

## Switchmode 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 adaptors, Photovoltaic Solar cell protection, free-wheeling and polarity protection diodes.

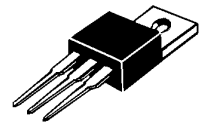
### Features

- \* 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-0
- \* *Pb free*
- \* *In compliance with EU RoHs directives*
- \* *ESD: 4KV(Min.) Human-Body Model*
- \* Mounting Torque: 5 in-lbs.Max.

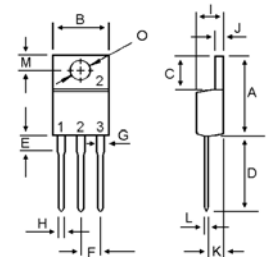


### SCHOTTKY BARRIER RECTIFIERS

**40 AMPERES  
60 VOLTS**



**TO-220AB**



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	16.00
B	9.78	10.42
C	5.02	6.60
D	13.00	14.62
E	3.10	4.19
F	2.41	2.67
G	1.10	1.67
H	0.69	1.01
I	3.21	4.98
J	1.14	1.40
K	2.20	3.30
L	0.28	0.61
M	2.48	3.00
O	3.50	4.00

### MAXIMUM RATINGS

Characteristic	Symbol	S40M60C	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 ( per diode )	$I_{F(AV)}$	20	A
Total Device (Rated $V_R$ ),		40	
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	320	A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150	°C

### THERMAL RESISTANCES

Typical Thermal Resistance junction to case( per diode )	$R_{\theta j-c}$	5.8	°C/w
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### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage ( per diode ) ( $I_F = 20.0$ Amp $T_C = 25^\circ C$ ) ( $I_F = 20.0$ Amp $T_C = 125^\circ C$ )	$V_F$	---	0.53 0.55	0.60 ---	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25^\circ C$ ) ( Rated DC Voltage, $T_C = 125^\circ C$ )	$I_R$	---	0.2 40	0.4 ---	mA

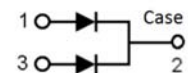


FIG-1 FORWARD CURRENT DERATING CURVE

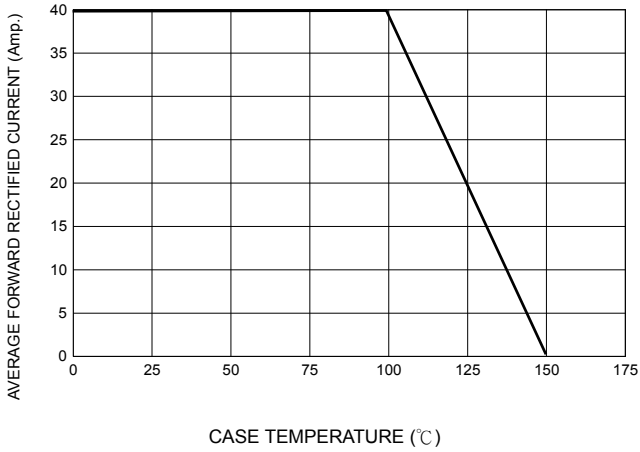


FIG-2 TYPICAL FORWARD CHARACTERISTICS

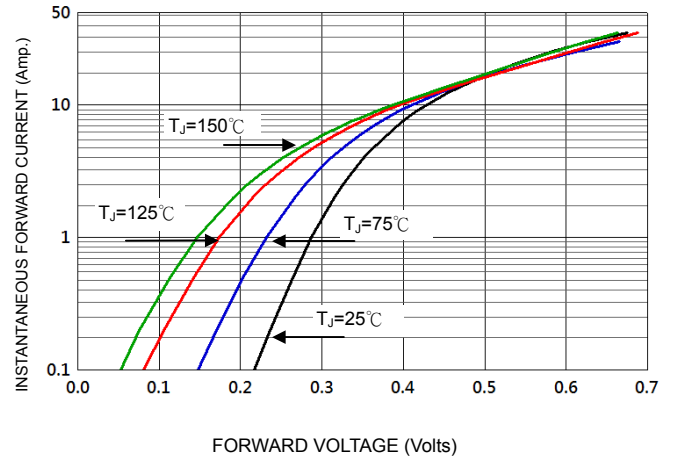


FIG-3 TYPICAL REVERSE CHARACTERISTICS

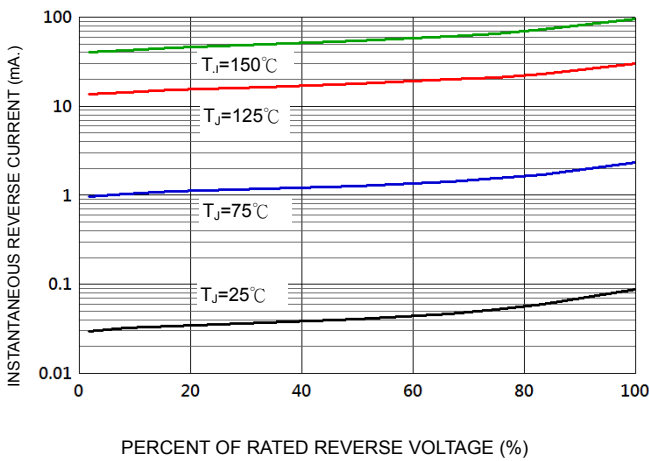


FIG-4 TYPICAL JUNCTION CAPACITANCE

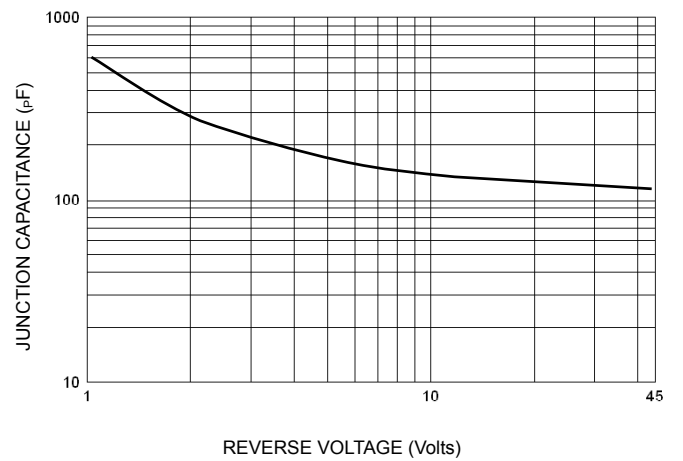
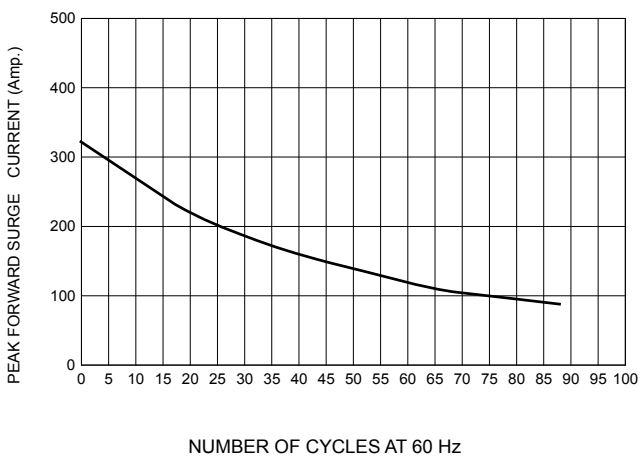


FIG-5 PEAK FORWARD SURGE CURRENT



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