Elektronische Bauelemente

SBL20A100DS1

Voltage 100V 20.0 Amp

Low VF Trench Barrier Schottky Rectifier

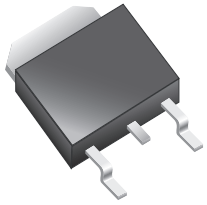
RoHS Compliant Product

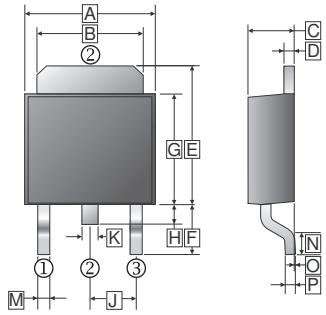
A suffix of "-C" specifies halogen free

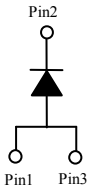
FEATURES

- Trench Barrier Schottky technology
- Low forward voltage drop, low power losses.
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

TO-252







REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.3	6.9	J	2.3 REF.	
B	4.95	5.53	K	0.89 REF.	
C	2.1	2.5	M	0.45	1.14
D	0.4	0.9	N	1.55 Typ.	
E	6	7.7	O	0	0.15
F	2.90 REF		P	0.58 REF.	
G	5.4	6.4			
H	0.6	1.2			

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

ORDER INFORMATION

Part Number	Type
SBL20A100DS1	Lead (Pb)-free
SBL20A100DS1-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	I_F	20	A
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 [1]	$R_{\theta JC}$	6	°C /W
Operating and Storage Temperature Range	T_J,T_{STG}	-40~150	°C

ELECTRICAL CHARACTERISTICS

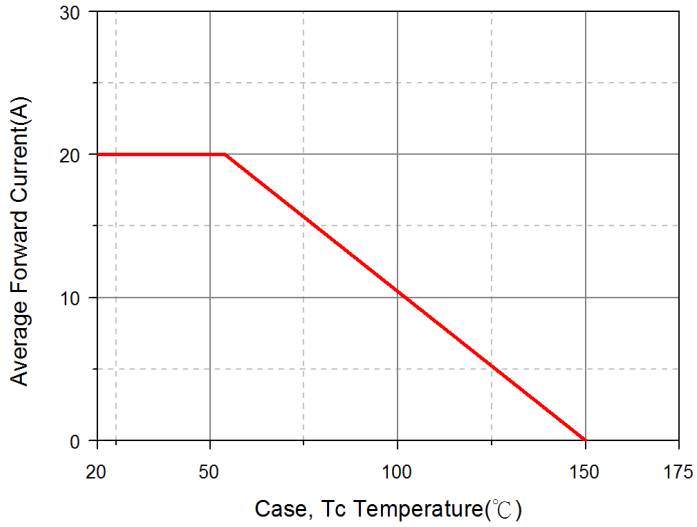
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.45	-	V	I_F=3A, T_J=25°C
		0.5	-		I_F=5A, T_J=25°C
		0.61	-		I_F=10A, T_J=25°C
		0.8	0.84		I_F=20A, T_J=25°C
		0.72	-		I_F=20A, T_J=125°C
Maximum DC Reverse Current at Rated DC Blocking Voltage [3]	I_R	-	0.15	mA	T_J=25°C
		-	10		T_J=100°C
Typical Junction Capacitance [2]	C_J	630	-	pF	

Notes:

