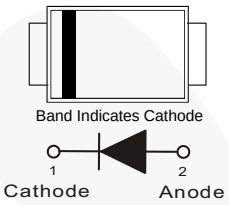
August 2015

FSV240AF
Surface Mount Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop: 0.5 V Maximum at 2 A, T_A = 25°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

SMAF



Ordering Information

Part Number	Top Mark	Package	Packing Method
FSV240AF	FSV240AF	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°C unless otherwise noted.

Symbol	Parameter	Value	Unit
V_{RRM}	Recurrent Peak Reverse Voltage	40	V
V_{RMS}	RMS Reverse Voltage	28	V
V_R	DC Blocking Voltage	40	V
$I_{F(AV)}$	Average Forward Current	2	A
I_{FSM}	Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	50	A
T_J	Operating Junction Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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Thermal Characteristics[1]

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
ψ_{JL}	Typical Thermal Characteristics, Junction-to-Lead[2]	15	°C/W
$R_{\theta JA}$	Typical Thermal Resistance, Junction-to-Ambient	120	°C/W

Note:

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°C unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage	I_F = 2.0 A			0.5	V
I_R	Reverse Current	V_R = 40 V			0.1	mA
T_{rr}	Reverse Recovery Time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A		9.65		ns
C_J	Junction Capacitance	V_R = 4 V, f = 1 MHz		98		pF

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Typical Performance Characteristics

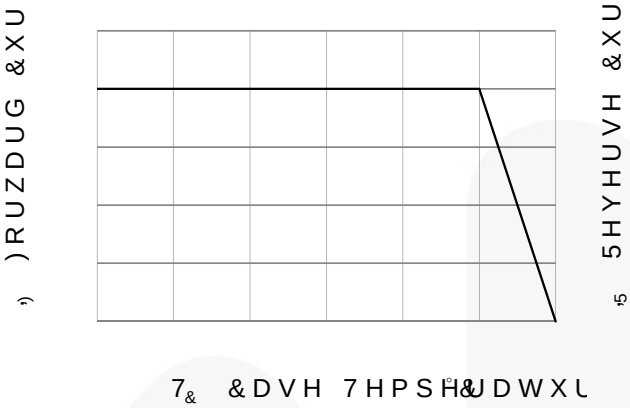

Figure 1. Forward Current Derating Curve

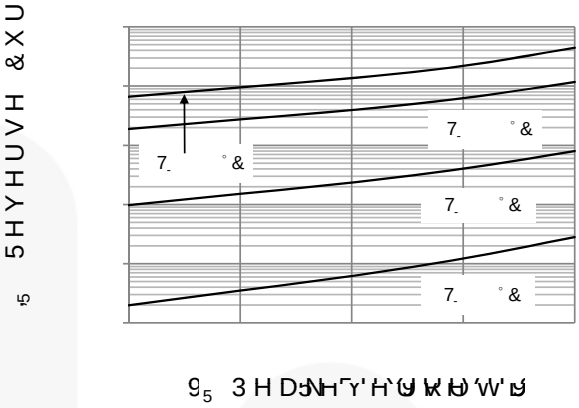

Figure 2. Typical Reverse Characteristics

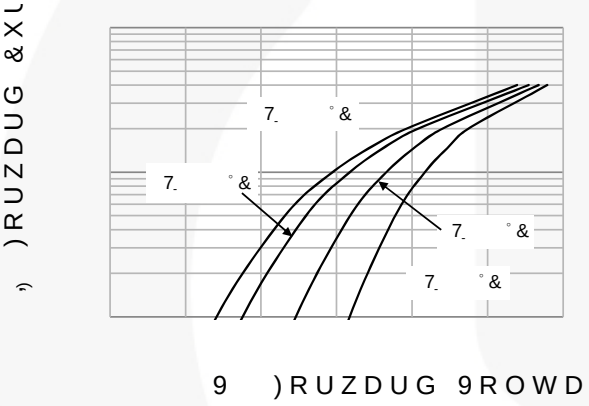

Figure 3. Typical Forward Characteristics

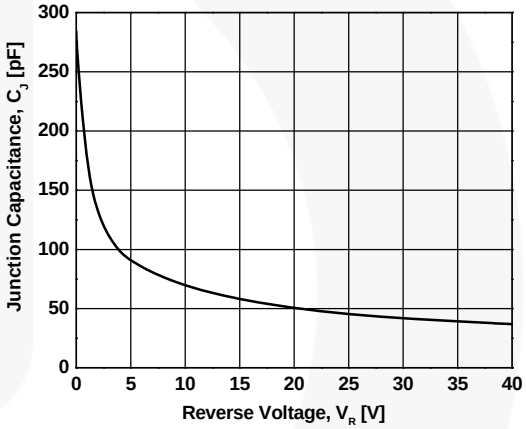

Figure 4. Typical Junction Capacitance

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