

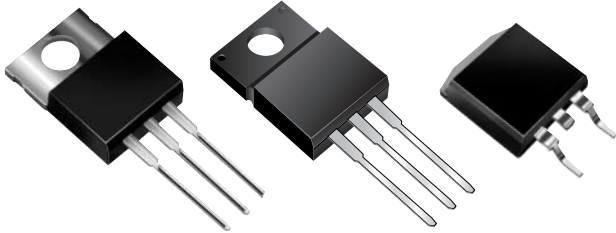


SBL25LxxCT, SBLF25LxxCT & SBLB25LxxCT Series

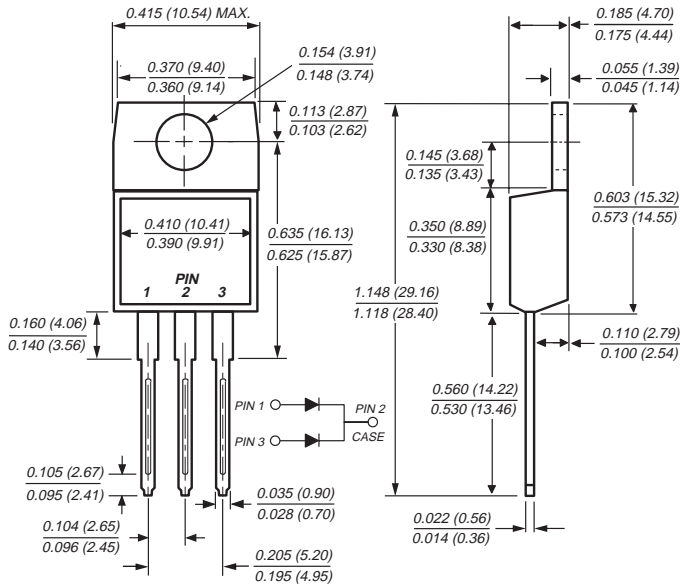
Vishay Semiconductors
formerly General Semiconductor

Dual Low V_F Schottky Rectifier

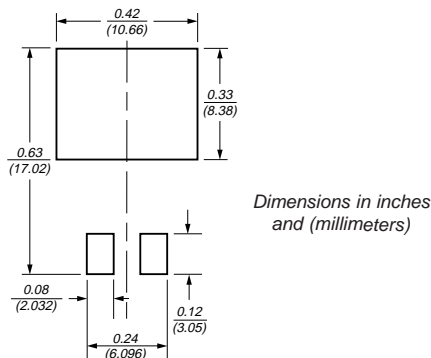
Reverse Voltage 20 to 30V
Forward Current 25A



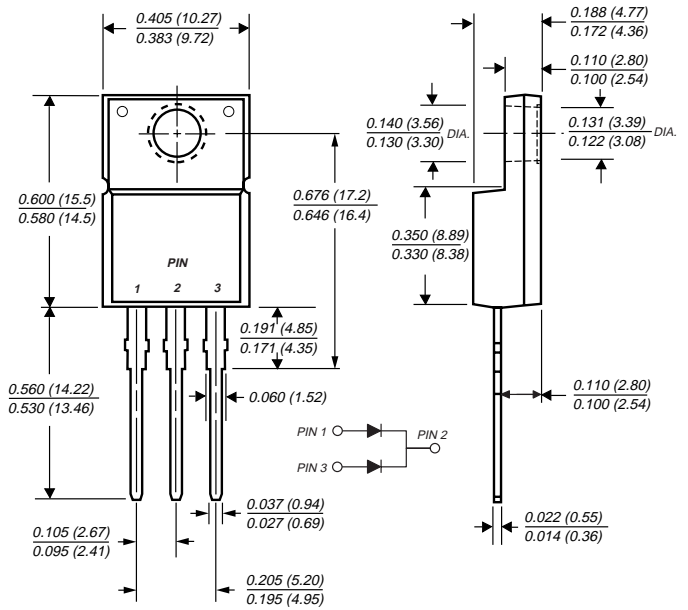
TO-220AB (SBL25LxxCT)