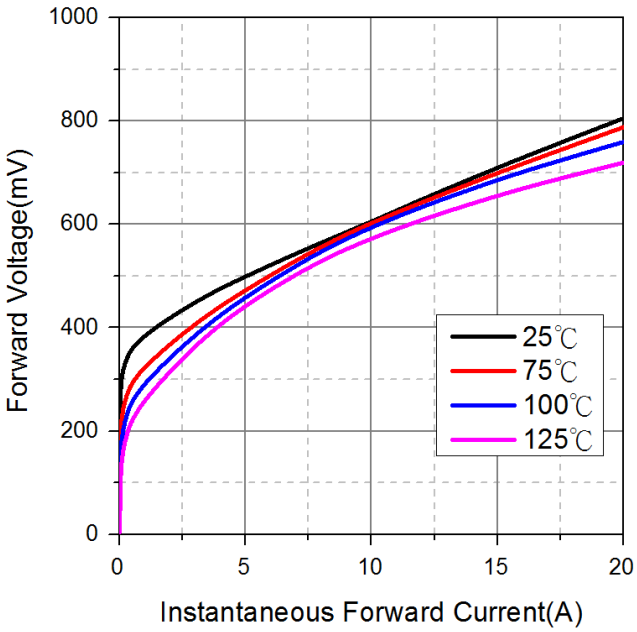
1. Surface mounted on 2.5cm x 2.5cm x 0.5mm copper pad area.
2. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
3. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≦ 2.0%.

RATINGS AND CHARACTERISTIC CURVES

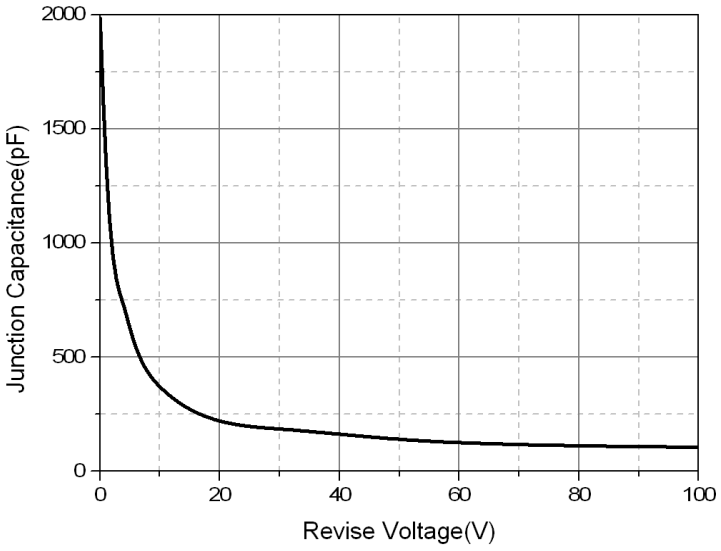
Typical Forward Current Derating Curve



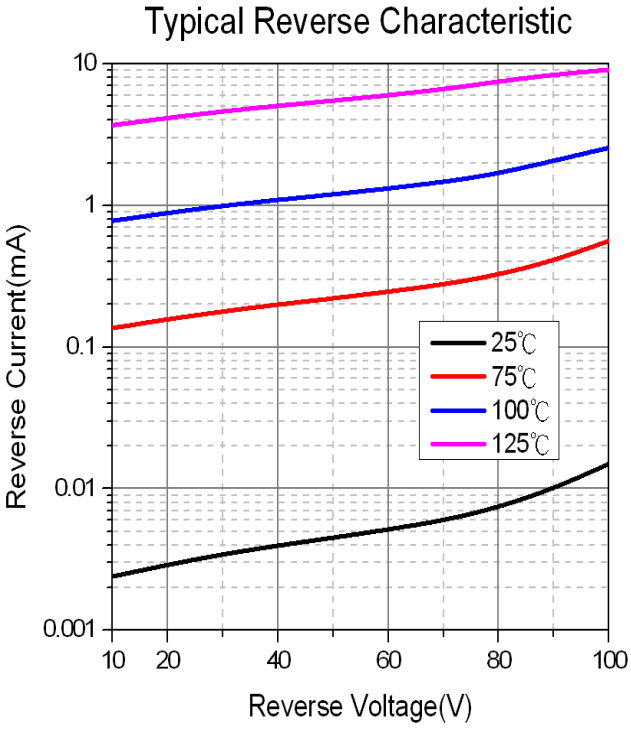
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current