



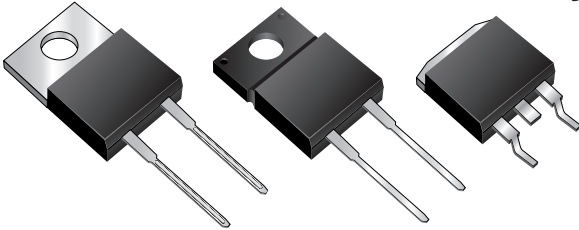
SBL8L40, SBLF8L40 & SBLB8L40

New Product

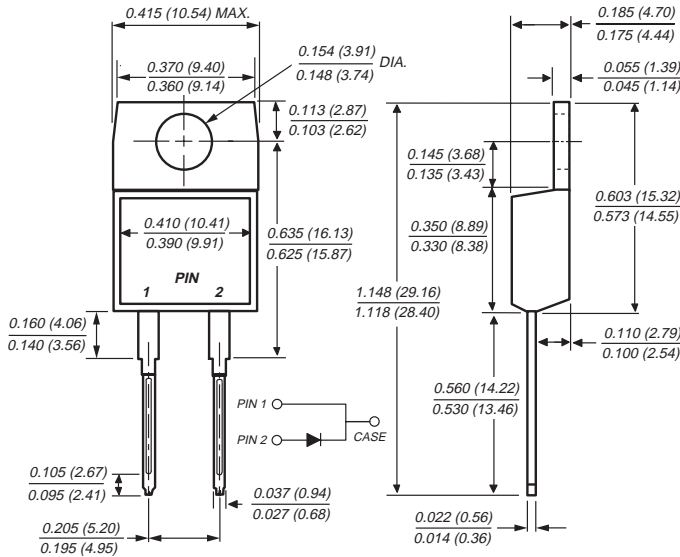
Vishay Semiconductors
formerly General Semiconductor

Schottky Barrier Rectifiers

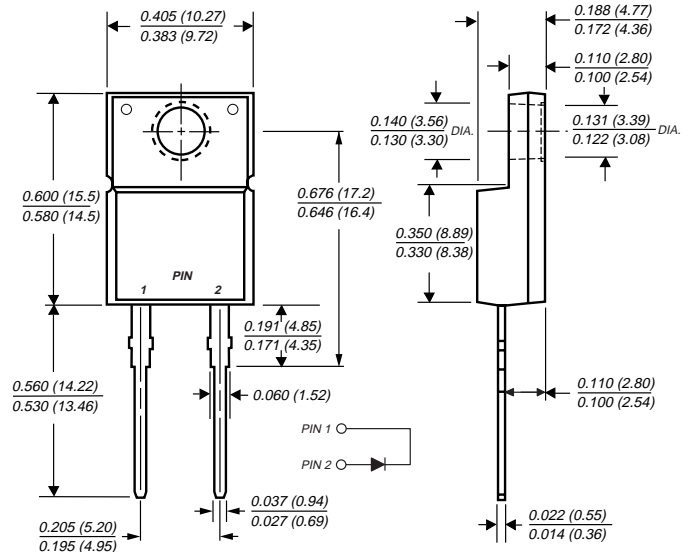
Reverse Voltage 40V
Forward Current 8A



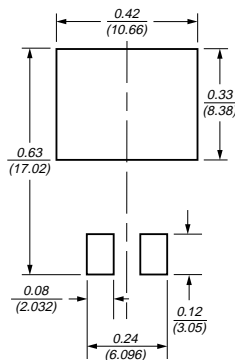
TO-220AC (SBL8L40)



ITO-220AC (SBLF8L40)

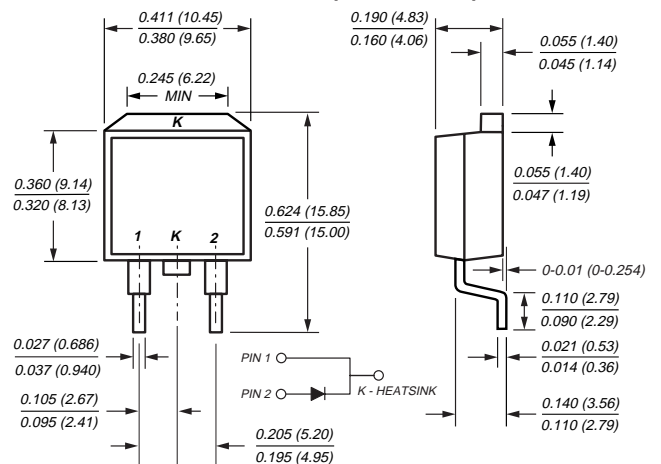


Mounting Pad Layout TO-263AB



Dimensions in inches and (millimeters)

TO-263AB (SBLB8L40)



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: 0.08oz., 2.24g

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

SBL8L40, SBLF8L40 & SBLB8L40



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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	40	V
Working peak reverse voltage	V _{RWM}	28	V
Maximum DC blocking voltage	V _{DC}	40	V
Maximum average forward rectified current (see fig. 1)	I _{F(AV)}	8	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I _{FSM}	250	A
Peak repetitive reverse current at t _p = 2μs, 1kHz	I _{RRM}	1.0	A
Voltage rate of change (rated V _R)	dv / dt	10,000	V / μs
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +125	°C
RMS Isolation voltage (SBLF type only) 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 ⁽⁴⁾ at I _F = 4A, T _J = 25°C at I _F = 4A, T _J = 125°C at I _F = 8A, T _J = 25°C at I _F = 8A, T _J = 125°C	V _F	0.44 0.35 0.50 0.41	V
Maximum instantaneous reverse current at DC blocking voltage ⁽⁴⁾ T _J = 25°C T _J = 100°C	I _R	1.0 75	mA

