

RoHS Compliant Product  
A suffix of "-C" specifies halogen free

## FEATURES

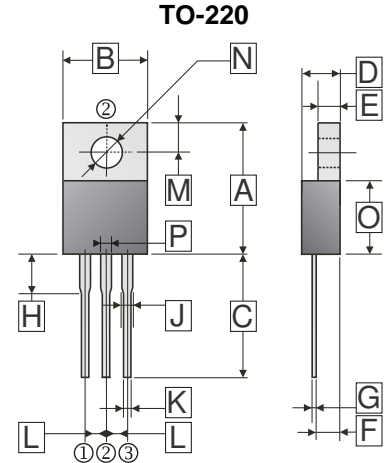
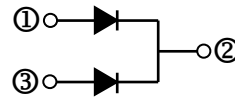
- Planar MOS Schottky technology
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

## MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As Marked
- Mounting position: Any

## ORDER INFORMATION

Part Number	Type
SBL40U60	Lead (Pb)-free
SBL40U60-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.22	16.51	J	0.7	1.78
B	9.57	10.90	K	0.38	1.11
C	12.50	14.75	L	2.01	3.07
D	3.56	5.10	M	2.22	3.43
E	0.51	1.47	N	3.10	4.31
F	2.03	3.19	O	8.10	9.65
G	0.28	0.76	P	1.18 Typ.	
H	2.95	4.5			

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Rating	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	60	V
Working Peak Reverse Voltage	$V_{RSM}$	60	V
Maximum DC Blocking Voltage	$V_{DC}$	60	V
Maximum Average Forward Rectified Current	$I_F$	20	A
(Per Leg)		40	
(Per Device)			
Peak Forward Surge Current@ 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	280	A
Voltage Rate of Change (Rated $V_R$ )	$dv/dt$	10000	V / $\mu s$
Typical Thermal Resistance from Junction to Case	$R_{\theta JC}$	2	$^{\circ}C / W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-40~150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS

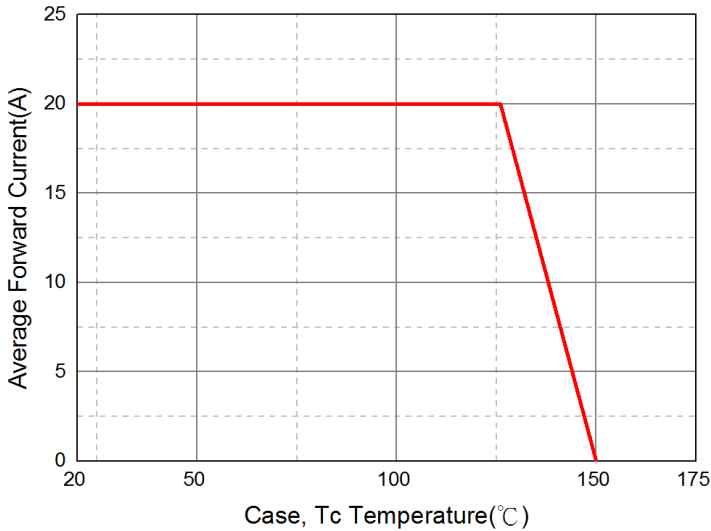
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	$V_F$	0.35	0.39	V	$I_F=3A, T_J=25^{\circ}C$
		0.38	0.42		$I_F=5A, T_J=25^{\circ}C$
		0.56	0.62		$I_F=20A, T_J=25^{\circ}C$
		0.53	-		$I_F=20A, T_J=125^{\circ}C$
Maximum DC Reverse Current at Rated DC Blocking Voltage <sup>2</sup>	$I_R$	-	0.5	mA	$T_J=25^{\circ}C$
		-	30		$T_J=100^{\circ}C$
Typical Junction Capacitance <sup>1</sup>	$C_J$	600	-	pF	

Notes:

