

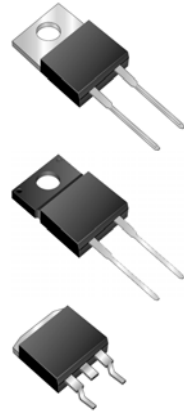


SBL10xx, SBLF10xx & SBLB10xx Series

Schottky Barrier Rectifiers
Reverse Voltage 30 to 40 Volts Forward Current 10.0 Amperes

Features

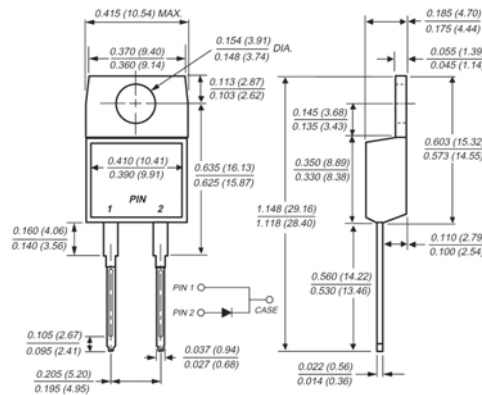
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Dual rectifier construction, positive center tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.25" (6.35mm) from case



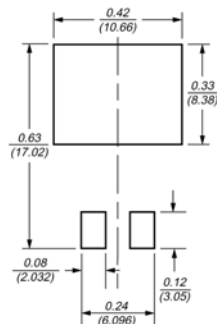
Mechanical Data

- ◆ Case: JEDEC TO-220AC, ITO-220AC & 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 ounce, 2.24 grams

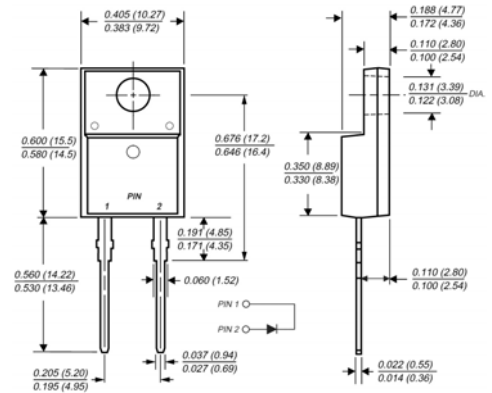
TO-220AC



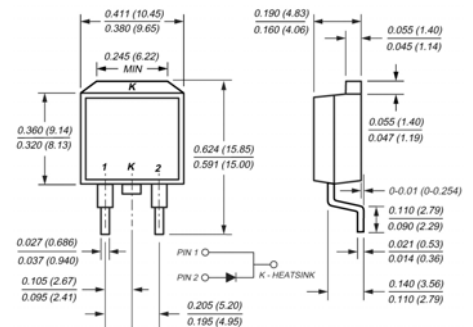
Mounting Pad Layout TO-263AB



ITO-220AC



TO-263AB(D²PAK)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

($T_c = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	SBL1030	SBL1040	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	30	40	Volts
Working peak reverse voltage	V_{RWM}	30	40	Volts
Maximum DC blocking voltage	V_{DC}	30	40	Volts
Maximum average forward rectified current (See Fig. 1)	$I_{F(AV)}$	10		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250		Amps
Maximum instantaneous forward voltage at 10A (Note 4)	V_F	0.60		Volts
Maximum instantaneous reverse current at DC blocking voltage (Note 4)	I_R	$T_c=25^\circ\text{C}$	1.0	mA
		$T_c=100^\circ\text{C}$	50.0	
Typical thermal resistance from junction to case	$R_{\theta JC}$	SBL 2.0 / SBLF 5.0 / SBLB 2.0		$^\circ\text{C/W}$
RMS Isolation voltage (SBLF type only) from terminals to heatsink with $t = 1.0$ second, $RH \leq 30\%$	V_{ISOL}	4500 (Note 1) 3500 (Note 2) 1500 (Note 3)		Volts
Operating junction temperature range	T_J	-55 to +125		$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150		$^\circ\text{C}$

- 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: 300us pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES

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

