

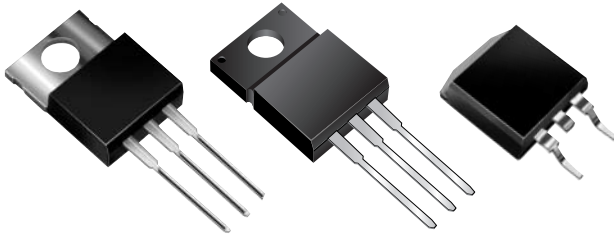


SBL10xxCT, SBLF10xxCT & SBLB10xxCT Series

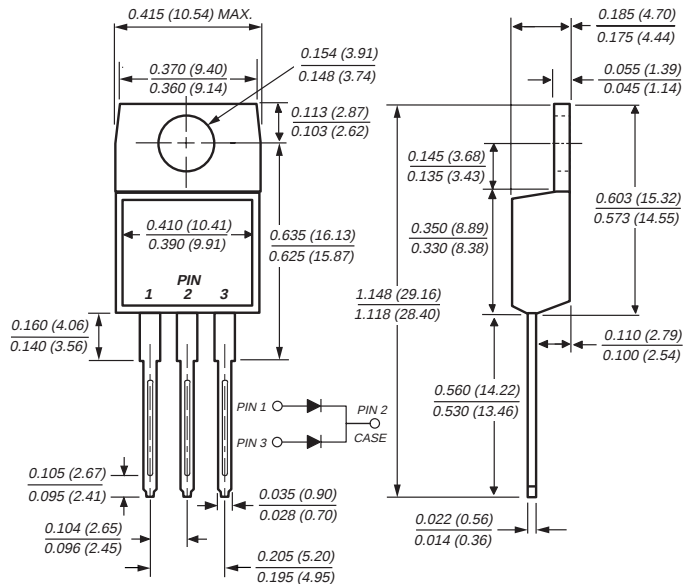
Vishay Semiconductors
formerly General Semiconductor

Dual Schottky Rectifier

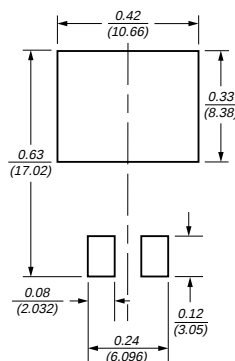
Reverse Voltage 30 and 40V
Forward Current 10A



TO-220AB (SBL10xxCT)

