SIRECT ELECTRONIC

SBL40L60CT/FCT/PT

Power Schottky Rectifier - 40Amp 60Volt

☐ Features

-Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
-High Junction Temperature Capability
-Low forward voltage, high current capability
-High surge capacity
-Low power loss, high efficiency

☐ Application

-Switching-Mode Power Supply
-Solar-System Control Box

☐ Absolute maximum ratings

Symbol	Ratings	Unit	Conditions
$I_{F(AV)}$	40	A	Average Forward Current
V_{RRM}	60	V	Repetitive Peak Reverse Voltage
I_{FSM}	400	A	Peak Forward Surge Current
V_F	0.50	V	Forward Voltage Drop
T_j , T_{stg}	-50 to +150	ºC	Operating and Storage Temperature

☐ Electrical characteristics

Parameters	Symbol	Ratings	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.65V 0.50V	Per Leg at I_F = 20A Tc = 25ºC Tc = 125ºC
Maximum Reverse Leakage Current	I_R	1.0mA	Per Leg at V_R = 60V Tc = 25ºC
Maximum Voltage Rate of Change	dv/dt	10,000 V/μs	Rated V_R
Typical Thermal Resistance,Junction to Case	$R_{\theta (j-c)}$	2.2 ºC/W 4.5 ºC/W 1.25 ºC/W 1.1 ºC/W	Per Leg TO-220AB ITO-220AB TO-247AD TO-3P

