



# Frontier Electronics Corp.

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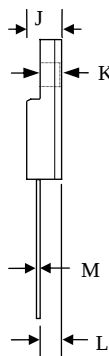
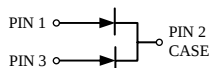
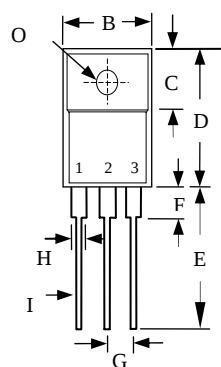
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## 16A DUAL SUPER FAST RECOVERY RECTIFIER

### SFF160-005CT THRU SFF160-06CT

CASE : ITO-220AB( SFF160-XX ) , FULLY INSULATED PACKAGE



|   | MILLIMETERS |       |
|---|-------------|-------|
|   | MIN         | MAX   |
| B | 9.72        | 10.27 |
| C | 6.30        | 6.90  |
| D | 14.50       | 15.50 |
| E | 13.00       | 13.80 |
| F | -           | 4.1   |
| G | 2.41        | 2.67  |
| H | -           | 1.52  |
| I | -           | 0.9   |
| J | -           | 4.8   |
| K | -           | 3.1   |
| L | 2.5         | 2.9   |
| M | -           | 0.8   |
| O | -           | Ø 3.4 |

#### FEATURES

- ULTRA FAST RECOVERY TIME
- LOW FORWARD VOLTAGE
- LOW THERMAL RESISTANCE
- HIGH CURRENT CAPABILITY
- HIGH VOLTAGE
- GLASS PASSIVATED CHIP JUNCTION

#### MECHANICAL DATA

- CASE: TRANSFER MOLDED
- TERMINAL: MIL-STD-202F METHOD 208
- POLARITY: AS MARKED
- EPOXY: UL94V-0 FLAME RETARDANT MOLDING COMPOUND
- MOUNTING POSITION: ANY
- WEIGHT: 2.05 GRAMS

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED  
SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

| RATINGS                                                                            | SYMBOL          | SFF160<br>-005CT | SFF160<br>-01CT | SFF160<br>-015CT | SFF160<br>-02CT | SFF160<br>-03CT | SFF160<br>-04CT | SFF160<br>-05CT | SFF160<br>-06CT | UNITS |
|------------------------------------------------------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
| MAXIMUM RECURRENT PEAK REVERSE VOLTAGE                                             | $V_{RRM}$       | 50               | 100             | 150              | 200             | 300             | 400             | 500             | 600             | V     |
| MAXIMUM RMS VOLTAGE                                                                | $V_{RMS}$       | 35               | 70              | 105              | 140             | 210             | 280             | 350             | 420             | V     |
| MAXIMUM DC BLOCKING VOLTAGE                                                        | $V_{DC}$        | 50               | 100             | 150              | 200             | 300             | 400             | 500             | 600             | V     |
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1                                | $I_O$           | 16.0             |                 |                  |                 |                 |                 |                 |                 | A     |
| PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD | $I_{FSM}$       | 200              |                 |                  |                 |                 |                 |                 |                 | A     |
| TYPICAL JUNCTION CAPACITANCE (NOTE 1)                                              | $C_J$           | 65               |                 |                  |                 |                 |                 |                 |                 | PF    |
| TYPICAL THERMAL RESISTANCE (NOTE 2)                                                | $R_{\theta jc}$ | 2.2              |                 |                  |                 |                 |                 |                 |                 | °C/W  |
| STORAGE TEMPERATURE RANGE                                                          | $T_{STG}$       | - 55 TO + 150    |                 |                  |                 |                 |                 |                 |                 | °C    |
| OPERATING TEMPERATURE RANGE                                                        | $T_{OP}$        | - 55 TO + 150    |                 |                  |                 |                 |                 |                 |                 | °C    |

#### ELECTRICAL CHARACTERISTICS ( $A_T T_A = 25^\circ C$ UNLESS OTHERWISE NOTED)

| CHARACTERISTICS                        | SYMBOL          | SFF160<br>-005CT | SFF160<br>-01CT | SFF160<br>-015CT | SFF160<br>-02CT | SFF160<br>-03CT | SFF160<br>-04CT | SFF160<br>-05CT | SFF160<br>-06CT | UNITS |    |
|----------------------------------------|-----------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|----|
| MAXIMUM FORWARD VOLTAGE AT 8A PER LEG  | V <sub>F</sub>  | 0.95             |                 |                  |                 | 1.3             |                 | 1.70            |                 | V     |    |
| MAXIMUM DC REVERSE CURRENT AT TA=25°C  | I <sub>R</sub>  | 10               |                 |                  |                 |                 |                 |                 |                 |       | μA |
| MAXIMUM DC REVERSE CURRENT AT TA=100°C | I <sub>R</sub>  | 100              |                 |                  |                 |                 |                 |                 |                 |       | μA |
| MAXIMUM REVERSE RECOVERY TIME (NOTE 3) | T <sub>RR</sub> | 35               |                 |                  |                 |                 |                 |                 |                 |       | nS |

