

**SURFACE MOUNT  
GLASS PASSIVATED RECTIFIER**

**REVERSE VOLTAGE – 600 Volts  
FORWARD CURRENT – 25 Amperes**

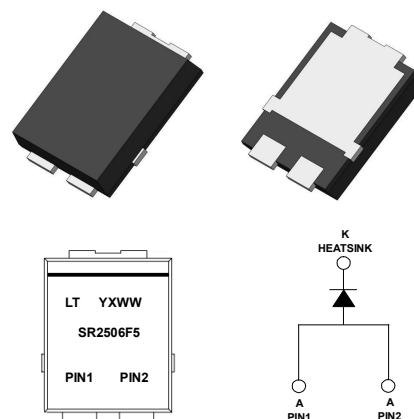
**FEATURES**

- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique

**MECHANICAL DATA**

- Case: F5-PAK molded plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.), “Halogen-free”
- Polarity Indicator: Symbol molded on body
- Marking Code : SR2506F5
- Weight: 0.989 grams (Approximate)

**F5**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

| PARAMETER  | SYMBOL                              | VALUE       | UNIT                 |
|--|-------------------------------------|-------------|----------------------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$                           | 600         | V                    |
| Maximum DC blocking voltage  | $V_{DC}$                            | 600         | V                    |
| Average rectified output current per device                                      | @ $T_A = 25^\circ\text{C}$ (Note1)  | $I_{F(AV)}$ | 25                   |
| Peak forward surge current 10ms single half sine-wave superimposed on rated load | @ $T_A = 25^\circ\text{C}$          | $I_{FSM}$   | 400                  |
|  | @ $T_A = 125^\circ\text{C}$ (Note1) |             | 320                  |
| $I^2 t$ rating for fusing ( $t = 10\text{ms}$ )                                  | $I^2 t$                             | 800         | $\text{A}^2\text{S}$ |
| Storage temperature range  | $T_J, T_{STG}$                      | -55 to +150 | $^\circ\text{C}$     |

**STATIC ELECTRICAL CHARACTERISTICS**

| PARAMETER                            | TEST CONDITION      |                                  | SYMBOL | TYP. | MAX | UNIT          |
|--------------------------------------|---------------------|----------------------------------|--------|------|-----|---------------|
| Forward voltage (Note1)              | $I_F = 25\text{A}$  | $T_A = 25^\circ\text{C}$ (Note1) | $V_F$  | 1.04 | 1.1 | V             |
| Leakage current                      | $V_R = 600\text{V}$ | $T_A = 25^\circ\text{C}$ (Note1) | $I_R$  | 0.2  | 10  | $\mu\text{A}$ |
| Typical junction capacitance (Note2) |                     |                                  | $C_J$  | 150  |     | pF            |

**THERMAL CHARACTERISTICS**

| PARAMETER                          | SYMBOL     | TYP. | UNIT               |
|------------------------------------|------------|------|--------------------|
| Typical thermal resistance (Note3) | $R_{thJC}$ | 2.5  | $^\circ\text{C/W}$ |
|                                    | $R_{thJL}$ | 2    |                    |
|                                    | $R_{thJA}$ | 5.5  |                    |

**Note :**

- (1) Perform static test after the temperature of oven is steady 20 minutes.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
- (3) Thermal resistance junction to case, lead and ambient mounted on PCB.

REV. 0, SEP-2015, KSDB08

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# RATING AND CHARACTERISTIC CURVES

