Trimming Potentiometers • Bridge Rectifiers • Diodes & Transistors • Surge Arresters • OSC & Quartz Crystals • MLCC & Tantalum Capacitors

# Kingtronics® FR201 THRU FR207

## FAST RECOVERY RECTIFIERS

#### Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Amperes

**DO-15** 

#### 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-15 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.014 ounce, 0.40 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^\circ\!\mathrm{C}$  ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|   | SYMBOLS | FR  | FR          | FR  | FR   | FR  | FR  | FR   | UNITS        |  |
|---|---------|-----|-------------|-----|------|-----|-----|------|--------------|--|
|   | STWBULS | 201 | 202         | 203 | 204  | 205 | 206 | 207  |              |  |
| 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   | (AV)    |     |             |     | 2.0  |     |     |      | Amps         |  |
| 0.375"(9.5mm) lead length at TA=75 $^\circ\! \mathbb C$                             | I(AV)   |     |             | 2.0 |      |     |     |      | Airiba       |  |
| Peak forward surge current  |         |     |             |     |      |     |     |      |              |  |
| 8.3ms single half sine-wave superimposed on   | IFSM    |     |             |     | 70.0 |     |     | Amps |              |  |
| rated load (JEDEC Method)   |         |     |             |     |      |     |     |      |              |  |
| Maximum instantaneous forward voltage at 2.0A                                       | VF      |     |             |     | 1.3  |     |     |      | Volts        |  |
| Maximum DC reverse current TA=25 $^\circ\!\!\!{}^\circ\!\!\!{}^\circ\!\!\!{}^\circ$ | IR      |     |             |     | 5.0  |     |     |      | mA           |  |
| at rated DC blocking voltage TA=100 $^\circ\!\!\mathbb{C}$                          | IR      |     | 100.00      |     |      |     |     |      |              |  |
| Maximum reverse recovery time (NOTE 1)  | trr     |     | 1           | 50  |      | 250 | 5   | 00   | ns           |  |
| Typical junction capacitance (NOTE 2)   | CJ      |     |             |     | 40.0 |     |     |      | pF           |  |
| Typical thermal resistance (NOTE 3)   | Reja    |     |             |     | 40.0 |     |     |      | °C <b>/W</b> |  |
| Operating junction and storage temperature range                                    | TJ,TSTG |     | -65 to +150 |     |      |     |     |      | °C           |  |

Note: 1.Reverse recovery condition IF=0.5A,IR=1.0A,Irr=0.25A

2.Measured at 1MHz 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

#### Kingtronics<sup>®</sup> International Company

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0.140(3.6) 0.104(2.6)

DIA

0.034(0.9

0.028(0 DIA 1.0 (25.4) MIN

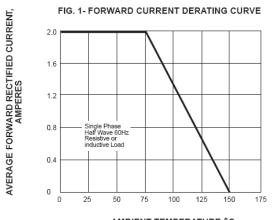
0.300(7.6) 0.230(5.8)

1.0 (25.4) MIN

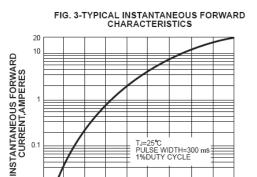
Dimensions in inches and (millimeters)

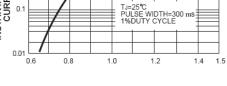
R

#### RATINGS AND CHARACTERISTIC CURVES FR201 THRU FR207

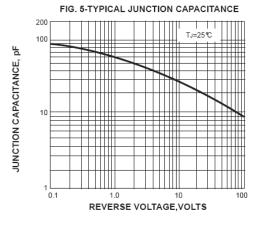


AMBIENT TEMPERATURE,°C

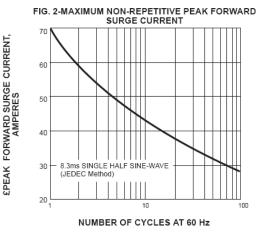




INSTANTANEOUS FORWARD VOLEAGE, VOLTS



Note: Specifications are subject to change without notice.



FR201 TF

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

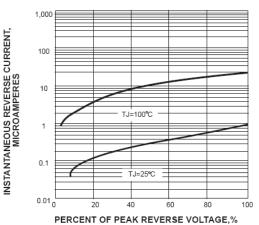
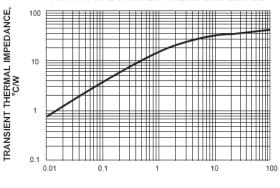


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.

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