

Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, Photovoltaic Solar cell protection, free-wheeling and polarity protection diodes.

Features

- * Ultra Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * *In compliance with EU RoHs 2002/95/EC directives*



SCHOTTKY BARRIER RECTIFIERS

**5 AMPERES
60 VOLTS**



TO-277

MAXIMUM RATINGS

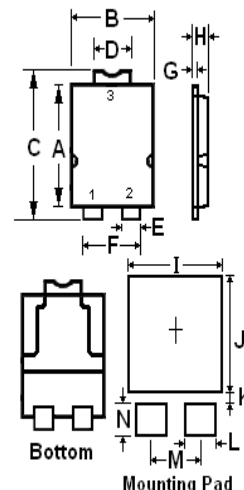
Characteristic	Symbol	S05L60	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	60	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	42	V
Average Rectifier Forward Current	$I_{F(AV)}$	5	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	125	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	°C

THERMAL RESISTANCES

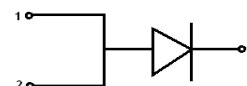
Typical Thermal Resistance junction to body	$R_{\theta j-c}$	5	°C/w
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ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	S10M60C			Unit
Maximum Instantaneous Forward Voltage ($I_F = 0.1$ Amp $T_C = 25^\circ\text{C}$) ($I_F = 3.0$ Amp $T_C = 25^\circ\text{C}$) ($I_F = 5.0$ Amp $T_C = 25^\circ\text{C}$)	V_F	Min	Typ.	Max.	V
		---	0.25	0.26	
		---	0.44	0.46	
		---	0.52	0.55	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R	---	0.05	0.1	mA
		---	10	12	



DIM	MILLIMETERS	
	MIN	MAX
A	5.20	5.40
B	4.10	3.90
C	6.40	6.60
D	1.70	1.90
E	0.80	1.00
F	1.80	1.90
G	0.25	0.35
H	1.05	1.15
I	3.36	---
J	4.86	---
K	0.85	---
L	1.40	---
M	1.84	---
N	1.40	---



S05L60

FIG-1 FORWARD CURRENT DERATING CURVE

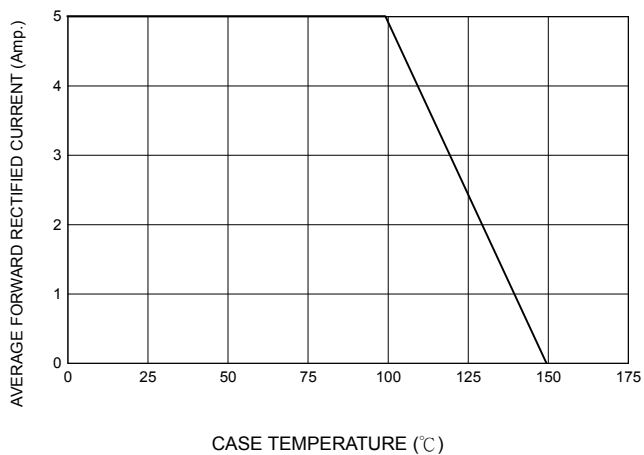


FIG-2 TYPICAL FORWARD CHARACTERISTICS

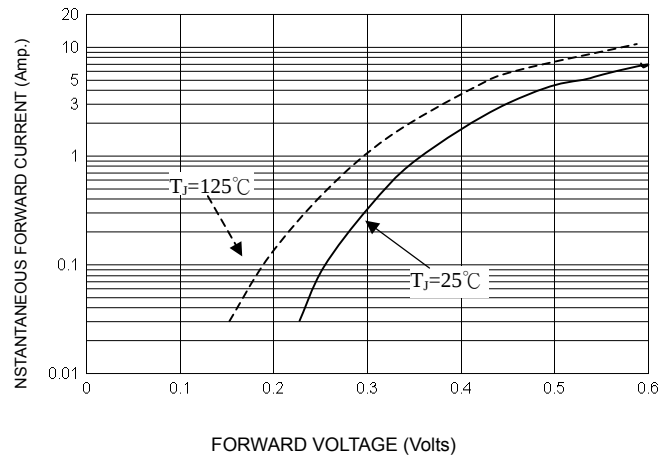


FIG-3 TYPICAL REVERSE CHARACTERISTICS

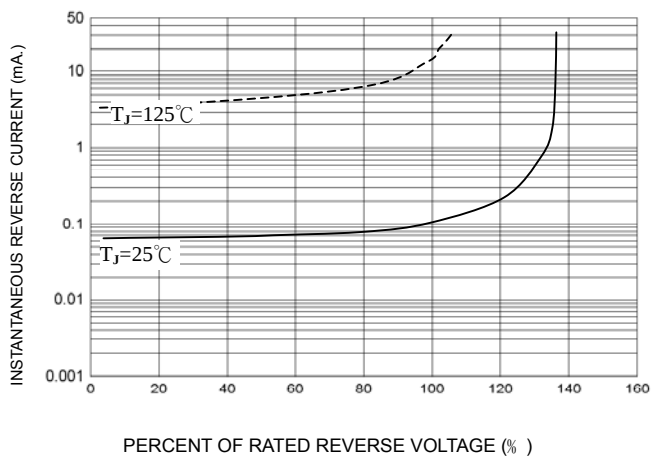


FIG-4 TYPICAL JUNCTION CAPACITANCE

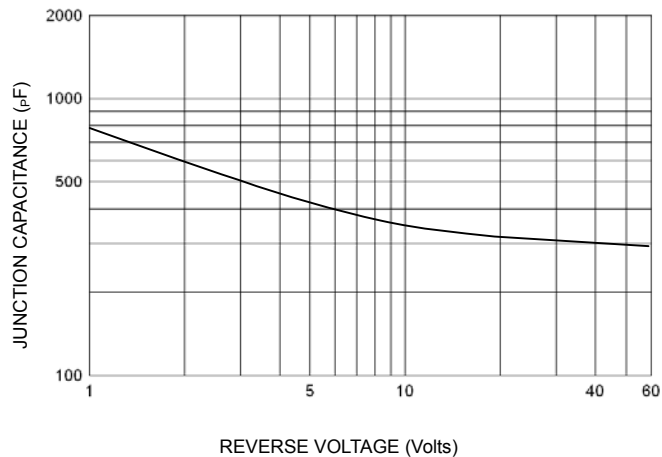


FIG-5 PEAK FORWARD SURGE CURRENT

