onsemi

Ultra-Low VF Schottky Rectifier

15 A, 100 V FSV15100V

Features

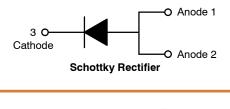
- Ultra-Low Forward Voltage Drop
- Low Thermal Resistance
- Very Low Profile: Typical Height of 1.1 mm
- Trench Schottky Technology
- Green Molding Compound as per IEC61249 Standard
- Non–DAP Option Only
- These Devices are Pb–Free, Halogen Free Free and are RoHS Compliant

Specifications

ABSOLUTE MAXIMUM RATINGS	(T _A = 25°C unless otherwise noted)
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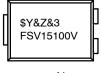
Symbol	Rating	Value	Unit
V _{RRM}	Peak Repetitive Reverse Voltage 100		
V _{RWM}	Working Peak Reverse Voltage	100	V
V _{RMS}	RMS Reverse Voltage	70	V
V _R	DC Blocking Voltage 100		V
I _{F(AV)}	Average Rectified Peak Forward Surge 15 Current		A
I _{FSM} Non-Repetitive Peak Forward Surge Current		250	A
TJ	Operating Junction Temperature Range -55 to +150		°C
T _{STG}	T _{STG} Storage Temperature Range -55 to +150		°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.





MARKING DIAGRAM



\$Y= onsemi Logo&Z= Assembly Plant Code

&3 = Date Code (Year & Week)

FSV15100V = Specific Device Code

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

FSV15100V

THERMAL CHARACTERISTICS (T_A = 25° C unless otherwise noted) (Note 1)

Symbol	Characteristic	Minimum Land Pattern	Maximum Land Pattern	Unit
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance	100	40	°C/W
Ψ_{JL}	Junction-to-Lead Thermal Characteristics, Thermocouple Soldered to Anode	15	12	°C/W
	Junction-to-Lead Thermal Characteristics, Thermocouple Soldered to Cathode	6	5	

 The thermal resistances (R_{0,JA} & Ψ_{JL}) are characterized with device mounted on the following FR4 printed circuit boards, as shown in Figure 1 and Figure 2. PCB size: 76.2 x 114.3 mm. Minimum land pattern size: 4.9 x 4.8 mm (big pattern, x1), 1.4 x 1.52 mm (small pattern, x2). Maximum land pattern size: 30 x 30 mm (pattern, x2). Force line trace size = 55 mils, sense line trace size = 4 mils.



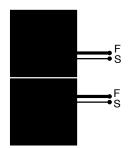


Figure 1. Minimum Land Pattern of 2 oz Copper

Figure 2. Maximum Land Pattern of 2 oz Copper

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
BV _R	Breakdown Voltage	I _R = 0.5 mA	100	-	-	V
V _F	Forward Voltage Drop	I _F = 15 A	-	0.613	0.660	V
I _R	Reverse Current	V _R = 100 V	-	28	80	μΑ

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

ORDERING INFORMATION

Part Number	Top Mark	Package	Shipping [†]
FSV15100V	FSV15100V	TO–277 3L (Pb–Free/Halogen Free)	5000 / Tape & Reel

+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

FSV15100V

TYPICAL PERFORMANCE CHARACTERISTICS

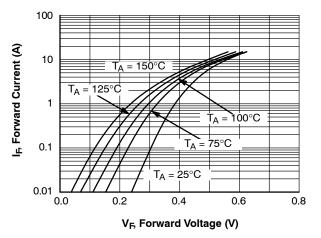


Figure 3. Typical Forward Characteristics

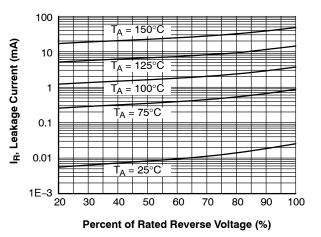


Figure 4. Typical Reverse Characteristics

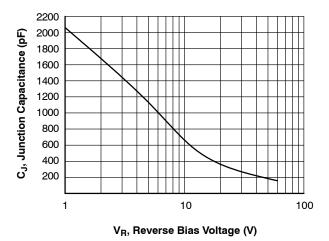


Figure 5. Typical Junction Capacitance

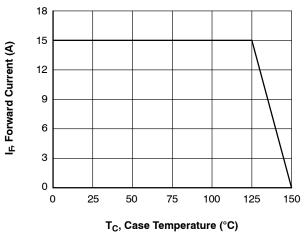


Figure 6. Forward Current Derating Curve

TO-277-3LD CASE 340BQ **ISSUE O** DATE 30 SEP 2016 6.65 6.35 6.15 В 1.40 1.10 (2X) A 5.67 4.65 MIN 1.45 MIN 4.63 4.15 MIN 4.25 1.97 0.63 0.43 (2X) 1.15 MIN **TOP VIEW** 1.00 0.01 -2.75 SEATING PLANE LAND PATTERN RECOMMENDATION 1.20 (0.35) -1.00 0.40 **FRONT VIEW** С 0.23 4.90 4.23 NOTES: UNLESS OTHERWISE SPECIFIED Ď 1.25 0.90 A. PACKAGE REFERENCE: JEDEC TO-277 **B. DIMENSIONS ARE EXCLUSIVE OF** BURRS, MOLD FLASH, AND TIE BAR 2.20 EXTRUSIONS. 4.15 3.25 2.25 \mathbf{D} 2.00 C. ALL DIMENSIONS ARE IN MILLIMETERS. 1.95 /D` DOES NOT COMPLY TO JEDEC STANDARD VALUE. **-** 0.913 (0.25)3,680 **BOTTOM VIEW** 0.60 -**DAP OPTION** 4.75 MAX 3.81

BOTTOM VIEW – DAP OPTION

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