**FAST RECOVERY RECTIFIERS**

REVERSE VOLTAGE - **50** to **1000** Volts
FORWARD CURRENT - **1.0** Ampere

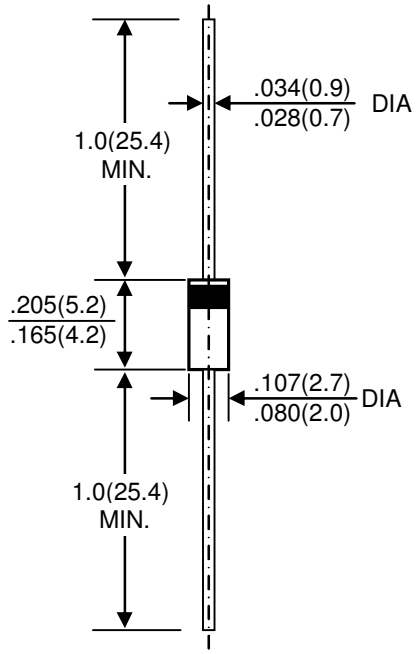
## FEATURES

- 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-41 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.012 ounces , 0.34 grams
- Mounting position: Any

**DO- 41**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | FR101 | FR102 | FR103 | FR104 | FR105 | FR106 | FR107 | 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 @$T_A$=75 ℃ | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Peak Forward Voltage at 1.0A DC | $V_F$ | 1.3 | | | | | | | V |
| Maximum DC Reverse Current @$T_J$=25℃ at Rated DC Blocking Voltage @$T_J$=100℃ | $I_R$ | 5.0<br>100 | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance (Note2) | $C_J$ | 25 | | | | 15 | | | pF |
| Typical Thermal Resistance (Note3) | $R_{\theta JA}$ | 25 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

NOTES: 1.Measured with $I_F$=0.5A,$I_R$=1A,$I_{RR}$=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction to ambient.

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FIG. 1 – FORWARD CURRENT DERATING CURVE

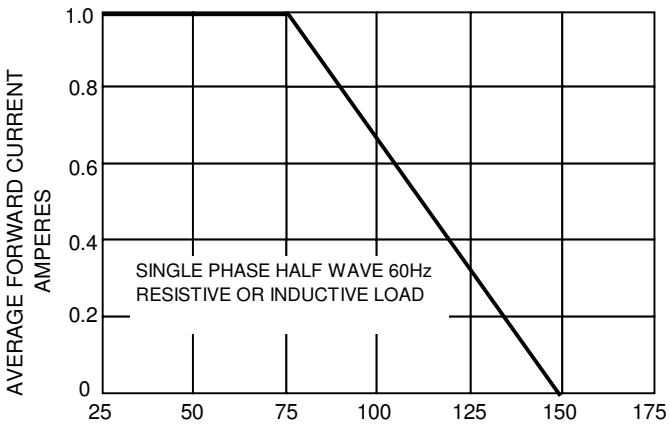



FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

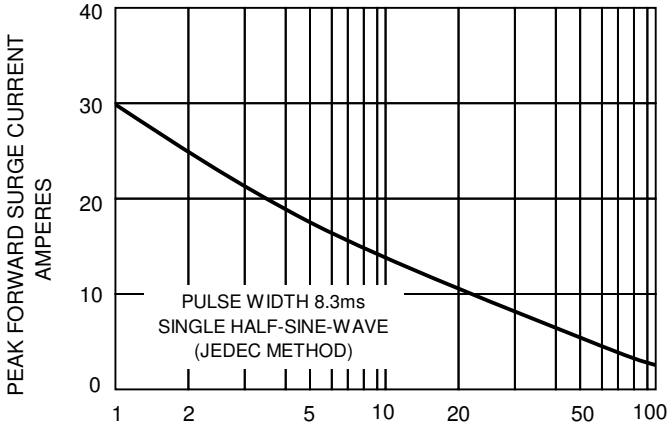



FIG.3 – TYPICAL JUNCTION CAPACITANCE

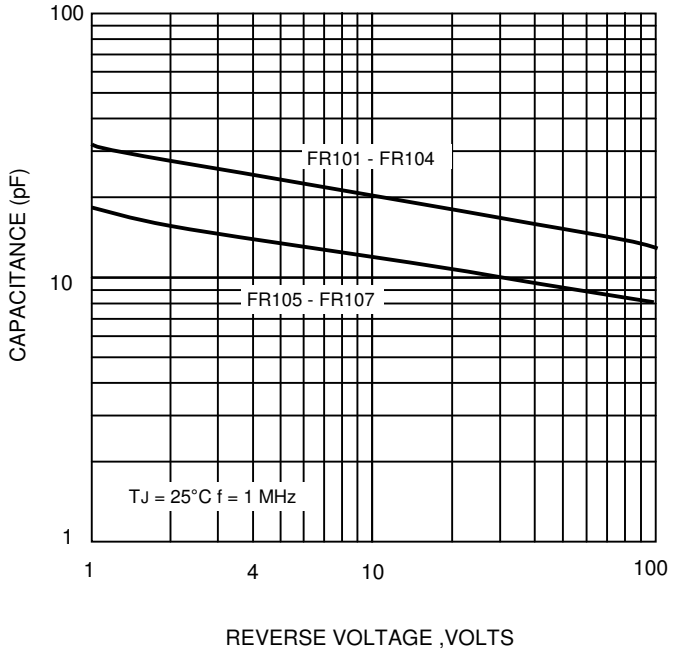
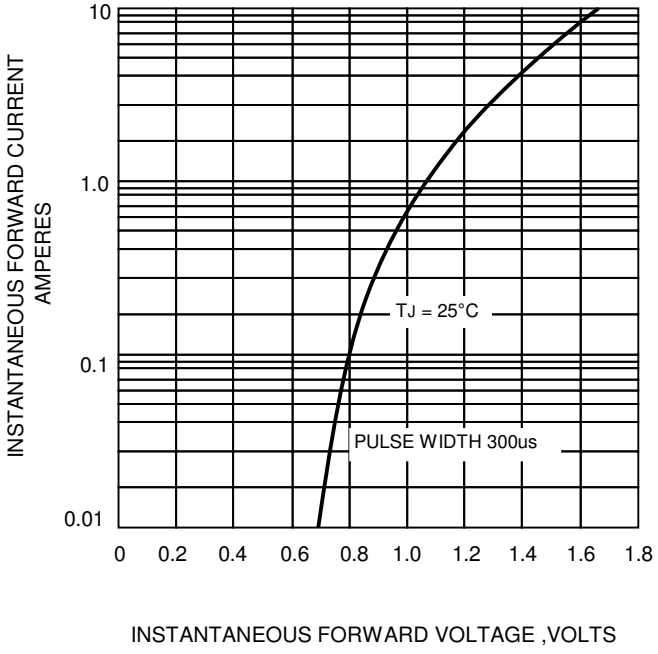



FIG.4-TYPICAL FORWARD CHARACTERISTICS

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