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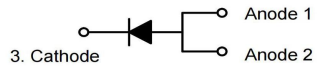
Schottky Barrier Rectifier

5 A, 60 V Low VF

FSV560



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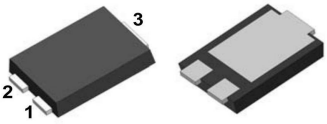
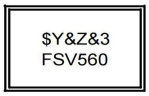


TO−277−3LD
CASE 340BQ

Features

- Low Forward Voltage Drop
- Low Thermal Resistance
- Very Low Profile: Typical Height of 1.1 mm
- Non−DAP Option Only
- These Devices are Pb−Free, Halogen Free and are RoHS Compliant

MARKING DIAGRAM



$Y = OM SENI
&Z = Assembly Plant Code
&3 = Date Code (Year & Week)
FSV560 = Specific Device Code

Specifications

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive 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 at T_A = 75°C	5	A
I_{FSM}	Non−Repetitive Peak Forward Surge Current	150	A
T_J	Operating Junction Temperature Range	−55 to +150	°C
T_{STG}	Storage Temperature Range	−55 to +150	°C

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	

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

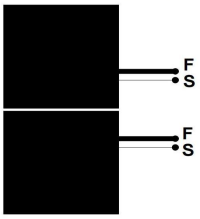


Figure 2. Maximum Land Pattern of 2 oz Copper

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

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
BV_R	Breakdown Voltage	I_R = 0.5 mA	60	–	–	V
V_F	Forward Voltage Drop	I_F = 3 A	–	511	–	mV
		I_F = 5 A	–	610	670	
		I_F = 3 A, T_A = 125°C	–	470	–	
		I_F = 5 A, T_A = 125°C	–	560	–	
I_R	Reverse Current	V_R = 48 V	–	12	–	μA
		V_R = 60 V	–	–	150	μA
		V_R = 60 V, T_A = 125°C	–	15	–	mA

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TYPICAL PERFORMANCE CHARACTERISTICS

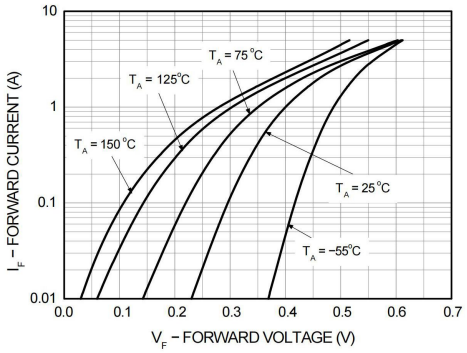

Figure 3. Typical Forward Characteristics

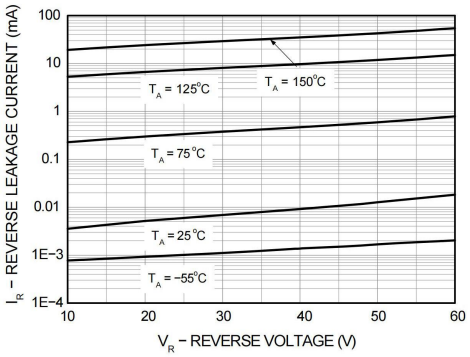

Figure 4. Typical Reverse Characteristics

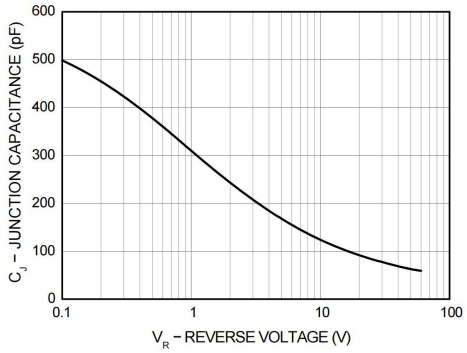

Figure 5. Typical Junction Capacitance

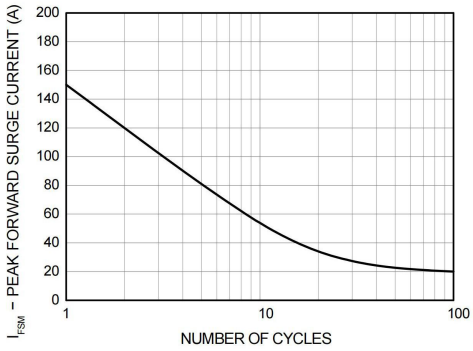

Figure 6. Typical Reverse Characteristic

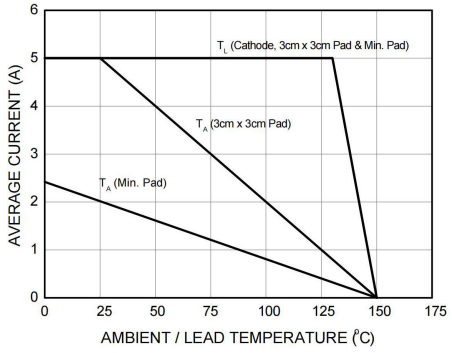

Figure 7. Forward Current Derating Curve

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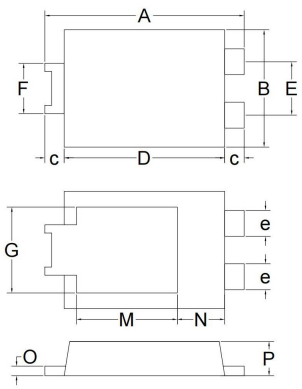
Ordering Information

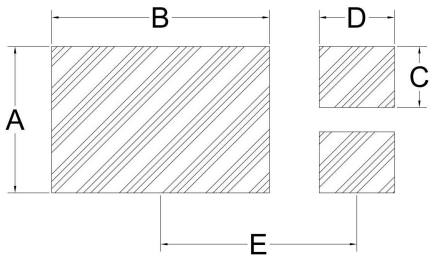
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
TO-277	R3	0.090	5000	10000	100000	13''

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