

Kingtronics®**FR151 THRU
FR157****FAST RECOVERY RECTIFIERS****REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.5 Ampere****FEATURES**

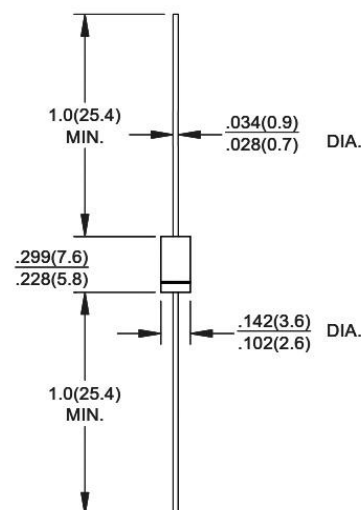
Low forward voltage drop
 Low leakage current
 High forward surge capability
 High reliability
 High temperature soldering guaranteed
 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

Case: Transfer molded plastic
 Epoxy: UL94V-0 rate flame retardant
 Polarity: Color band denotes cathode end
 Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
 Mounting position: Any

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%

DO-15**Dimensions in inches and (millimeters)**

| PARAMETER | SYMBOL | FR151 | FR152 | FR153 | FR154 | FR155 | FR156 | FR157 | UNIT |
|--|-----------------|-------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current at $T_A=55^\circ\text{C}$ | $I_{(AV)}$ | 1.5 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 60 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.5A | V_F | 1.3 | | | | | | | VOLTS |
| Maximum DC Reverse Current at Rated | I_R | 5.0 | | | | | | | uA |
| DC blocking voltage | | | | | | | | | |
| | | 100 | | | | | | | |
| Maximum reverse recovery time (NOTE 1) | t_{rr} | 150 | | | | 250 | 500 | | ns |
| Typical Junction Capacitance (Note 2) | C_J | 25 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 50 | | | | | | | °C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | °C |

1- Reverse recovery condition $I_f=0.5A, I_r=1.0A, I_{rr}=0.25A$.

2- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

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.1-TYPICAL FORWARD CURRENT DERATING CURVE

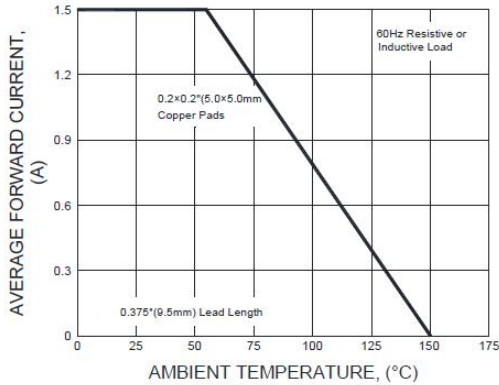


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

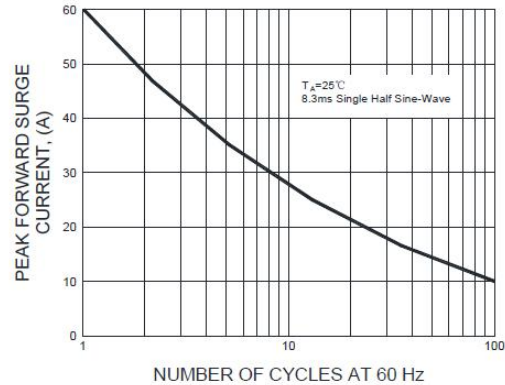


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

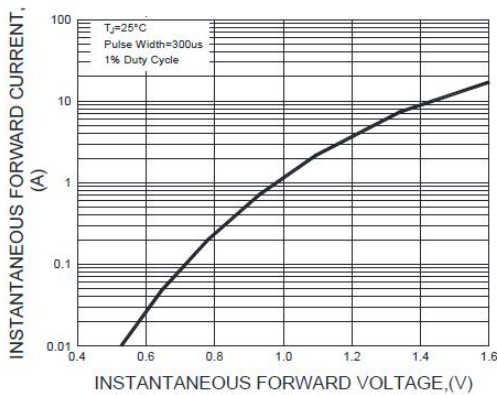


FIG.4-TYPICAL JUNCTION CAPACITANCE

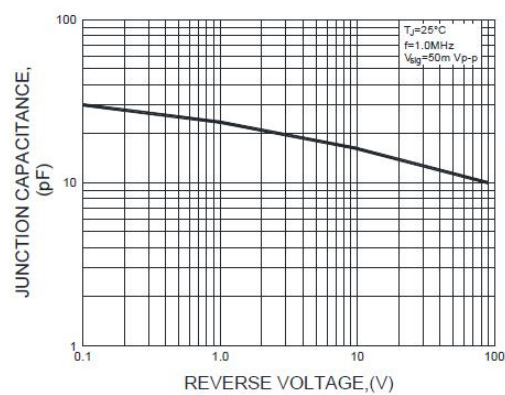
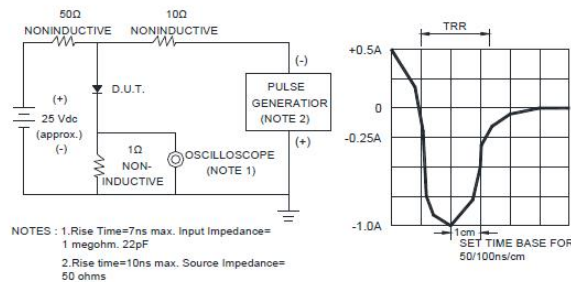


FIG.5-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice.

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