



August 2015

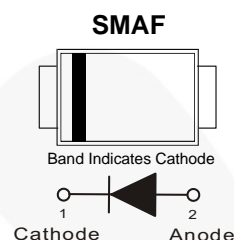
FSV530AF

Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop: 0.54 V Maximum at 5 A, $T_A = 25^\circ\text{C}$
- Ultra Thin Profile - Maximum Height of 1.0 mm
- High Surge Capacity
- UL Flammability 94V-0 Classification
- MSL 1
- RoHS Compliant / Green Mold Compound
- Industrial Device Qualified per AEC-Q101 Standards.

* see authorized use policy



Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|-------------|----------|-----------------|----------------|
| FSV530AF | FSV530AF | DO-214AD (SMAF) | Tape and Reel |

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|-------------|--|-------------|------------------|
| V_{RRM} | Recurrent Peak Reverse Voltage | 30 | V |
| V_{RMS} | RMS Reverse Voltage | 21 | V |
| V_R | DC Blocking Voltage | 30 | V |
| $I_{F(AV)}$ | Average Forward Current | 5 | A |
| I_{FSM} | Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | 100 | A |
| T_J | Operating Junction Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |

Thermal Characteristics⁽¹⁾

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|-----------------|--|-------|--------------------|
| Ψ_{JL} | Typical Thermal Characteristics, Junction-to-Lead ⁽²⁾ | 15 | $^\circ\text{C/W}$ |
| $R_{\theta JA}$ | Typical Thermal Resistance, Junction-to-Ambient | 120 | $^\circ\text{C/W}$ |

Notes:

1. Per JESD51-3 recommended thermal test board. Device mounted on FR-4 PCB, board size = 76.2 mm x 114.3 mm.
2. Thermocouple soldered at cathode lead.

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|----------|-----------------------|--|------|-------|------|---------------|
| V_F | Forward Voltage | $I_F = 5\text{ A}$ | | | 0.54 | V |
| I_R | Reverse Current | $V_R = 30\text{ V}$ | | | 100 | μA |
| T_{rr} | Reverse Recovery Time | $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$ | | 15.72 | | ns |
| C_J | Junction Capacitance | $V_R = 10\text{ V}$, $f = 1\text{ MHz}$ | | 159 | | pF |

