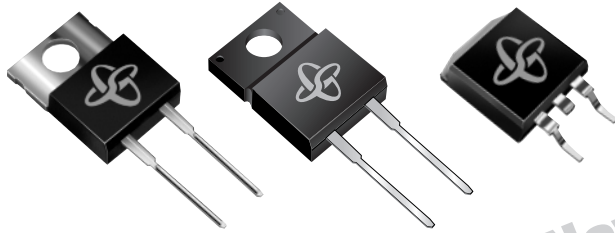


SBL20L15, SBLF20L15 SBLB20L15

Low V_F Schottky OR-ing Rectifier

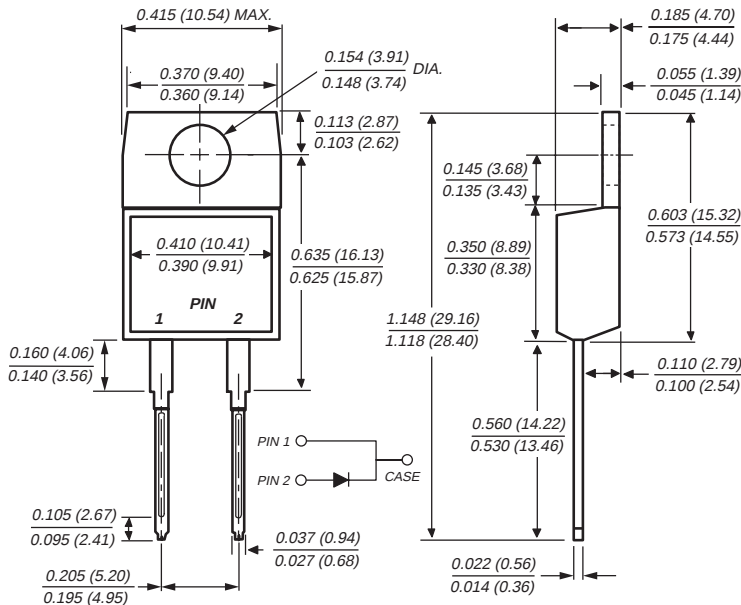
Reverse Voltage 15V

Forward Current 20A

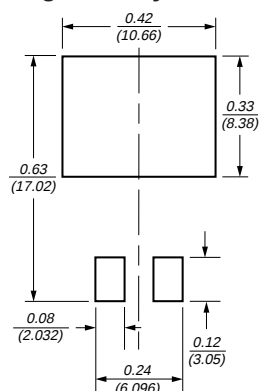


New Product

TO-220AC (SBL20L15)

