

Switchmode Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of 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, DC/DC convertes, free-wheeling and polarity protection diodes.

Features

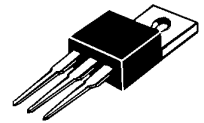
- * Super Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



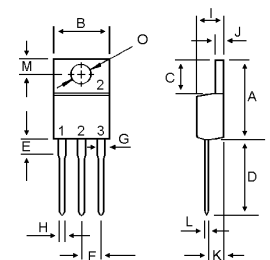
* In compliance with EU RoHS 2002/95/EC directives

SCHOTTKY BARRIER RECTIFIERS

**30 AMPERES
60 VOLTS**



TO-220AB



MAXIMUM RATINGS

Characteristic	Symbol	SBL3060CL	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)	$I_{F(AV)}$	15	A
Total Device (Rated V_R), $T_C=100^\circ\text{C}$		30	
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	30	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	300	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

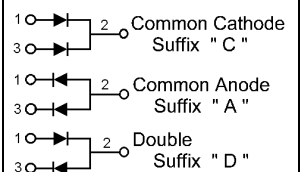
THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta j-c}$	3.6	$^\circ\text{C}/\text{w}$
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ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	SBL3060CL			Unit
		Min	Typ.	Max.	
Maximum Instantaneous Forward Voltage (per diode) ($I_F=0.1\text{ Amp } T_C=25^\circ\text{C}$) ($I_F=7.5\text{ Amp } T_C=25^\circ\text{C}$) ($I_F=15\text{ Amp } T_C=25^\circ\text{C}$)	V_F	---	0.26	0.28	V
		---	0.47	0.52	
		---	0.58	0.60	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$) (Rated DC Voltage, $T_C=100^\circ\text{C}$)	I_R	---	0.10	0.25	mA
		---	12	30	

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



SBL3060CL

FIG-1 FORWARD CURRENT DERATING CURVE

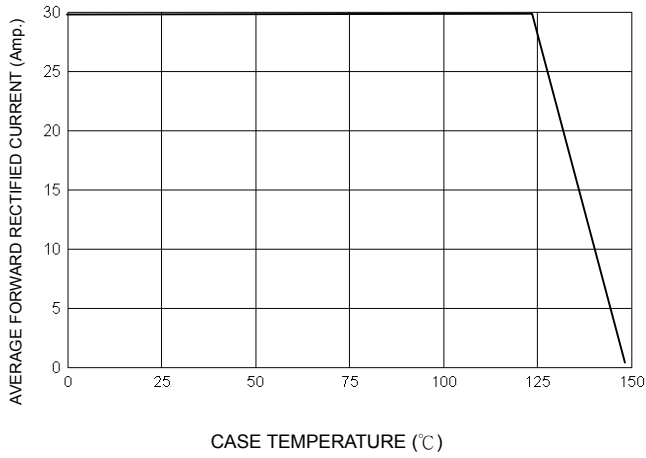


FIG-2 TYPICAL FORWARD CHARACTERISTICS

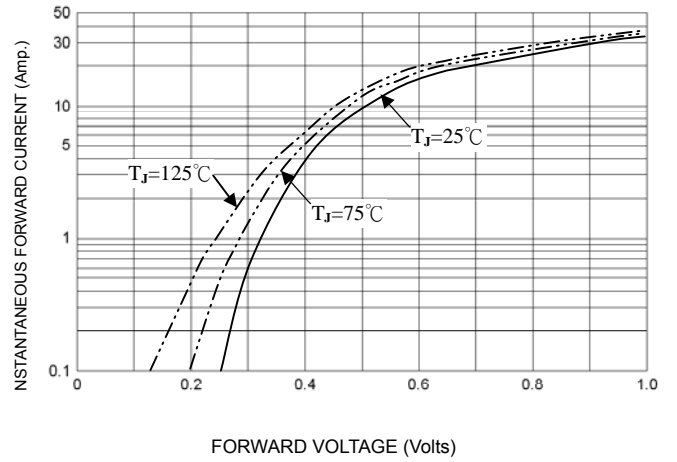


FIG-3 TYPICAL REVERSE CHARACTERISTICS

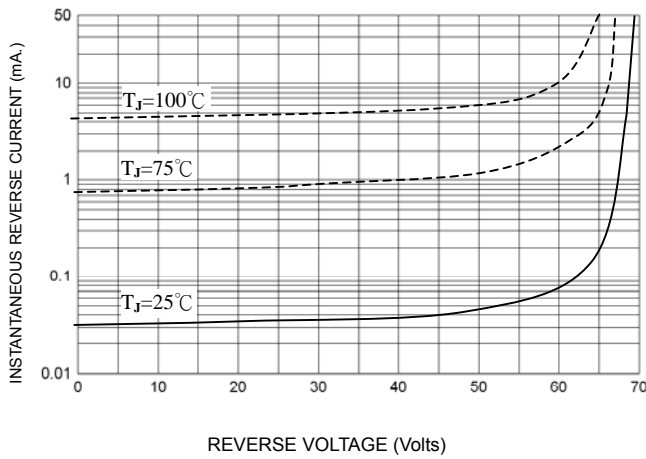


FIG-4 TYPICAL JUNCTION CAPACITANCE

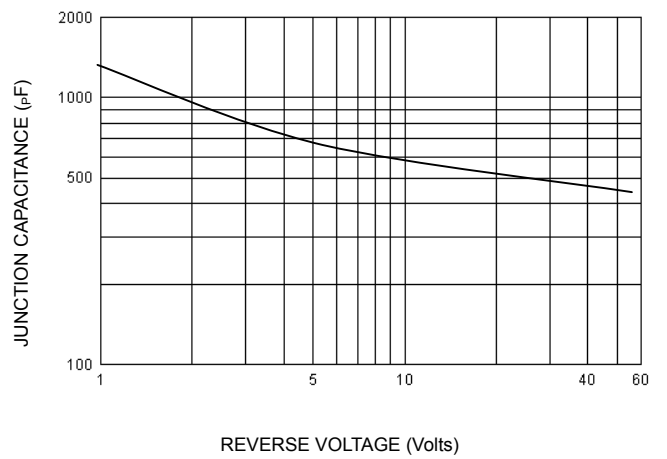
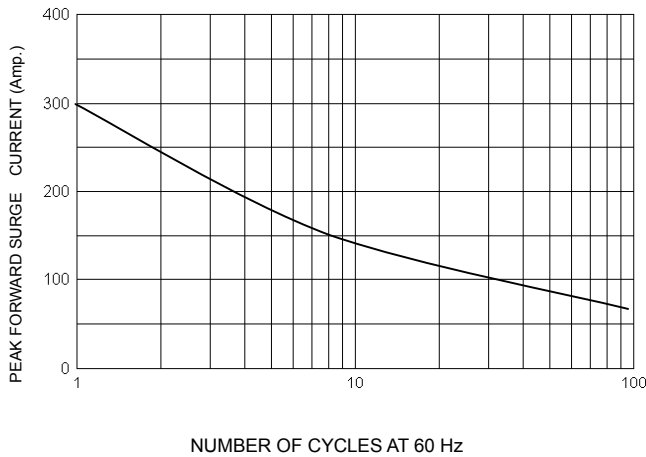


FIG-5 PEAK FORWARD SURGE CURRENT



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