

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 100 to 600 V

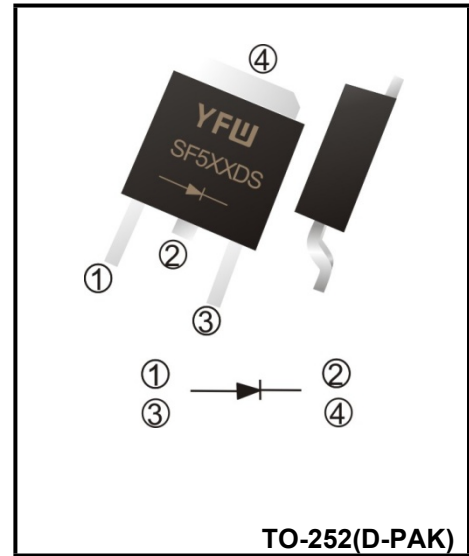
Forward Current - 5 A

FEATURES

- ◆ Glass Passivated Chip Junction
- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ Low power loss, high efficiency
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: TO-252(D-PAK)
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.32g / 0.011oz



Absolute Maximum Ratings and characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | SF501DS | SF502DS | SF503DS | SF504DS | SF505DS | SF506DS | Units |
|--|-----------------|---------|---------|------------|---------|---------|---------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum Average Forward Rectified Current at $T_c = 125\text{ }^\circ\text{C}$ | $I_{F(AV)}$ | 5 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load(JEDEC method) | I_{FSM} | 150 | | | | | | A |
| Maximum Instantaneous Forward Voltage at 5 A | V_F | 0.95 | | 1.25 | | 1.65 | | V |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$ | I_R | | | 1 | | 300 | | μA |
| Typical Junction Capacitance at $V_R=4\text{V}, f=1\text{MHz}$ | C_j | | | 45 | | | | pF |
| Maximum Reverse Recovery Time ⁽¹⁾ | T_{rr} | | | 35 | | | | nS |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JC}$ | | | 15 | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | | | -55 ~ +150 | | | | $^\circ\text{C}$ |

(1) Measured with $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

(2) P.C.B. mounted with 10cmX10cmX1mm copper pad areas.

