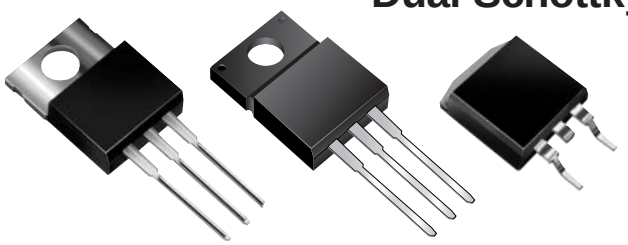
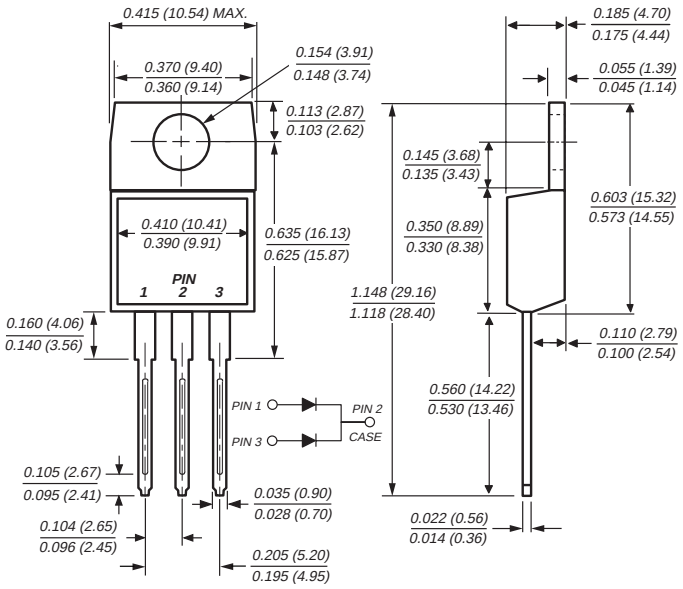
Dual Schottky Barrier Rectifier

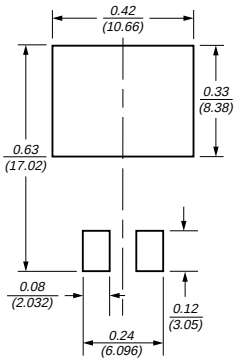
Reverse Voltage 30 and 40V
Forward Current 16A



TO-220AB (SBL16xxCT)

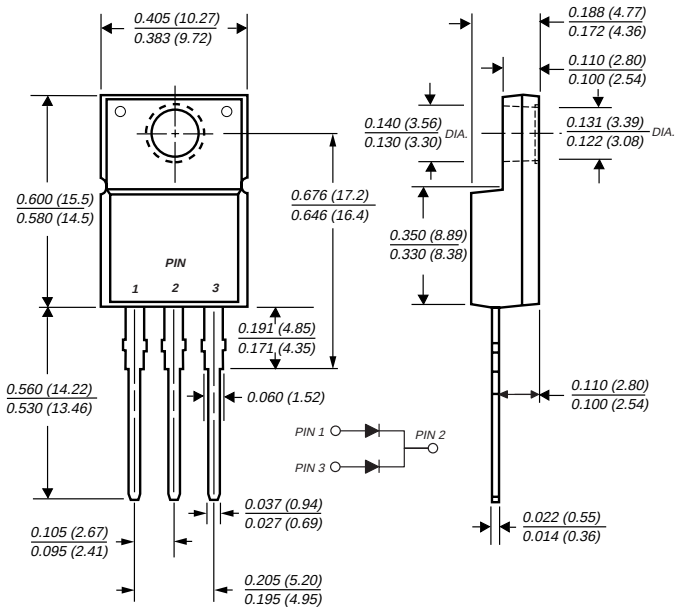


Mounting Pad Layout TO-263AB

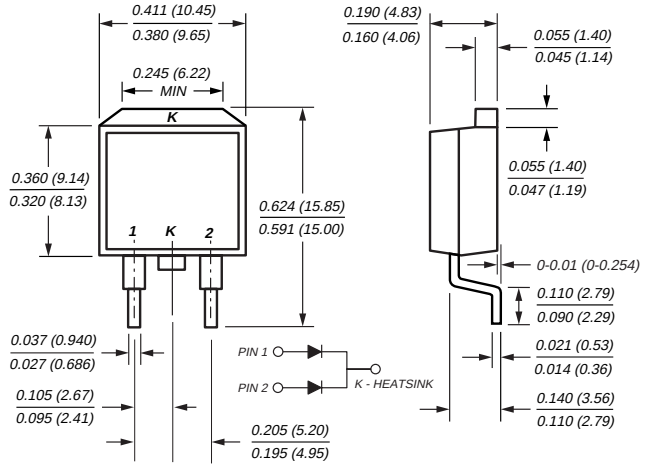


Dimensions in inches and (millimeters)

ITO-220AB (SBLF16xxCT)



TO-263AB (SBLB16xxCT)



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

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

Parameter	Symbol	SBL1630CT	SBL1640CT	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 *Total device* / at T_C = 95°C *Per leg*	$I_{F(AV)}$	16 8.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	I_{FSM}	250		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 8.0 A (Note 4)	V_F	0.55	V
Maximum instantaneous reverse current T_C = 25°C / at rated DC blocking voltage per leg (Note 4) T_C = 100°C	I_R	0.5 50	mA

