Elektronische Bauelemente

SBL30U120D

30A, 120V

Low VF Trench Barrier Schottky Rectifier

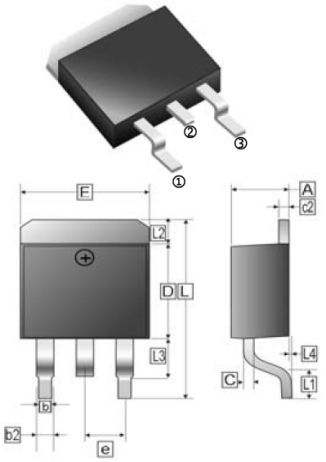
RoHS Compliant Product

A suffix of "-C" specifies halogen free

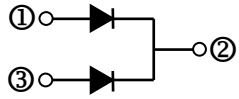
FEATURES

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

TO-263



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.00	4.87	c2	1.07	1.65
b	0.51	1.01	b2	1.34 REF	
L4	0.00	0.30	D	8.0	9.65
C	0.30	0.74	e	2.54 REF	
L3	1.50 REF		L	14.6	16.1
L1	2.5 REF		L2	1.27 REF	
E	9.60	10.67			



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
SBL30U120D	Lead (Pb)-free
SBL30U120D-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Rating 25℃ 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}	120	V
Working Peak Reverse Voltage		V_{RSM}	120	V
Maximum DC Blocking Voltage		V_{DC}	120	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}	200	A
Voltage Rate of Chance (Rated V_R)		dv/dt	10000	V / μs
Typical Thermal Resistance from Junction to Case		$R_{\theta JC}$	3	℃ /W
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-40~150	℃

ELECTRICAL CHARACTERISTICS

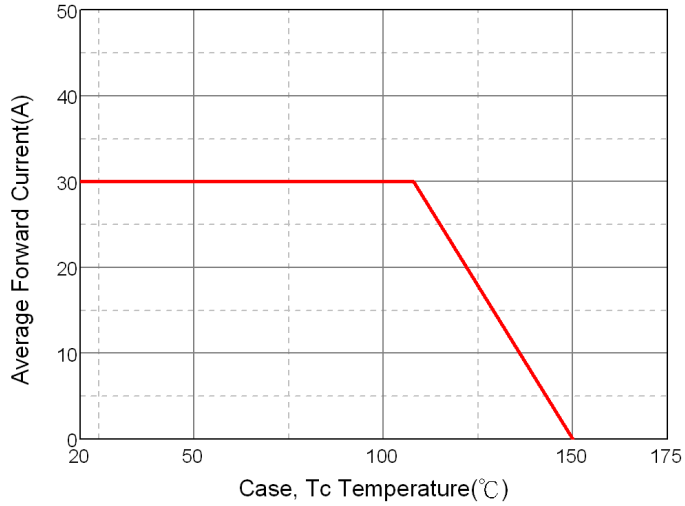
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.49	0.52	V	I_F=3A, T_J=25℃
		0.55	0.58		I_F=5A, T_J=25℃
		0.8	0.9		I_F=15A, T_J=25℃
		0.65	-		I_F=15A, T_J=125℃
Maximum DC Reverse Current at Rated DC Blocking Voltage [2]	I_R	-	0.1	mA	T_J=25℃
		-	20		T_J=100℃
Typical Junction Capacitance [1]	C_J	470	-	pF	

Notes:

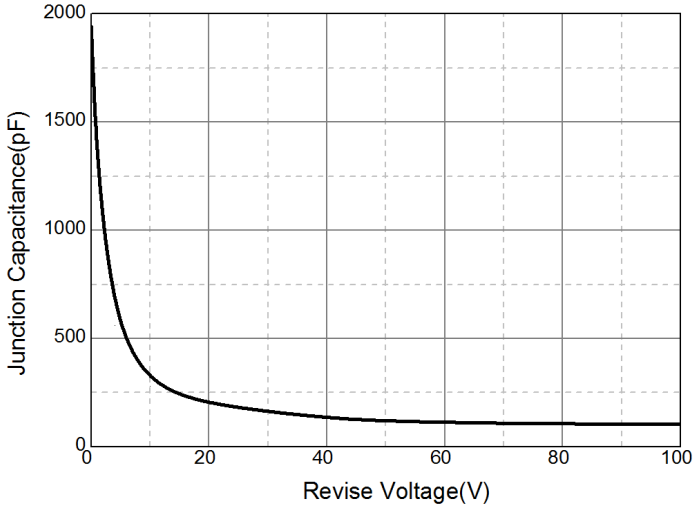
1. Measured at 1MHz and applied with 5.0V D.C reverse voltage.
2. Pulse Test: Pulse Width=300μs, duty cycle≦2.0%.

RATINGS AND CHARACTERISTIC CURVES

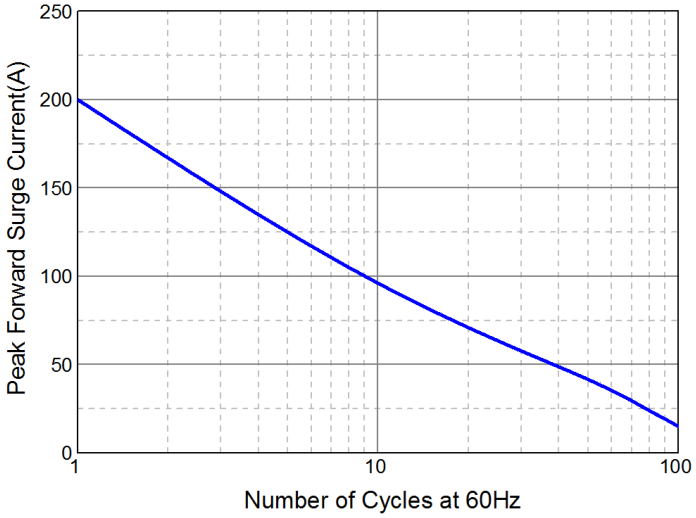
Typical Forward Current Derating Curve



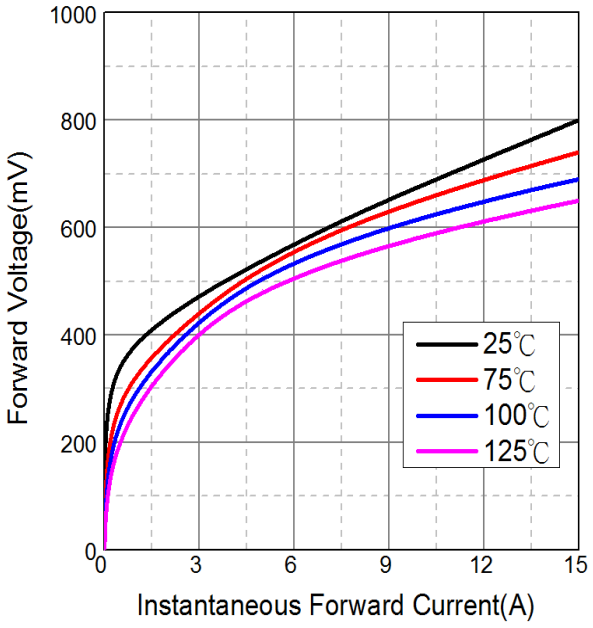
Typical Junction Capacitance



Maximum Non-Repetitive Forward Surge Current



Typical Forward Characteristic



Typical Reverse Characteristic