Fig.1 Maximum Average Forward Current Rating

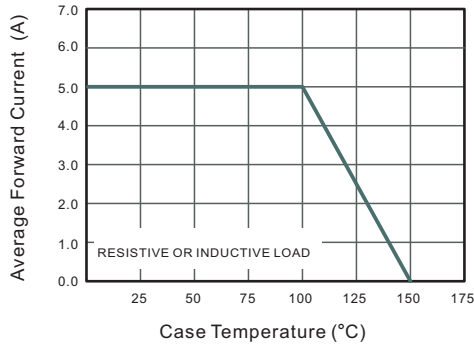


Fig.2 Typical Reverse Characteristics

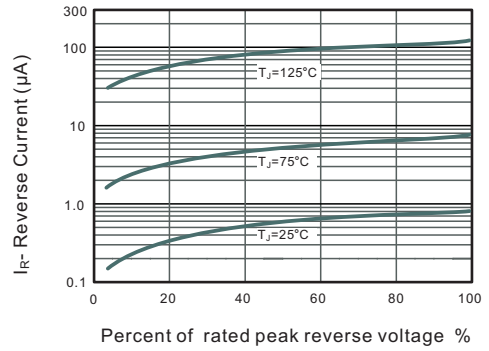


Fig.4 Typical Forward Characteristics

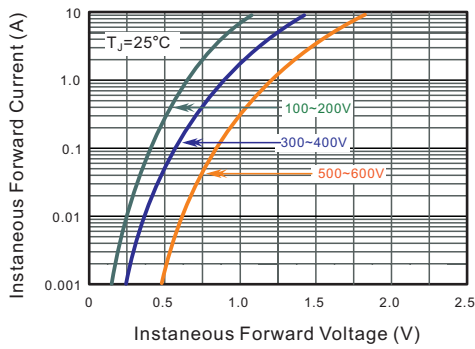


Fig.4 Typical Junction Capacitance

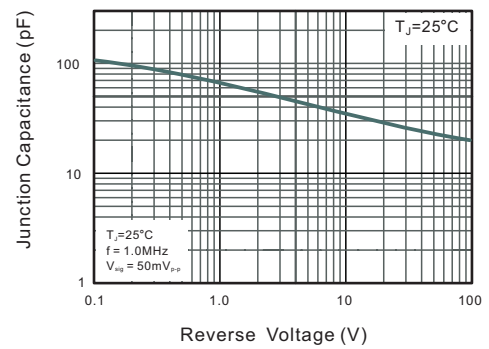
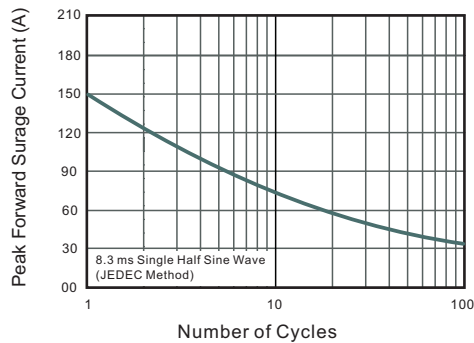
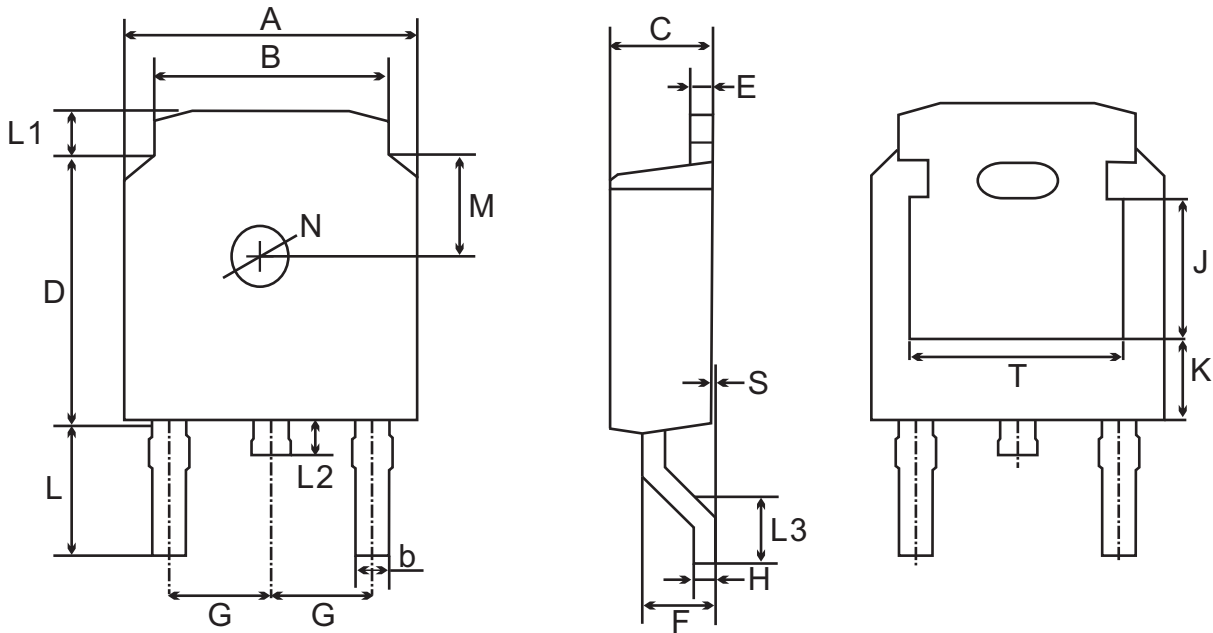


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

TO-252(D-PAK)



| UNIT | | A | B | b | C | D | E | F | G | H | L | L1 | L2 | L3 | S | M | N | J | K | T |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|------|-----|-----|-----|------|-----|----------------|----------------|--------------|--------------|--------------|
| mm | max | 6.7 | 5.5 | 0.8 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29 TYPICAL | 0.55 | 3.1 | 1.2 | 1.0 | 1.75 | 0.1 | 1.8 TYPICAL | 1.3 TYPICAL | 3.16 ref. | 1.80 ref. | 4.83 ref. |
| | min | 6.3 | 5.1 | 0.3 | 2.1 | 5.9 | 0.4 | 1.3 | | 0.45 | 2.7 | 0.8 | 0.6 | 1.40 | 0.0 | | | | | |
| mil | max | 264 | 217 | 31 | 98 | 248 | 24 | 71 | 90 TYPICAL | 22 | 122 | 47 | 39 | 69 | 4 | 71 TYPICAL | 51 TYPICAL | 124 ref. | 71 ref. | 190 ref. |
| | min | 248 | 201 | 12 | 83 | 232 | 16 | 51 | | 18 | 106 | 31 | 24 | 55 | 0 | | | | | |

Summary of Packing Options

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------------|---------------------|------------------|-------------------|
| TO-252(D-PAK) | Tape/Reel, 13" reel | 2500 | EIA-481-1 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)