Typical Performance Characteristics

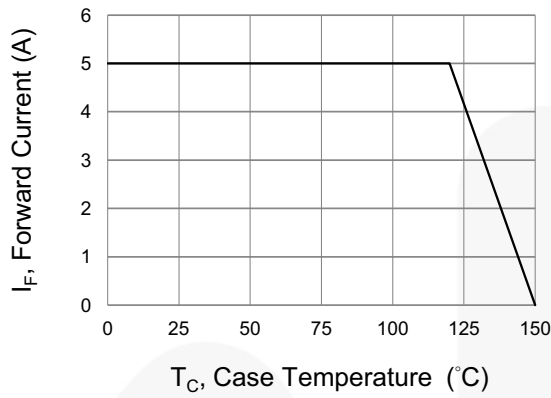


Figure 1. Forward Current Derating Curve

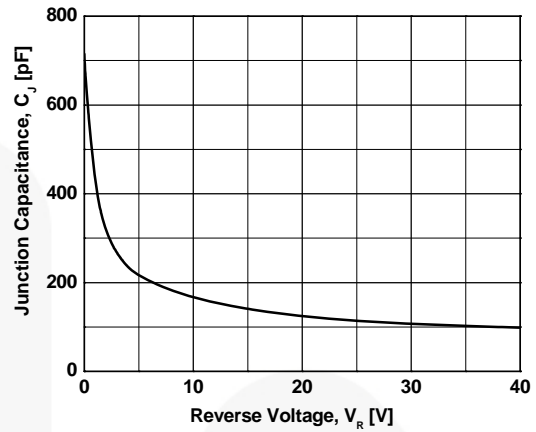


Figure 2. Typical Junction Capacitance

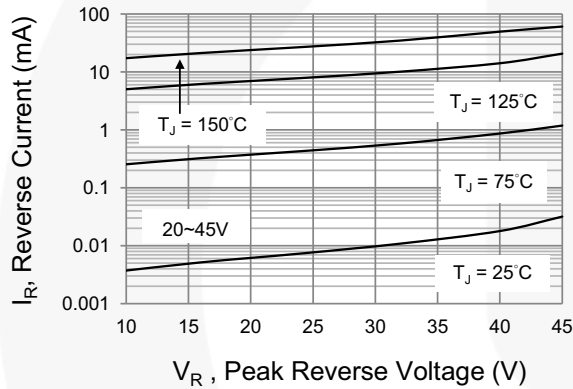


Figure 3. Typical Reverse Characteristics

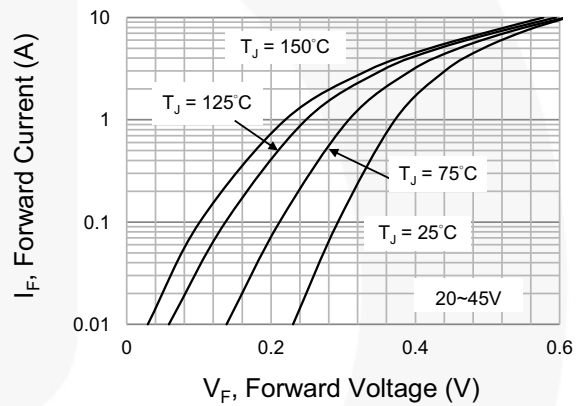
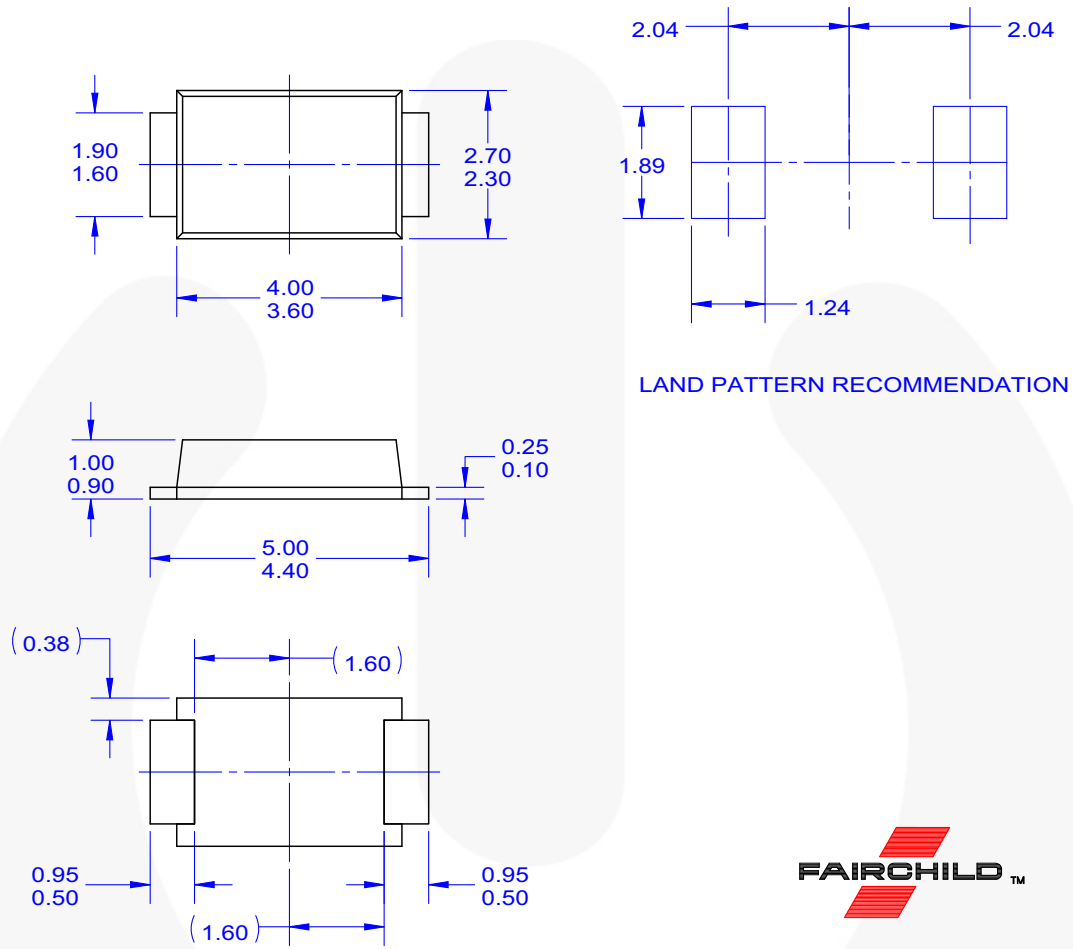


Figure 4. Typical Forward Characteristics

Physical Dimensions



NOTES:

- THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
- ALL DIMENSIONS ARE IN MILLIMETERS.
- DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- LAND PATTERN RECOMMENDATION PER IPC SODFL4725X110N
- DRAWING FILE NAME: MKT-DO214AD REV2

Figure 5. 2-LEAD, SMAF, NON JEDEC FLAT LEAD







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