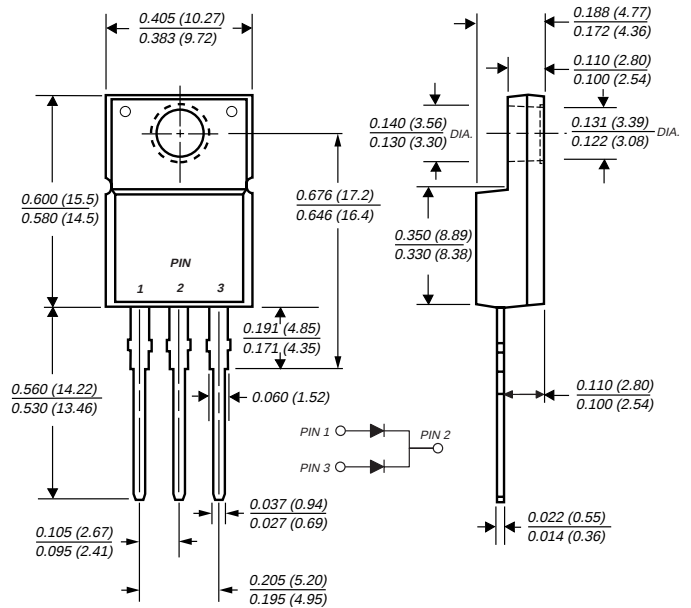


Mounting Pad Layout TO-263AB

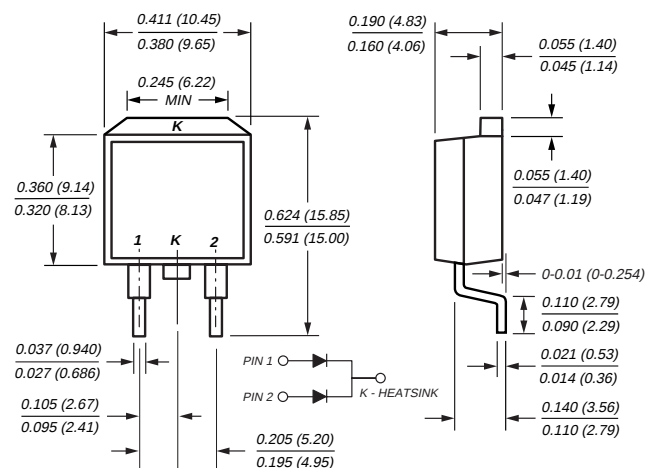


Dimensions in inches
and (millimeters)

ITO-220AB (SBLF10xxCT)



TO-263AB (SBLB10xxCT)



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- 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

Mechanical Data

Case: JEDEC TO-220AB, ITO-220AB & 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 oz., 2.24 g

SBL10xxCT, SBLF10xxCT & SBLB10xxCT Series

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Maximum Ratings (T_C = 25°C unless otherwise noted)

Parameter	Symbol	SBL1030CT	SBL1040CT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	30	40	V
Working peak reverse voltage	V _{RWM}	21	28	V
Maximum DC blocking voltage	V _{DC}	30	40	V
Maximum average forward rectified current at T _C = 107°C <i>Total device per leg</i>	I _{F(AV)}	10 5.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I _{FSM}	175		A
Operating junction and storage temperature range	T _J , T _{STG}	-40 to +125		°C
RMS Isolation voltage (SBLF) from terminals to heatsink with t = 1 second, RH ≤ 30%	V _{ISOL}	4500 ⁽¹⁾ 3500 ⁽²⁾ 1500 ⁽³⁾		V

Electrical Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage at 5.0A ⁽⁴⁾	V _F	0.55	V
Maximum instantaneous reverse current per leg at rated DC blocking voltage ⁽⁴⁾ T _C = 25°C T _C = 100°C	I _R	0.5 50	mA

Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	SBL	SBLF	SBLB	Unit
Typical thermal resistance per leg	R _{θJC}	3.0	5.0	3.0	°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: 300μs pulse width, 1% duty cycle

Ordering Information

Product	Case	Package Code	Package Option
SBL10xxCT	TO-220AB	45	Anti-Static tube, 50/tube, 2K/carton
SBLF10xxCT	ITO-220AB	45	Anti-Static tube, 50/tube, 2K/carton
SBLB10xxCT	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