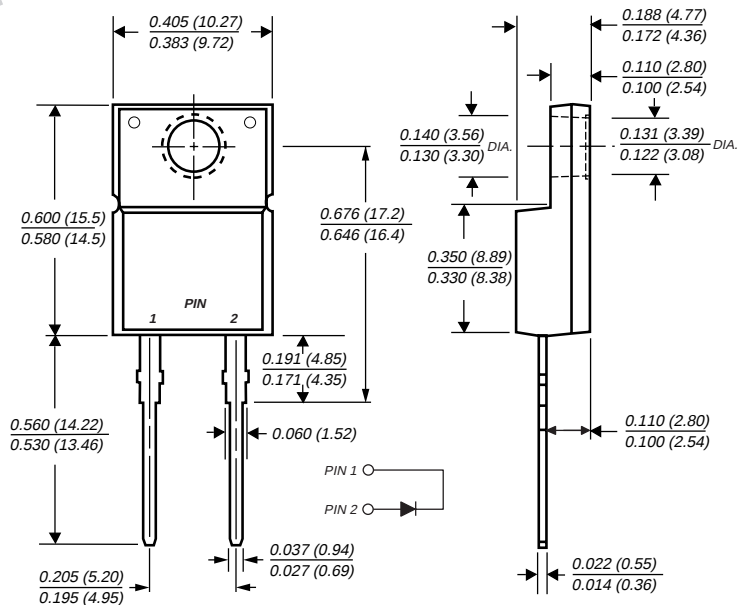


Mounting Pad Layout TO-263AB

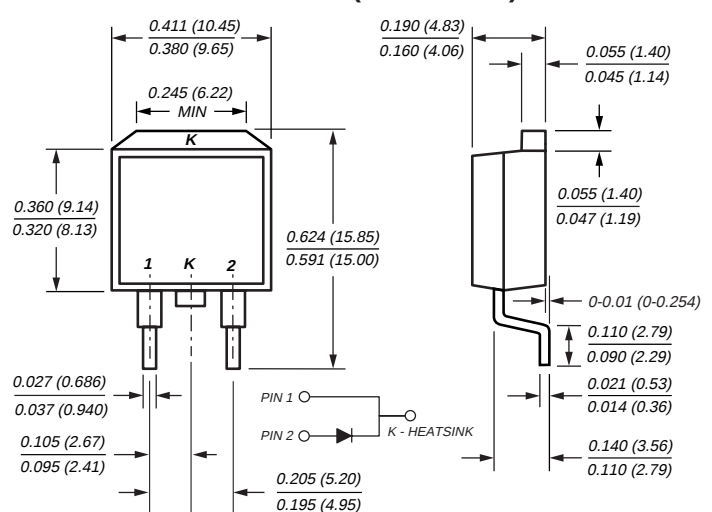


Dimensions in inches and (millimeters)

ITO-220AC (SBLF20L15)



TO-263AB (SBLB20L15)



Mechanical Data

Case: JEDEC TO-220AC, ITO-220AC & TO-263AB molded plastic body

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in-lbs maximum

Weight: 0.08 ounce, 2.24 grams

Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Optimized for OR-ing applications

SBL20L15, SBLF20L15 SBLB20L15

Low V_F Schottky OR-ing Rectifier

Maximum Ratings ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	15	V
Working peak reverse voltage	V_{RWM}	15	V
Maximum DC blocking voltage	V_{DC}	15	V
Maximum average forward rectified current at $T_C = 115^\circ\text{C}$	$I_{F(AV)}$	20	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	340	A
Peak repetitive reverse current per leg at $t_p = 2\mu\text{s}$, 1KHz	I_{RRM}	2.0	A
Voltage rate of change (rated V_R)	dv/dt	10,000	V/ μs
Maximum Operating Junction temperature	T_J	125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150	$^\circ\text{C}$
RMS Isolation voltage (SBLF type only) from terminals to heatsink with $t = 1$ second, $RH \leq 30\%$	V_{ISOL}	4500 ⁽¹⁾ 3500 ⁽²⁾ 1500 ⁽³⁾	V

Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage ⁽⁴⁾ at $I_F = 19\text{A}$, $T_J = 25^\circ\text{C}$ at $I_F = 19\text{A}$, $T_J = 125^\circ\text{C}$ at $I_F = 40\text{A}$, $T_J = 25^\circ\text{C}$ at $I_F = 40\text{A}$, $T_J = 125^\circ\text{C}$	V_F	0.41 0.33 0.52 0.50	V
Maximum reverse current at working peak reverse voltage ⁽⁴⁾	I_R	6.0 500	mA mA

Thermal Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SBL	SBLF	SBLB	Unit
Typical thermal resistance, junction to case	$R_{\theta JC}$	1.6	4.0	1.6	$^\circ\text{C/W}$

Notes:

- (1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
(2) Clip mounting (on case), where leads do overlap heatsink
(3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")
(4) Pulse test: 300 μs pulse width, 1% duty cycle