- NOTES: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS  
2. THERMAL RESISTANCE JUNCTION TO CASE PER LEG MOUNTED ON HEAT SINK  
3. REVERSE RECOVERY TEST CONDITIONS:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$

# RATINGS AND CHARACTERISTIC CURVE SFF160-005CT THRU SFF160-06CT

FIG. 1 -TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

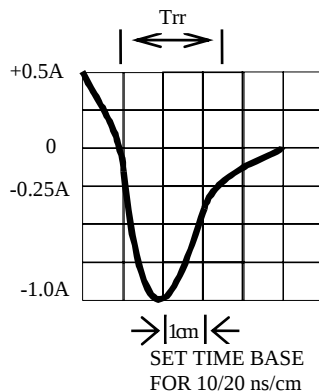
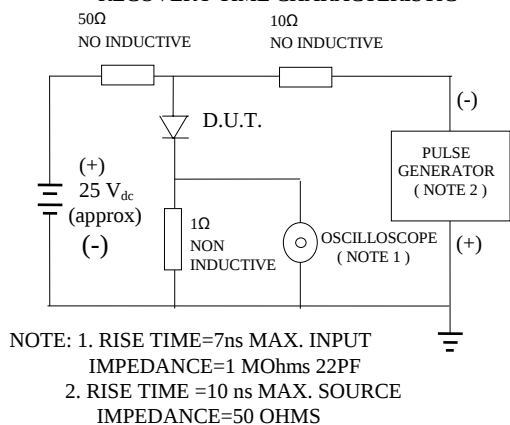


FIG. 2 -TYPICAL FORWARD CURRENT DERATING CURVE

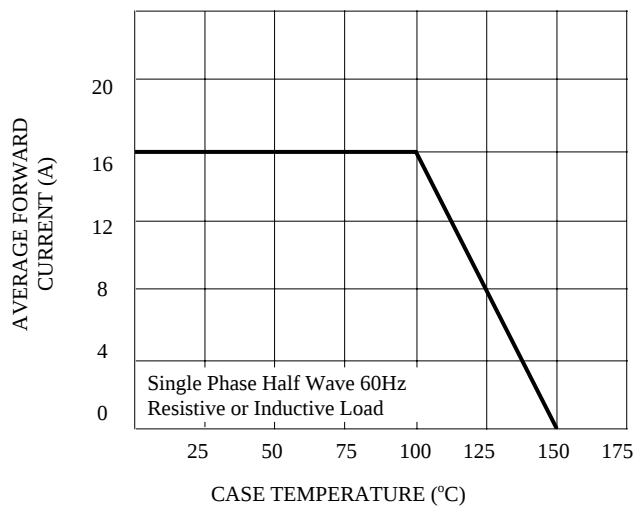


FIG. 3 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

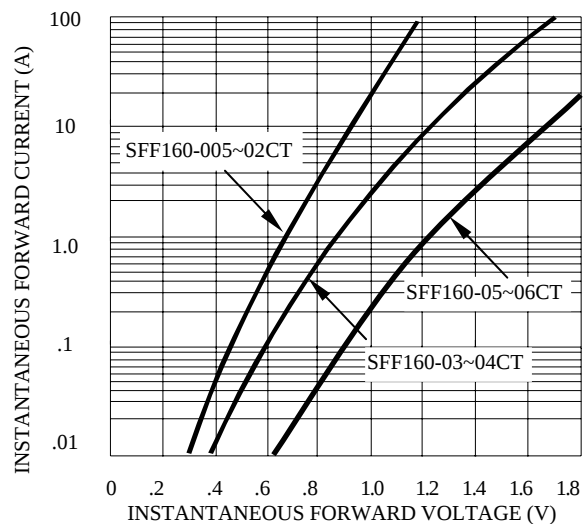


FIG. 4 -TYPICAL REVERSE CHARACTERISTICS

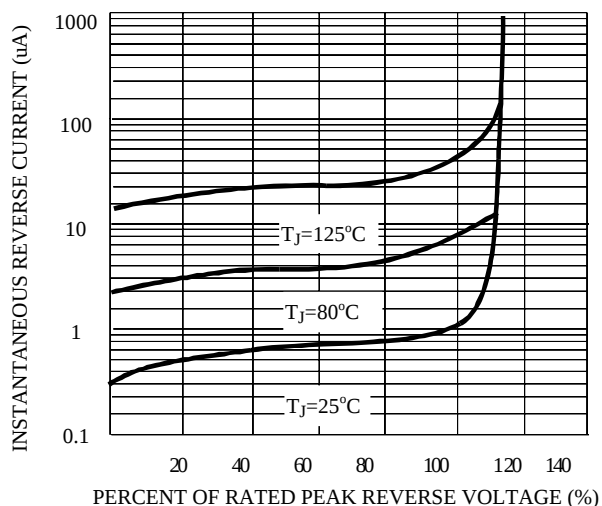


FIG. 5 -TYPICAL JUNCTION CAPACITANCE

