Elektronische Bauelemente

SBL30U80

80V, 30A

Low VF Trench Barrier Schottky Rectifier

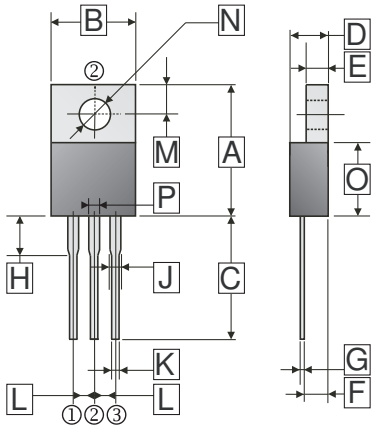
RoHS Compliant Product

A suffix of "-C" specifies halogen free

FEATURES

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

TO-220

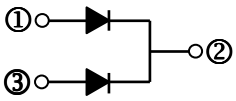


MECHANICAL DATA

- 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
SBL30U80	Lead (Pb)-free
SBL30U80-C	Lead (Pb)-free and Halogen-free



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			

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25℃ ambient temperature unless otherwise s pecified. 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}	80	V
Maximum RMS Voltage		V_{RMS}	56	V
Maximum DC Blocking Voltage		V_{DC}	80	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 Superimposed on rated load (JEDEC method)		I_{FSM}	200	A
Typical Thermal Resistance from Junction to Case		$R_{\theta JC}$	2	℃ /W
Operating and Storage Temperature Range		T_J, T_{STG}	150, -40~150	℃

ELECTRICAL CHARACTERISTICS

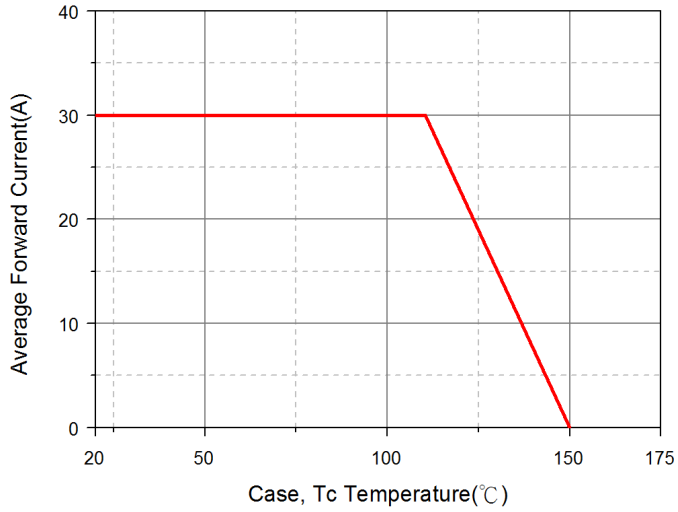
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Instantaneous Forward Voltage	V_F	0.42	-	V	I_F=3A, T_A=25℃
		0.53	-		I_F=10A, T_A=25℃
		0.6	0.65		I_F=15A, T_A=25℃
		0.59	-		I_F=15A, T_A=100℃
DC Reverse Current at Rated DC Blocking Voltage [1]	I_R	-	0.2	mA	T_A=25℃
		-	10		T_A=100℃
Junction Capacitance [2]	C_J	950	-	pF	

Notes:

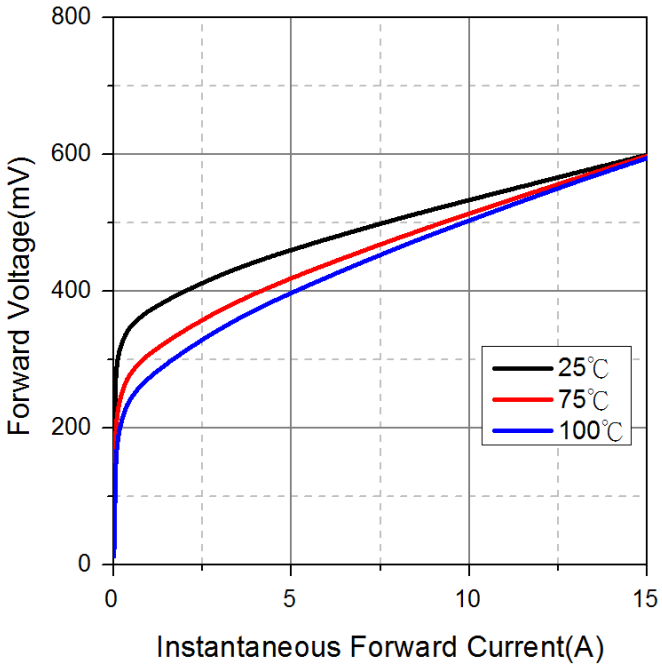
1. Pulse Test：Pulse Width=300μs, Duty Cycle≦2.0%.
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

CHARACTERISTIC CURVES

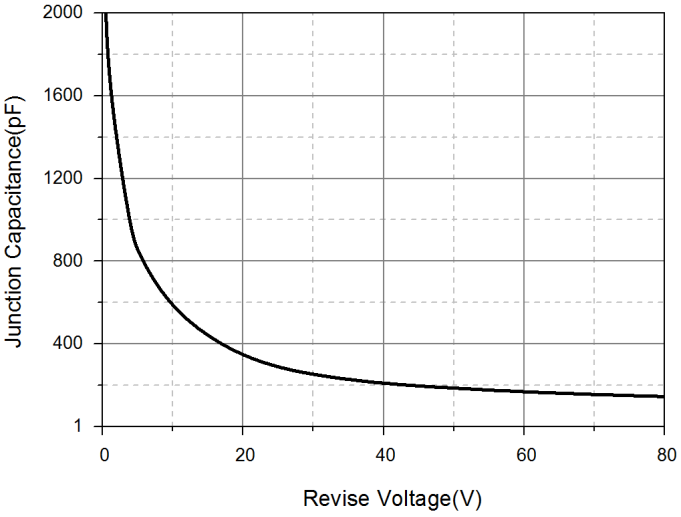
Typical Forward Current Derating Curve



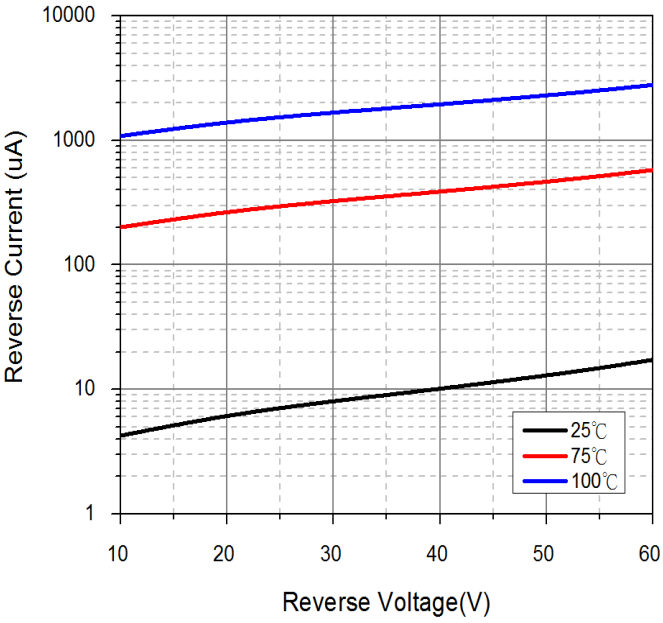
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current