Ordering Information

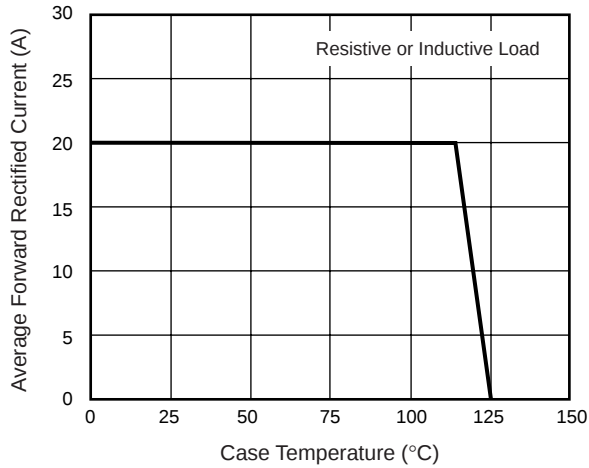
Product	Case	Package Code	Package Option
SBL20L15	TO-220AC	45	Anti-static tube, 50/tube, 2K/carton
SBLF20L15	ITO-220AC	45	Anti-static tube, 50/tube, 2K/carton
SBLB20L15	TO-263AB	31	13" reel, 800/reel, 4.8K/carton
		45	Anti-static tube, 50/tube, 2K/carton
		81	Anti-static 13" reel, 800/reel, 4.8K/carton

SBL20L15, SBLF20L15 SBLB20L15

Low V_F Schottky OR-ing Rectifier

Ratings and Characteristic Curves

**Fig. 1 – Forward Current
Derating Curve**



**Fig. 2 - Typical Instantaneous
Forward Characteristics**

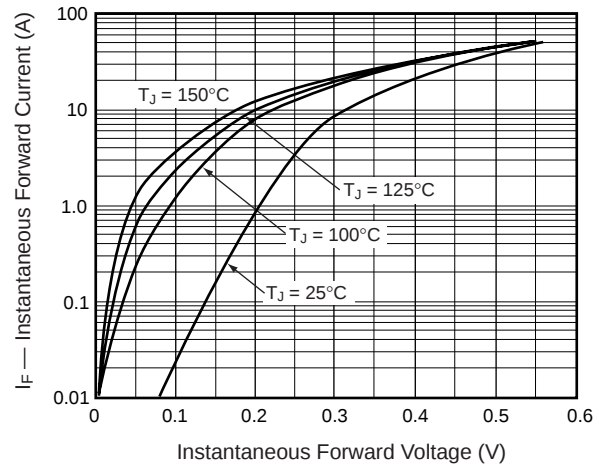


Fig. 3 - Typical Reverse Characteristics

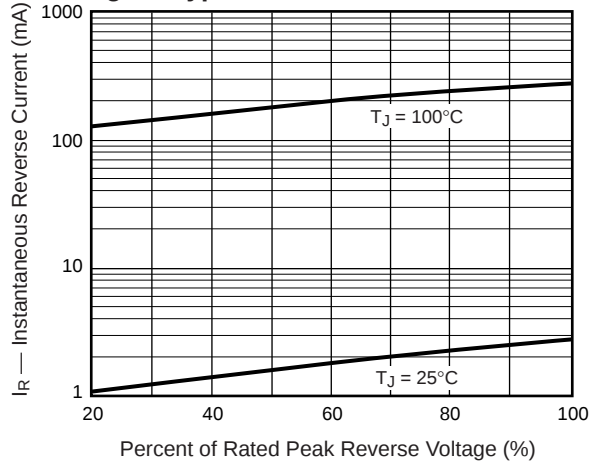
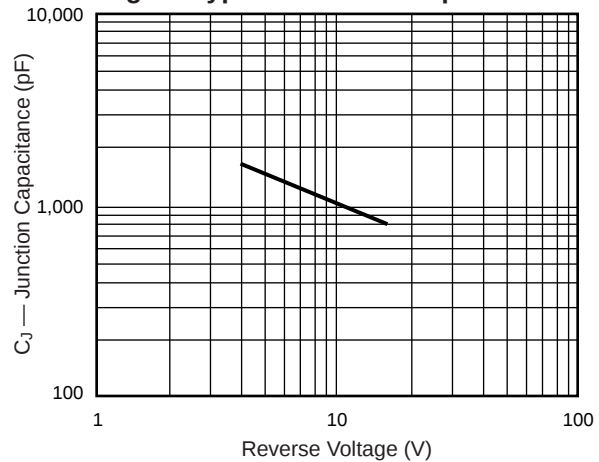


Fig. 4 - Typical Junction Capacitance



**Fig. 5 - Typical Transient
Thermal Impedance**