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

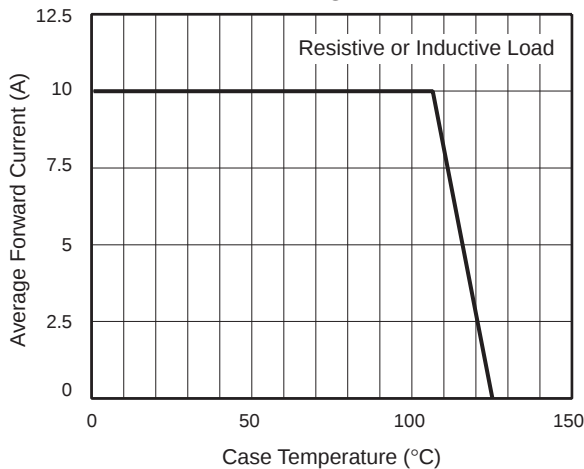


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

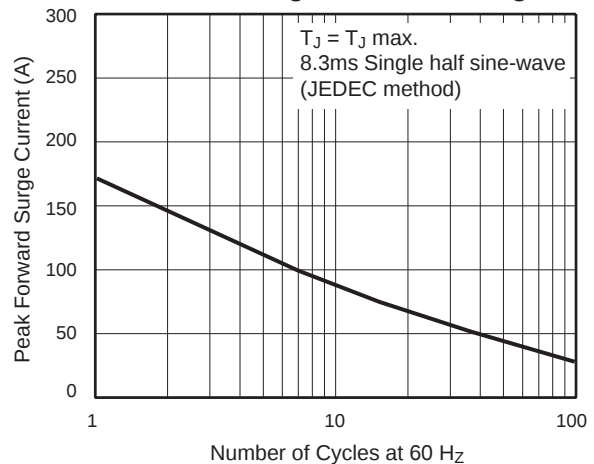


Fig. 3 - Typical Instantaneous Forward Characteristics Per Leg

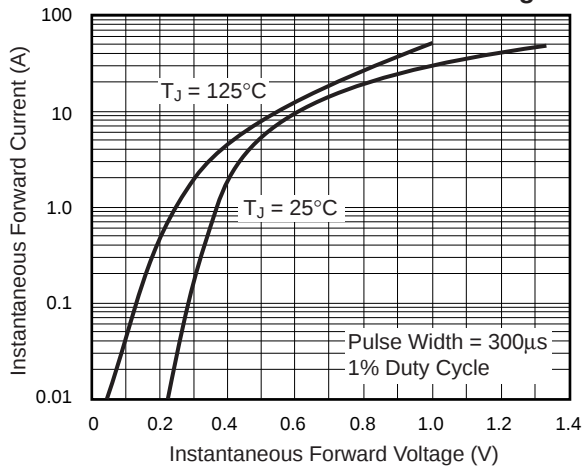


Fig. 4 - Typical Reverse Characteristics Per Leg

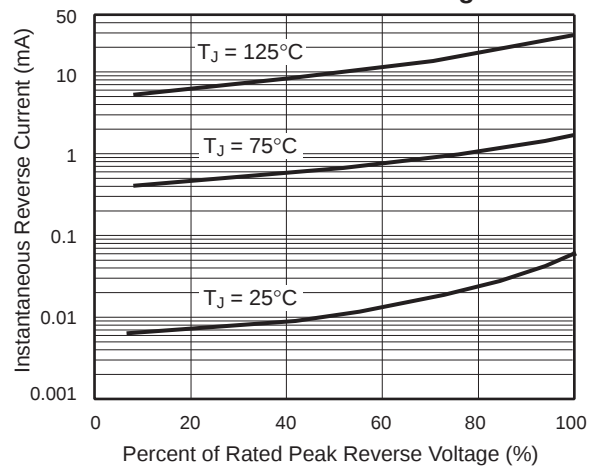


Fig. 5 - Typical Junction Capacitance Per Leg

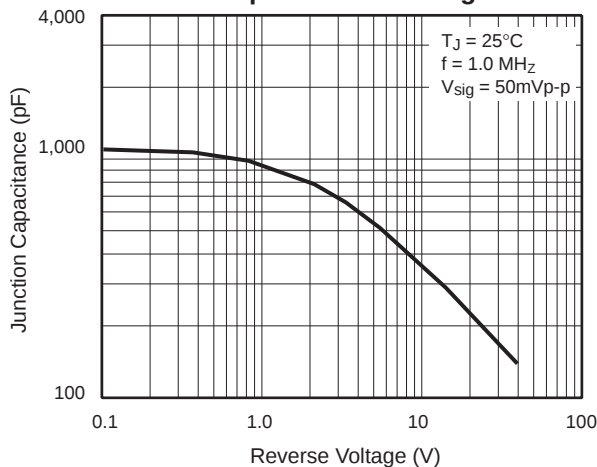


Fig. 6 - Typical Transient Thermal Impedance Per Leg