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}	3.2	4.0	3.2	°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, 2% duty cycle

Ordering Information

Product	Case	Package Code	Package Option
SBL8L40	TO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
SBLF8L40	ITO-220AC	45	Anti-Static tube, 50/tube, 2K/carton
SBLB8L40	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

Fig. 1 – Maximum Forward Current Derating Curve

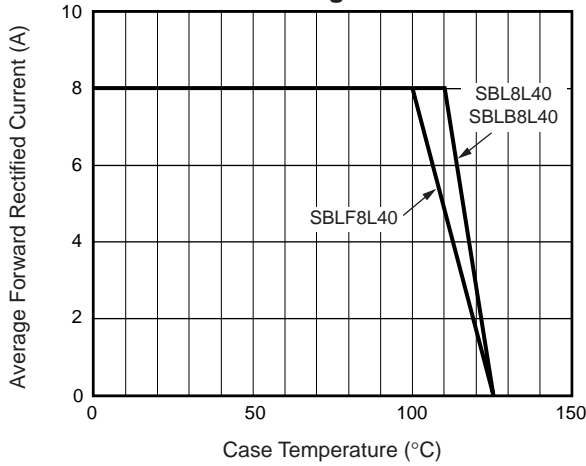


Fig. 2 – Typical Instantaneous Forward Characteristics

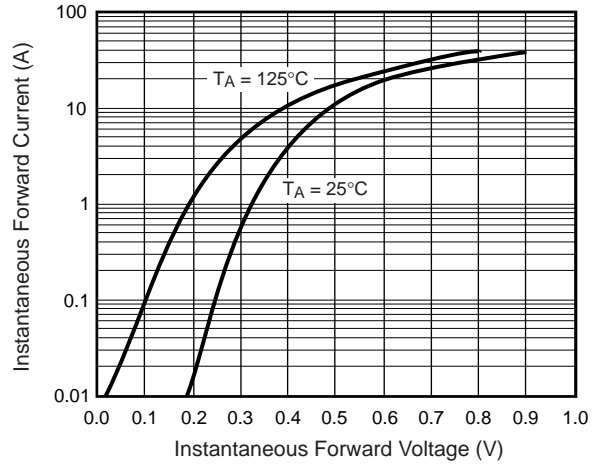


Fig. 3 – Typical Reverse Characteristics

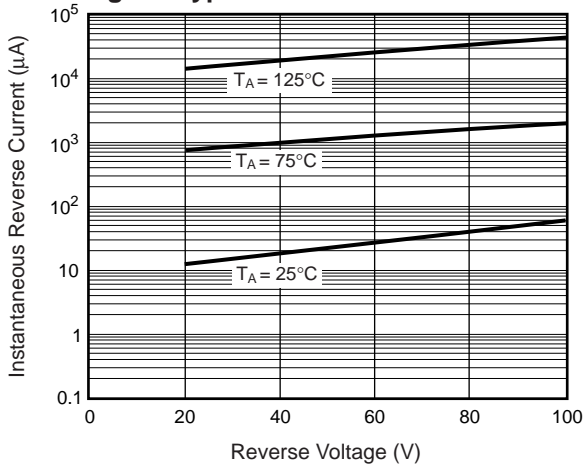


Fig. 4 – Typical Junction Capacitance

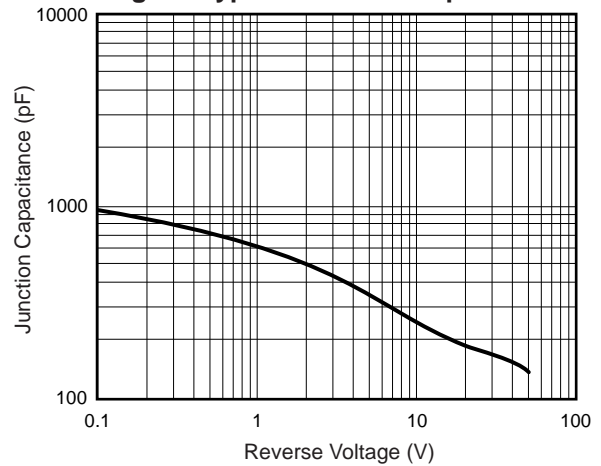
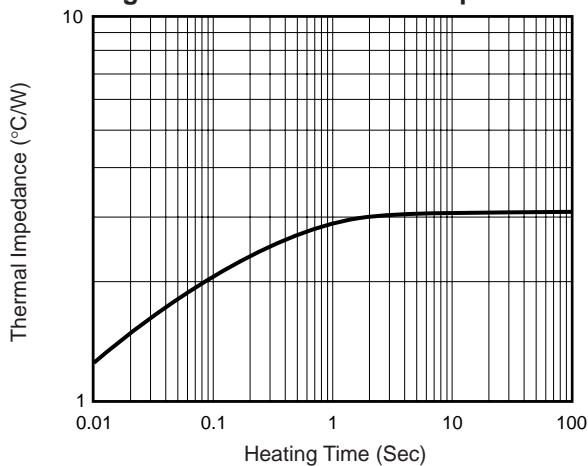


Fig. 5 – Transient Thermal Impedance





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