1.0 | | | | | | | Amp |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 30.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V _F | 1.3 | | | | | | | VOLTS |
| Maximum DC Reverse Current $T_A = 25^{\circ}C$ at Rated DC blocking voltage $T_A = 100^{\circ}C$ | IR | 5.0 50.0 | | | | | | | uA |
| Maximum reverse recovery time (NOTE 1) | t _{rr} | 150 | | | 250 | 500 | | ns | |
| Typical Junction Capacitance (Note 2) | CJ | 15.0 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | Reja | 50.0 | | | | | | | °C /W |
| Operating junction and storage temperature range | Т _Ј ,Тsтg | -65 to +150 | | | | | | | °C |

1- Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=0.25A

2- Measured at 1 MHZ and applied reverse voltage of 4.0V D.C.

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

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RATINGS AND CHARACTERISTIC CURVES

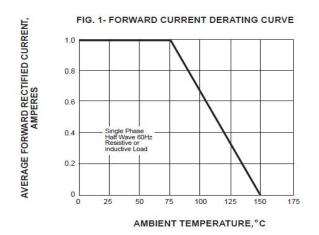
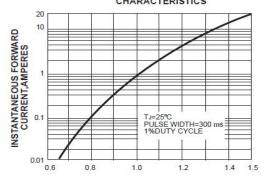
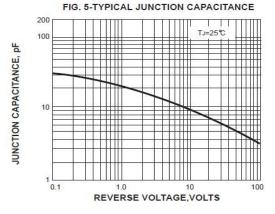


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLEAGE, VOLTS



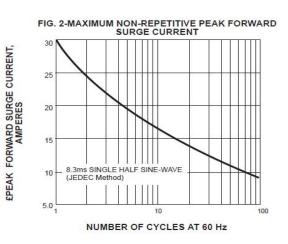


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

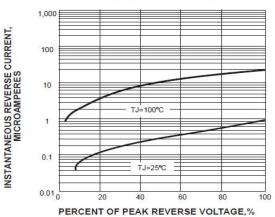
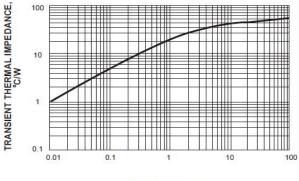


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.

Note: Specifications are subject to change without notice.

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