June 2010 / Rev.6.6

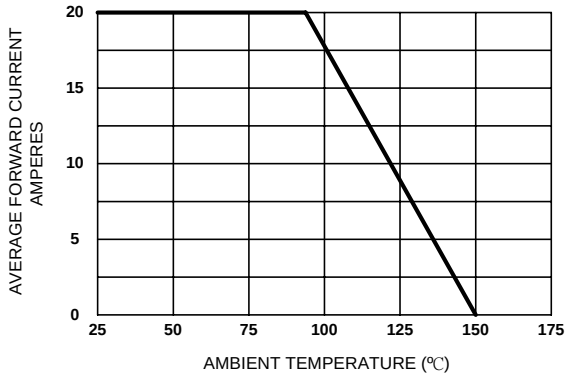


Figure 1. Forward Current Derating Curve

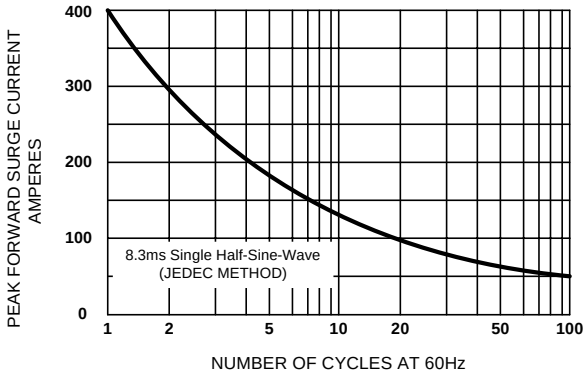


Figure 2. Maximum Non-repetitive Surge Current

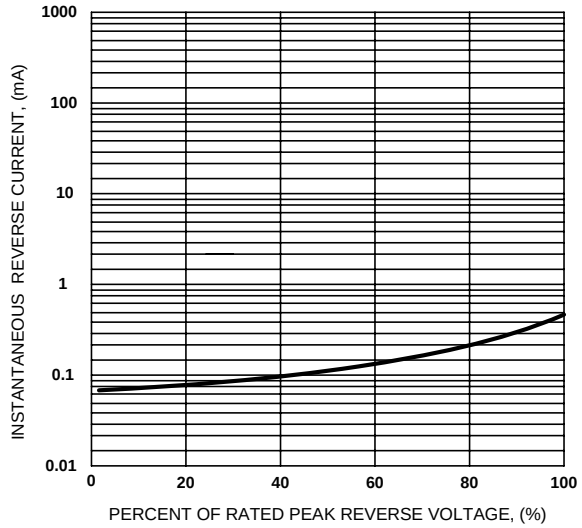


Figure 3. Typical Reverse Characteristics

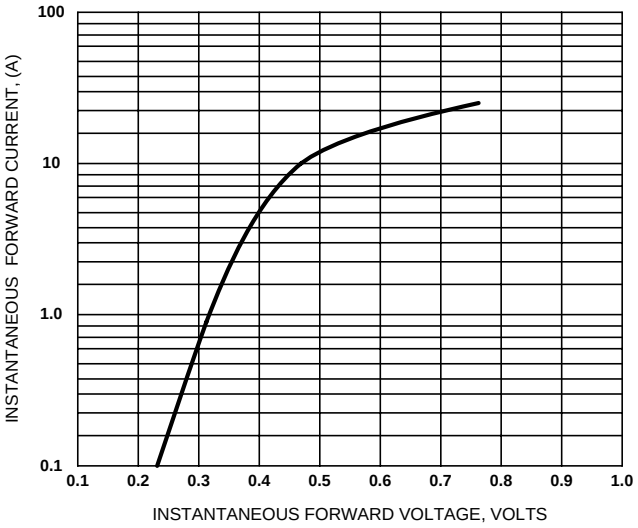


Figure 4. Typical Forward Characteristics

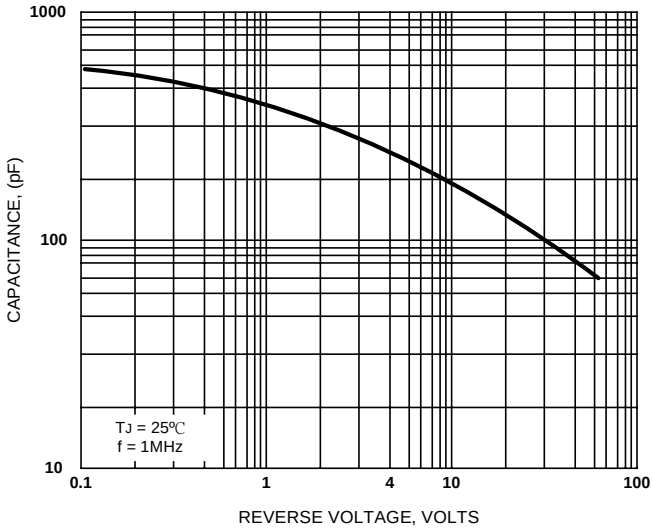
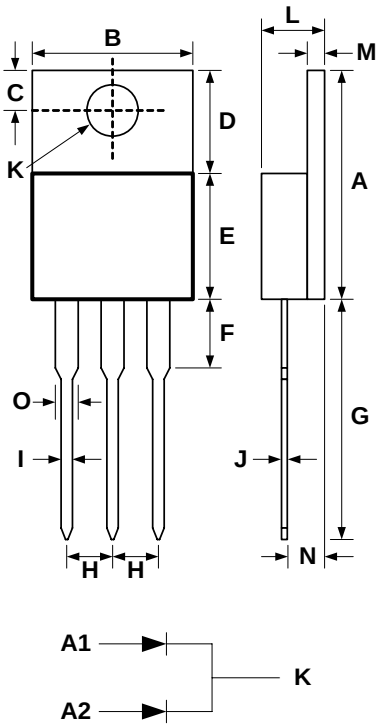


Figure 5. Typical Junction Capacitance

SBL40L60CT

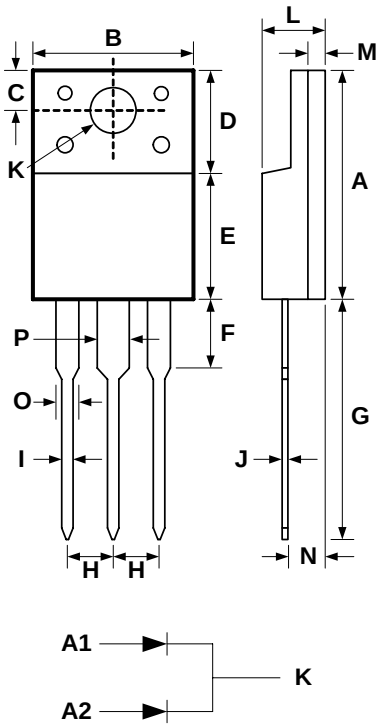
TO-220AB



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.579	.606	14.70	15.40	
B	.392	.411	9.95	10.45	
C	.104	.116	2.65	2.95	
D	.248	.272	6.30	6.90	
E	.325	.350	8.25	8.90	
F	.126	.157	3.20	4.00	
G	.492	.551	12.50	14.00	
H	.096	.108	2.45	2.75	
I	.028	.039	0.70	1.00	
J	.010	.022	0.25	0.55	
K	.146	.157	3.70	4.00	
L	.167	.187	4.25	4.75	
M	.045	.057	1.15	1.45	
N	.089	.114	2.25	2.90	
O	.047	.055	1.20	1.40	