## SR2506F5



FIG.1- FORWARD CURRENT DERATING CURVE

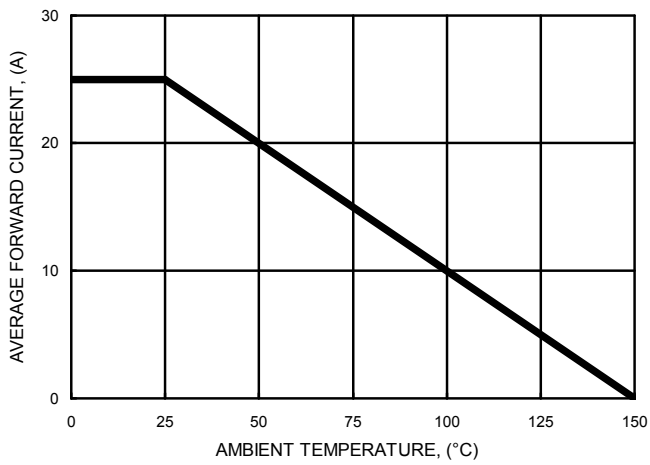


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

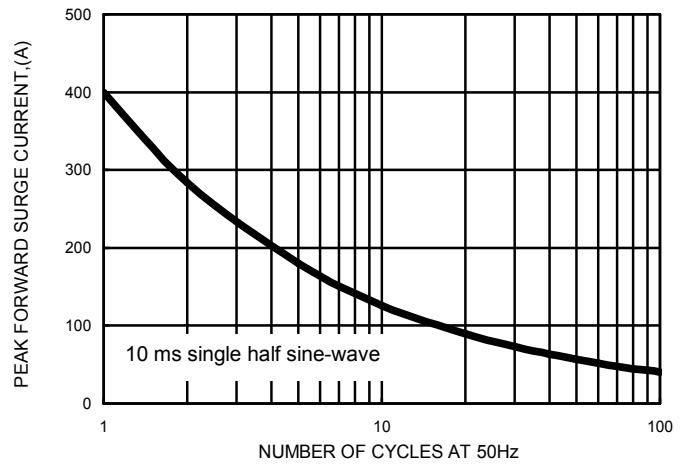


FIG.3- TYPICAL FORWARD CHARACTERISTICS

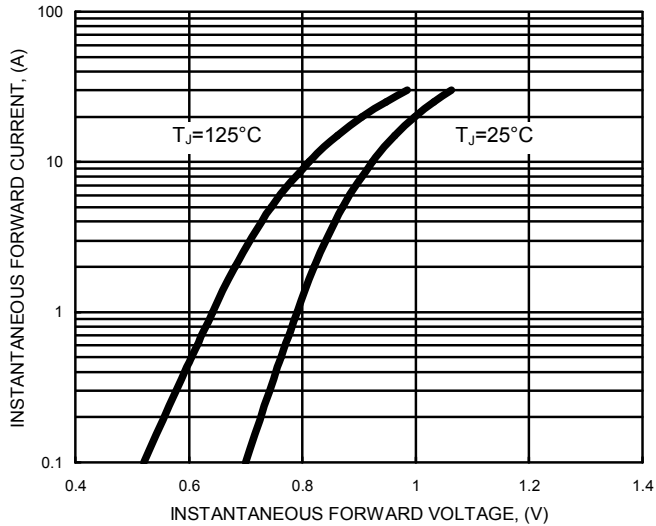


FIG.4- TYPICAL JUNCTION CAPACITANCE

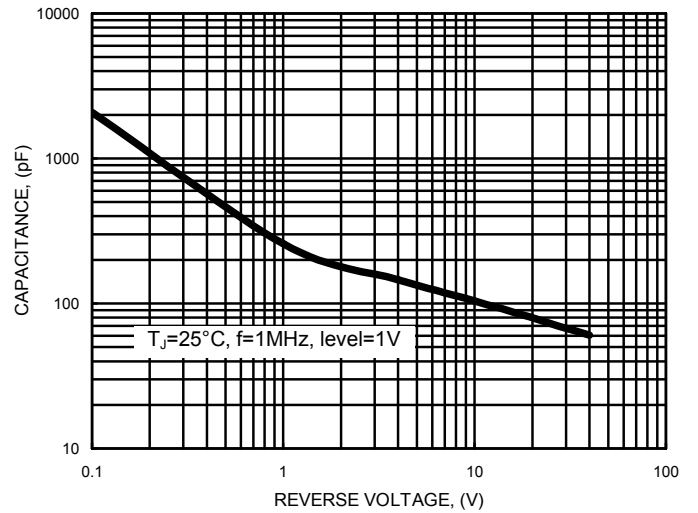
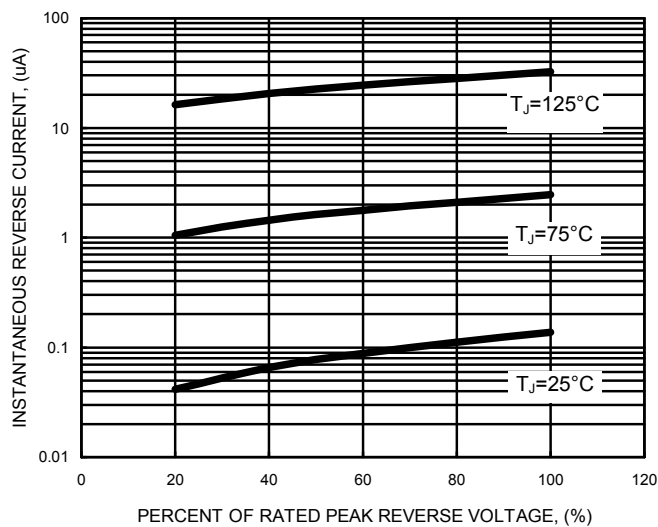