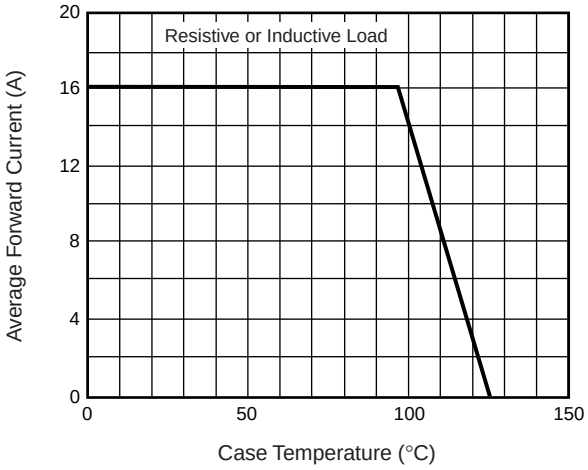
Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	MBR	MBRF	MBRB	Unit
Typical thermal resistance from junction to case per leg	$R_{\Theta JC}$	2.0	4.0	2.0	°C/W

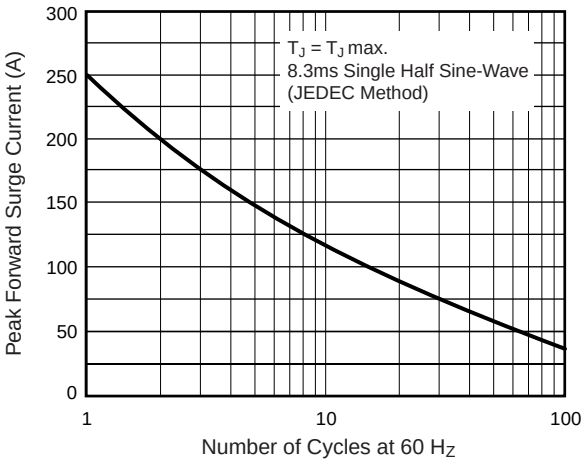
Notes:
(1) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
(2) Clip mounting (on case), where leads do overlap heatsink
(3) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19")
(4) Pulse test: 300µs pulse width, 1% duty cycle

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

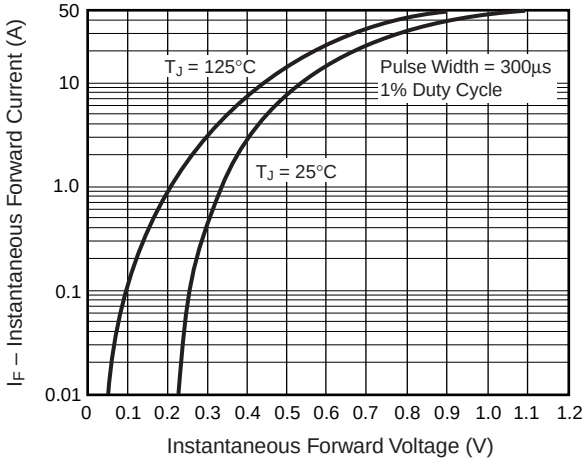
Forward Current Derating Curve



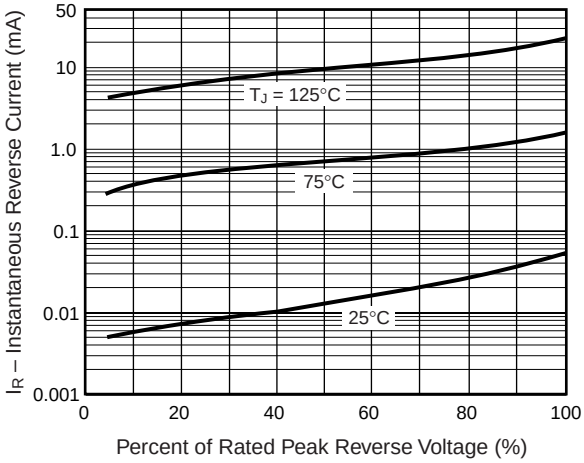
Maximum Non-Repetitive Peak Forward Surge Current Per Leg



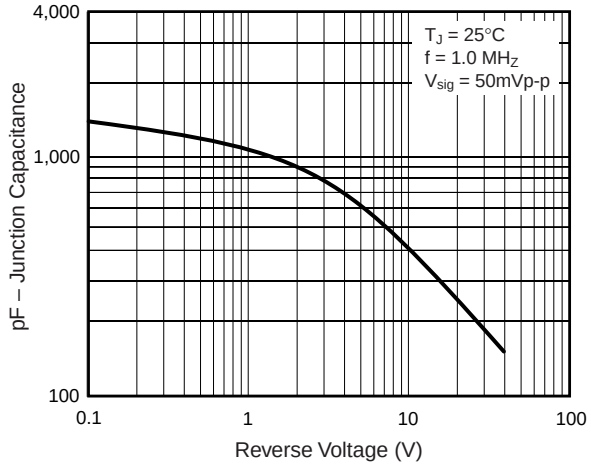
Typical Instantaneous Forward Characteristics Per Leg



Typical Reverse Characteristics Per Leg



Typical Junction Capacitance Per Leg



Typical Transient Thermal Impedance Per Leg