SBL40L60FCT

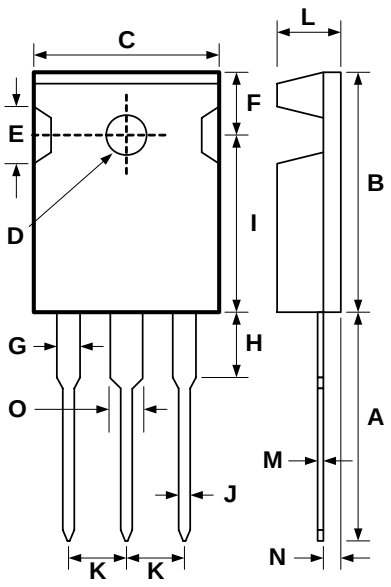
ITO-220AB

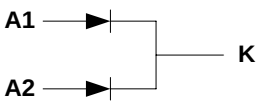


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.577	.600	14.65	15.25	
B	.386	.406	9.80	10.30	
C	.098	.114	2.50	2.90	
D	.258	.274	6.55	6.95	
E	.315	.331	8.00	8.40	
F	.110	.161	2.80	4.10	
G	.508	.551	12.90	14.00	
H	.089	.106	2.25	2.70	
I	.020	.028	0.50	0.70	
J	.020	.028	0.50	0.70	
K	.120	.138	3.05	3.50	
L	.169	.185	4.30	4.70	
M	.051	.063	1.30	1.60	
N	.079	.112	2.00	2.85	
O	.043	.055	1.10	1.40	
P	.051	.071	1.30	1.80	

SBL40L60PT

TO-247AD

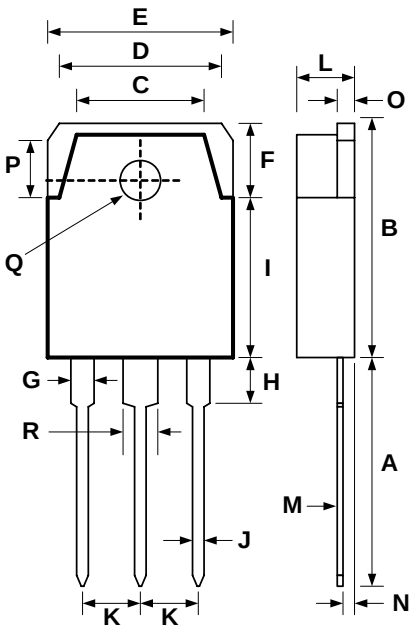


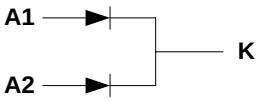


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.748	.827	19.00	21.00	
B	.787	.866	20.00	22.00	
C	.598	.638	15.20	16.20	
D	.130	.150	3.30	3.80	
E	.205	.242	5.20	6.15	
F	.209	.232	5.30	5.90	
G	.077	.091	1.95	2.30	
H	.161	.189	4.10	4.80	
I	.551	.610	14.00	15.50	
J	.045	.055	1.15	1.40	
K	.197	.219	5.00	5.55	
L	.189	.205	4.80	5.20	
M	.020	.031	0.50	0.80	
N	.083	.094	2.10	2.40	
O	.116	.128	2.95	3.25	

SBL40L60PT

TO-3P





DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.744	.783	18.90	19.90	
B	.787	.827	20.00	21.00	
C	.346	.386	8.80	9.80	
D	.512	.535	13.00	13.60	
E	.602	.628	15.30	15.95	
F	.256	.276	6.50	7.00	
G	.077	.085	1.95	2.15	
H	.098	.126	2.50	3.20	
I	.528	.551	13.40	14.00	
J	.035	.047	0.90	1.20	
K	.205	.220	5.20	5.60	
L	.183	.195	4.65	4.95	
M	.022	.035	0.55	0.90	
N	.053	.059	1.35	1.50	
O	.055	.065	1.40	1.65	
P	.165	.197	4.20	5.00	
Q	.128	.140	3.25	3.55	
R	.114	.130	2.90	3.30	