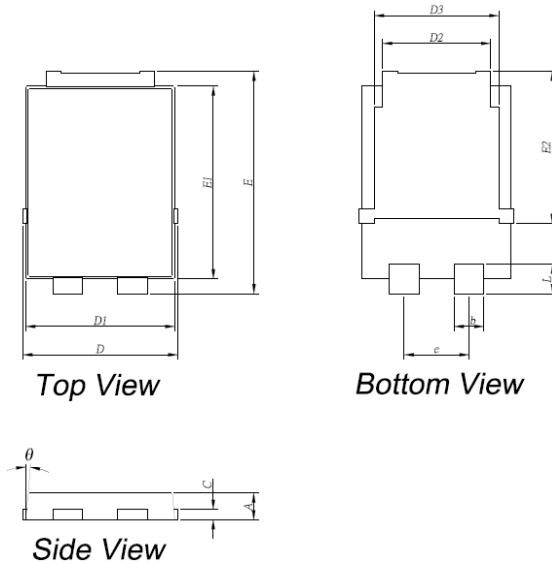
FIG.5- TYPICAL REVERSE CHARACTERISTICS



**MECHANICAL AND MARKING INFORMATION**  
**SR2506F5**

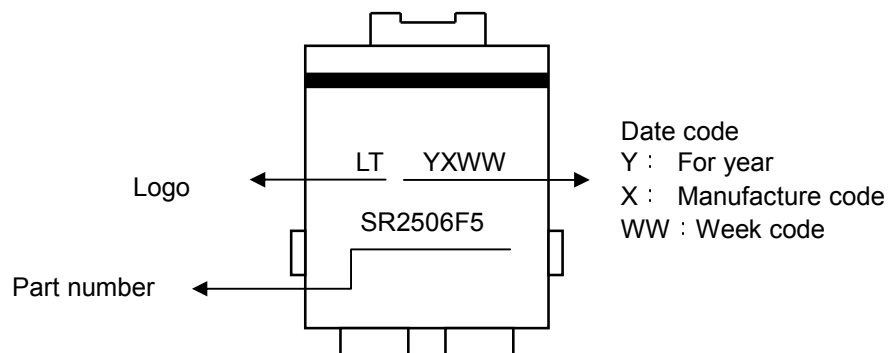


**Package Dimension :**



| F5                          |           |       |       |
|-----------------------------|-----------|-------|-------|
| DIM.                        | MIN.      | TYP.  | MAX   |
| A                           | 1.60      | 1.80  | 2.00  |
| b                           | 1.80      | 2.00  | 2.30  |
| C                           | --        | 0.70  | --    |
| D                           | --        | 10.40 | --    |
| D1                          | 9.80      | 10.00 | 10.30 |
| D2                          | 7.00      | 7.25  | 7.50  |
| D3                          | 8.10      | 8.35  | 8.60  |
| E                           | 14.50     | 15.00 | 15.50 |
| E1                          | 12.70     | 13.00 | 13.30 |
| E2                          | 10.00     | 10.25 | 10.60 |
| e                           | 4.35 REF. |       |       |
| L                           | 1.70      | 2.00  | 2.30  |
| θ                           | --        | 5°    | --    |
| All dimension in millimeter |           |       |       |

**Marking Information :**



**Packaging Information :**

| DEVICE   | Q'TY/REEL (PCS) | REEL DIA. (INCH) | Q'TY/BOX (PCS) | Q'TY/CARTON (PCS) |
|----------|-----------------|------------------|----------------|-------------------|
| SR2506F5 | 1500            | 13               | 1500           | 10.5K             |

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