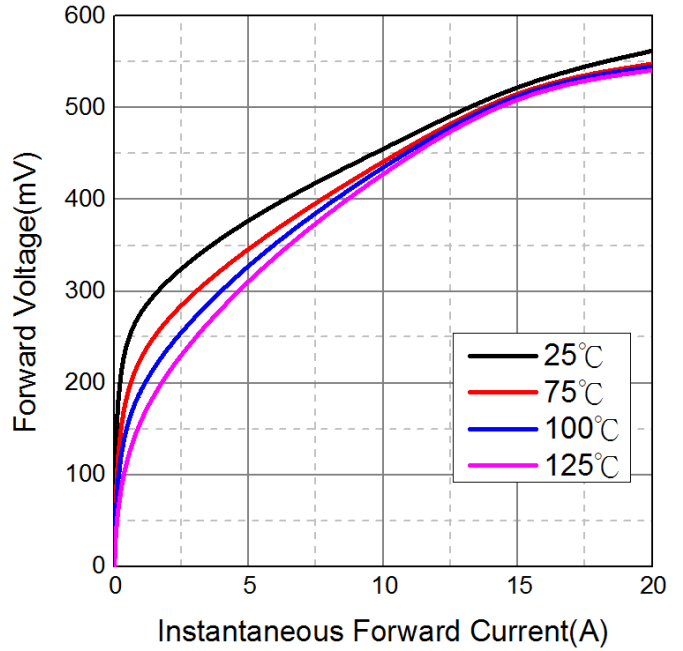
1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Pulse Test: Pulse width=300 $\mu s$ , duty cycle  $\leq 2.0\%$ .

**CHARACTERISTIC CURVES**

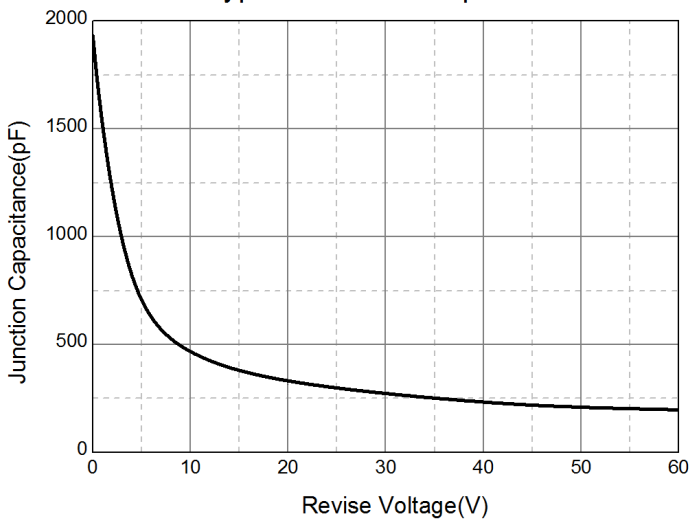
Typical Forward Current Derating Curve



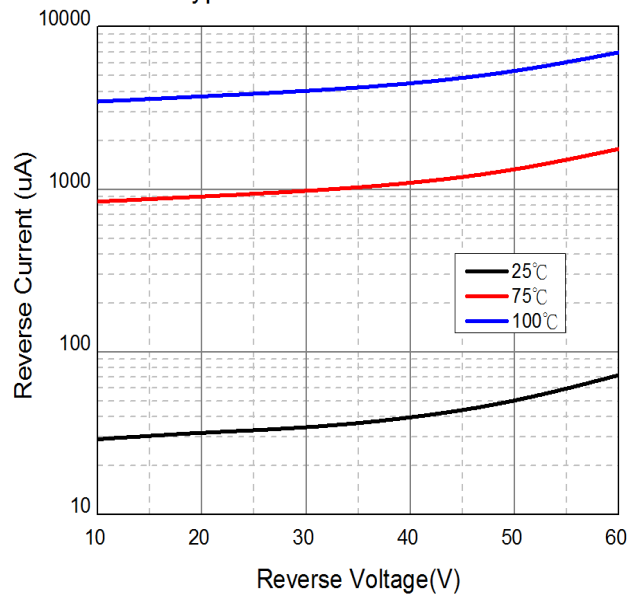
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

