Elektronische Bauelemente

SBL30A100

100V, 30A

Low VF Trench Barrier Schottky Rectifier

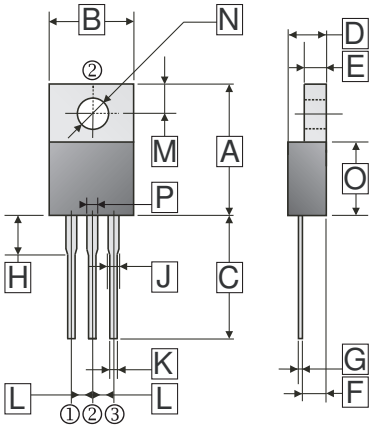
RoHS Compliant Product

A suffix of "-C" specifies halogen free

FEATURES

- Trench Barrier Schottky technology
- Low forward voltage drop
- Low reverse current
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

TO-220



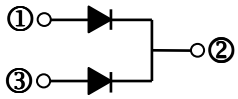
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.22	16.51	J	0.70	1.78
B	9.57	10.90	K	0.38	1.11
C	12.50	14.75	L	2.01	3.07
D	3.56	5.10	M	2.22	3.43
E	0.51	1.47	N	3.10	4.31
F	2.03	3.19	O	8.10	9.65
G	0.279	0.76	P	1.18 Typ.	
H	2.95	4.5			

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
SBL30A100	Lead (Pb)-free
SBL30A100-C	Lead (Pb)-free and Halogen-free



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}	100	V
Working Peak Reverse Voltage		V_{RSM}	100	V
Maximum DC Blocking Voltage		V_{DC}	100	V
Maximum Average Forward Rectified Current	(Per Leg)	I_F	15	A
	(Per Device)		30	
Peak Forward Surge Current, 8.3 ms single half sine-wave Superimposed on rated load (JEDEC method)		I_{FSM}	150	A
Voltage Rate of Chance (Rated V_R)		dv/dt	10000	V / μs
Typical Thermal Resistance		$R_{\theta JC}$	2	°C /W
Operating and Storage Temperature Range		T_J,T_{STG}	150,-55~150	°C

ELECTRICAL CHARACTERISTICS

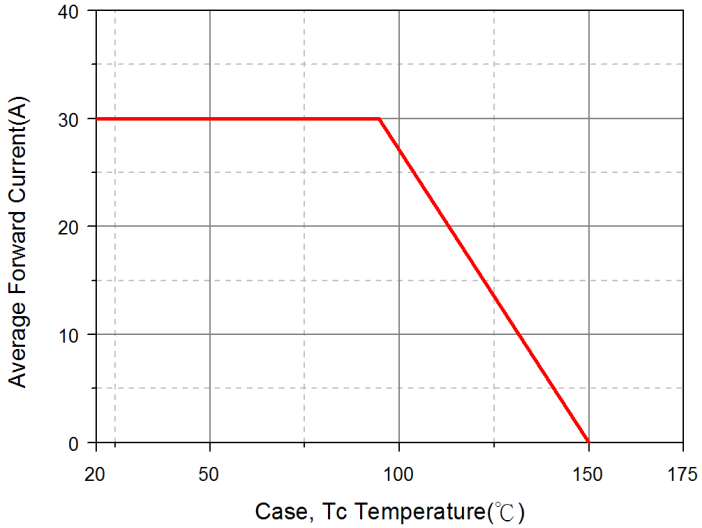
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.48	0.52	V	I_F=3A, T_J=25°C
		0.54	0.58		I_F=5A, T_J=25°C
		0.69	0.72		I_F=10 A, T_J=25°C
		0.8	0.84		I_F=15 A, T_J=25°C
		0.7	-		I_F=15 A, T_J=125°C
Maximum DC Reverse Current at Rated DC Blocking Voltage [2]	I_R	-	0.1	mA	T_J=25°C
		-	10		T_J=100°C
Typical Junction Capacitance [1]	C_J	470	-	pF	

Notes:

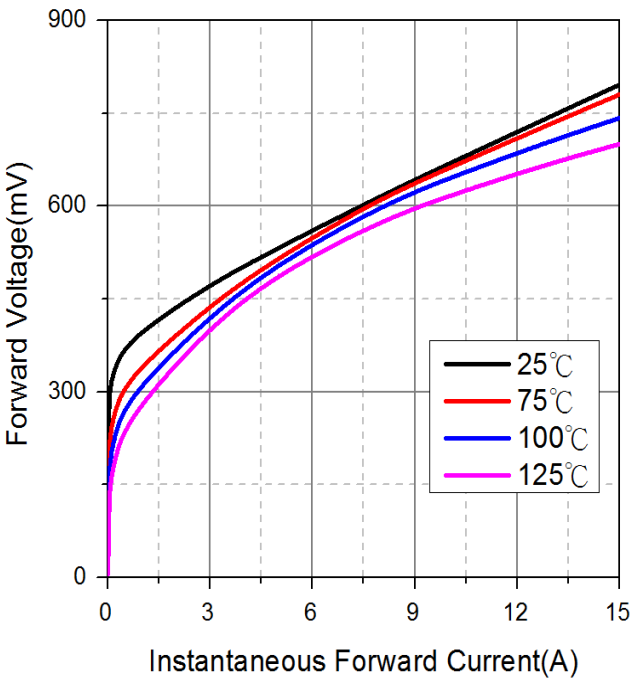
1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Pulse Test：Pulse Width = 300 μs, Duty Cycle ≦ 2.0%.

RATINGS AND CHARACTERISTIC CURVES

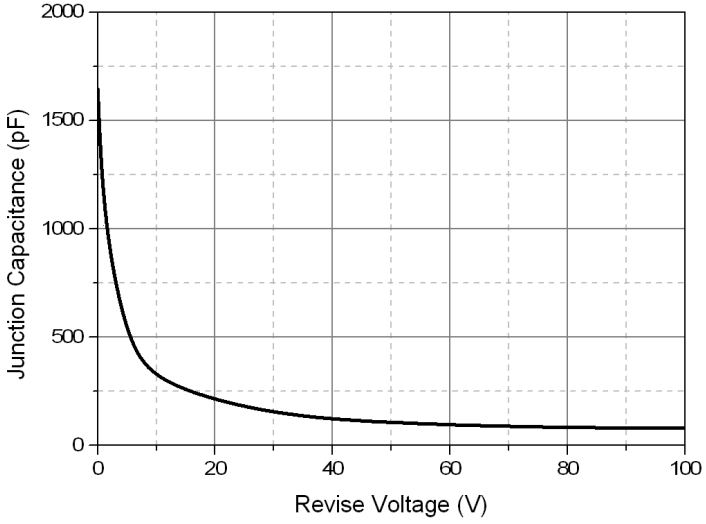
Typical Forward Current Derating Curve



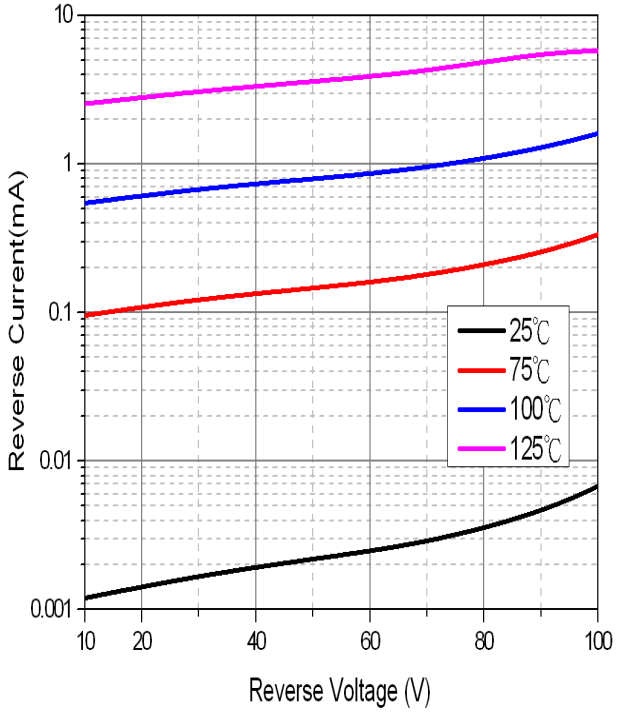
Typical Forward Characteristic



Typical Junction Capacitance (pF)



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current