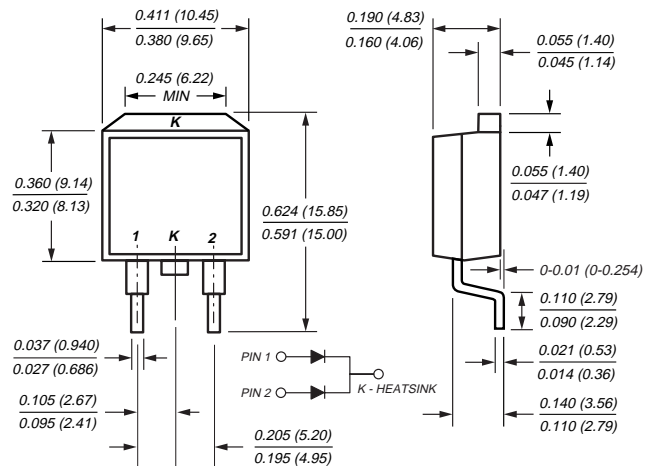
Mounting Pad Layout TO-263AB



ITO-220AB (SBLF25LxxCT)



TO-263AB (SBLB25LxxCT)



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

Mechanical Data

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

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

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in-lbs maximum

Weight: 0.08 oz., 2.24 g

SBL25LxxCT, SBLF25LxxCT & SBLB25LxxCT Series



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

Parameter	Symbol	SBL25L20CT	SBL25L25CT	SBL25L30CT	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	25	30	V
Working peak reverse voltage	V _{RWM}	14	17	21	V
Maximum DC blocking voltage	V _{DC}	20	25	30	V
Maximum average forward rectified current <i>Total device per leg</i> at T _C = 95°C	I _{F(AV)}	25 12.5			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I _{FSM}	180			A
Operating junction and storage temperature range	T _J , T _{STG}	-40 to +125			°C
RMS Isolation voltage (SBLF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V _{ISOL}	4500 (NOTE 1) 3500 (NOTE 2) 1500 (NOTE 3)			V

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

Parameter	Symbol	Value	Unit
Maximum instantaneous forward voltage per leg at 12.5A (NOTE 4)	V _F	T _C = 125°C 0.39	V
		T _C = 25°C 0.49	
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 4)	I _R	T _C = 25°C 0.90	mA
		T _C = 100°C 50	
		T _C = 125°C 100	

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

Parameter	Symbol	SBL	SBLF	SBLB	Unit
Typical thermal resistance from junction to case per leg	R _{θJC}	1.5	4.0	1.5	°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



