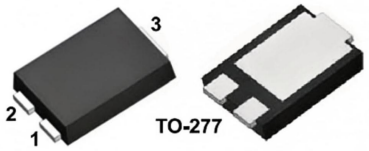
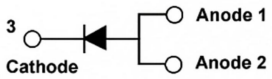
OM SENI

FSV2060L
20 A, 60 V Very Low VF Schottky Rectifier

Features

- Very Low Forward Voltage Drop
- Low Thermal Resistance
- Very Low Profile: Typical Height of 1.1 mm
- RoHS Compliant
- Lead Free in Compliance with EU RoHS 2011/65/EU Directive
- Qualified with Reflow (J-STD-020) and Solder Temperature 260°C Classification





Ordering Information

Part Number	Top Mark	Package	Packing Method
FSV2060L	FSV2060L	TO-277 3L	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}	Peak Repetitive Reverse Voltage	60	V
V_{RWM}	Working Peak Reverse Voltage	60	V
V_{RMS}	RMS Reverse Voltage	42	V
V_R	DC Blocking Voltage	60	V
$I_{F(AV)}$	Average Rectified Peak Forward Surge Current	20	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current	320	A
T_J	Operating Junction Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

OM SENI

Thermal Characteristics(1)

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

Symbol	Parameter	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	

Note:

1. The thermal resistances ($R_{\theta JA}$ & 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

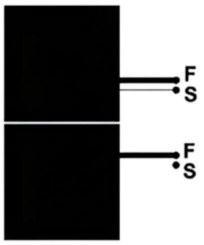


Figure 2. Maximum Land Pattern of 2 oz Copper

Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_R	Breakdown Voltage	I_R = 0.5 mA	60	66		V
V_F	Forward Voltage Drop	I_F = 15 A		477		mV
		I_F = 20 A		522	600	
I_R	Reverse Current	V_R = 60 V		78	320	μA
C_J	Junction Capacitance	V_R = 4 V, f = 1 MHz		771		pF

OM SENI

Typical Performance Characteristics

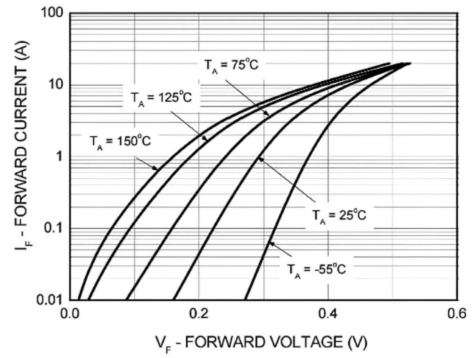


Figure 3. Typical Forward Characteristics

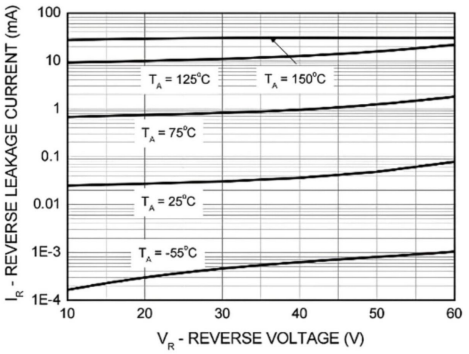


Figure 4. Typical Reverse Characteristics

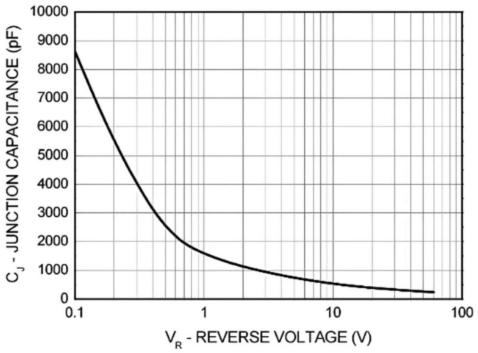


Figure 5. Typical Junction Capacitance

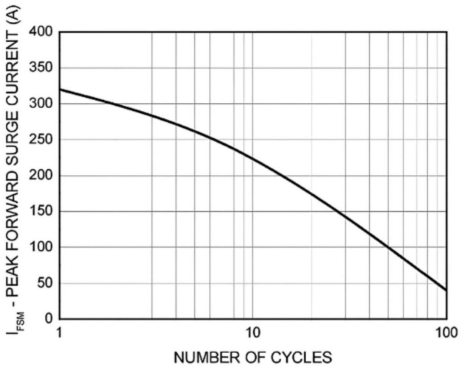


Figure 6. Maximum Non-Repetitive Peak Forward Surge Current

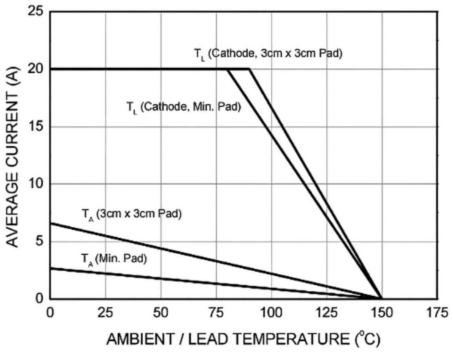


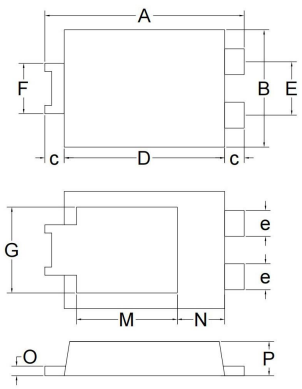
Figure 7. Forward Current Derating Curve

OM SENI

Ordering Information

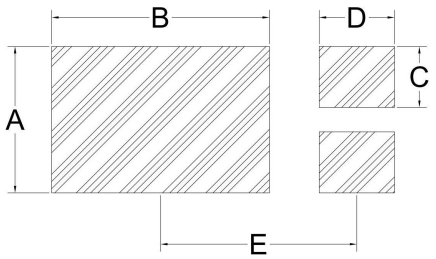
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
TO-277	R3	0.090	5000	10000	100000	13''

Package Outline Dimensions (TO-277)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	6.300	6.700	0.248	0.264
B	3.950	4.300	0.156	0.169
c	0.410	0.710	0.016	0.028
D	5.280	5.880	0.208	0.231
E	1.760	1.960	0.069	0.077
e	0.850	0.960	0.033	0.038
F	1.750	1.850	0.069	0.073
G	2.850	3.150	0.112	0.124
M	3.390	3.690	0.133	0.145
N	1.440	1.740	0.057	0.069
O	0.250	0.350	0.010	0.014
P	0.950	1.250	0.037	0.049

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.400	3.800	0.134	0.150
B	4.500	4.900	0.177	0.193
C	1.200	1.600	0.047	0.063
D	0.600	1.00	0.024	0.039
E	3.670	4.070	0.144	0.160