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

Fig. 1 - Forward Current Derating Curve

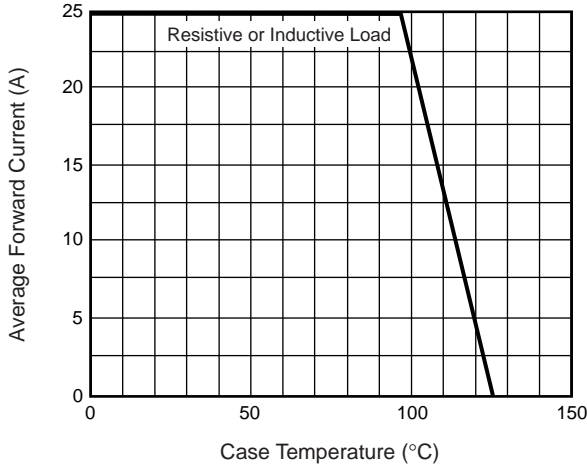


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

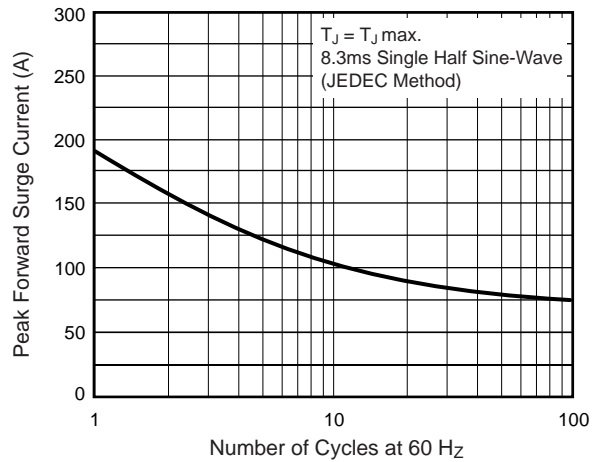


Fig. 3 - Typical Instantaneous Forward Characteristics Per Leg

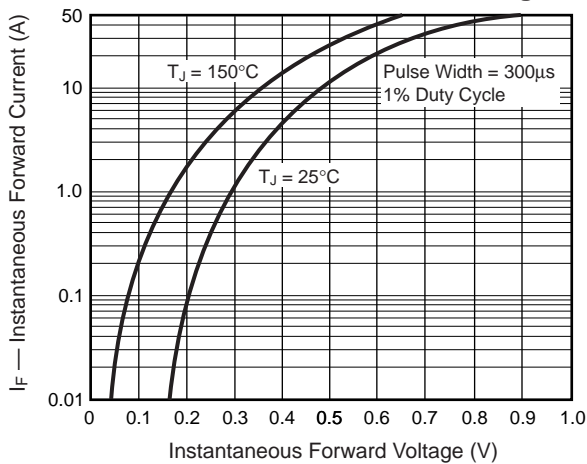


Fig. 4 - Typical Reverse Characteristics Per Leg

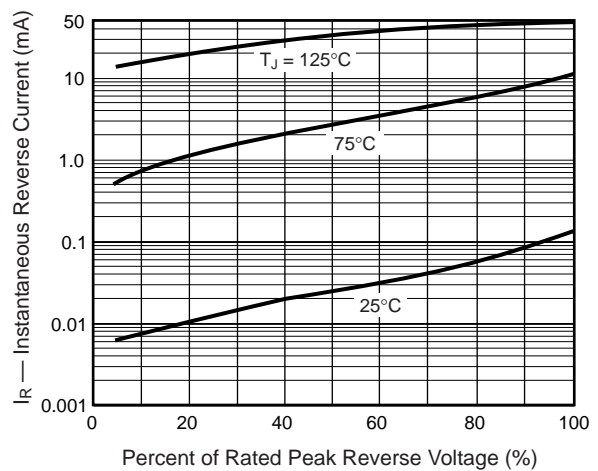


Fig. 5 - Typical Junction Capacitance Per Leg

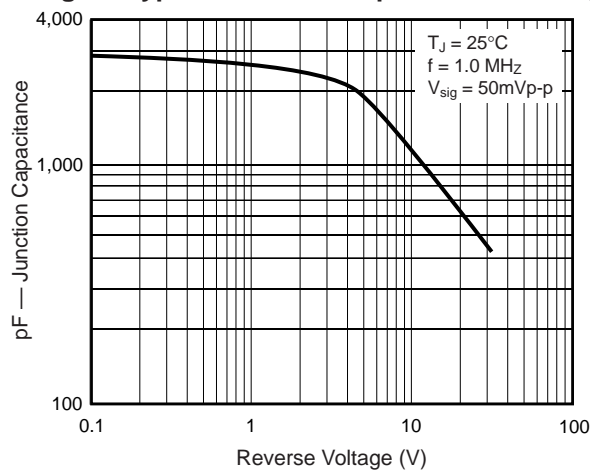


Fig. 6 - Typical Transient Thermal Impedance Per Leg

