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[Vishay Semiconductor/Diodes Division](#)  
[SBL2030PT-E3/45](#)

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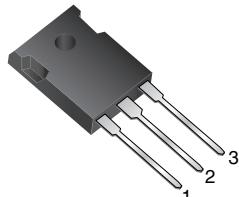


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## SBL2030PT, SBL2040PT

Vishay General Semiconductor

### Dual Common Cathode Schottky Rectifier



TO-247AD (TO-3P)



#### FEATURES

- Power pack
- Guardring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder dip 275 °C max., 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



RoHS  
COMPLIANT

#### TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters, or polarity protection application.

#### MECHANICAL DATA

**Case:** TO-247AD (TO-3P)

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102  
E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** As marked

**Mounting Torque:** 10 in-lbs maximum

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	20 A
$V_{RRM}$	30 V, 40 V
$I_{FSM}$	250 A
$V_F$	0.55 V
$T_J$ max.	125 °C
Package	TO-247AD (TO-3P)
Diode variations	Common cathode

#### MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	SBL2030PT	SBL2040PT	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	30	40	V
Maximum RMS voltage	$V_{RWM}$	21	28	V
Maximum DC blocking voltage	$V_{DC}$	30	40	V
Maximum average forward rectified current (fig. 1)	$I_{F(AV)}$		20	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$		250	A
Operating junction and storage temperature range	$T_J, T_{STG}$		- 40 to + 125	°C

#### ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS		SBL2030PT	SBL2040PT	UNIT
Maximum instantaneous forward voltage per diode	$V_F$ (1)	10 A		0.55		V
Maximum instantaneous reverse current at rated DC blocking voltage per diode	$I_R$ (1)		$T_C = 25$ °C	1.0		mA
			$T_C = 100$ °C	50		mA

**Note**

(1) Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle

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

PARAMETER	SYMBOL	SBL2030PT	SBL2040PT	UNIT
Thermal resistance, junction to case per diode	$R_{\text{JJC}}$		1.5	$^\circ\text{C/W}$

### ORDERING INFORMATION (Example)

PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-247AD	SBL2030PT-E3/45	6.13	45	30/tube	Tube

### RATINGS AND CHARACTERISTICS CURVES ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

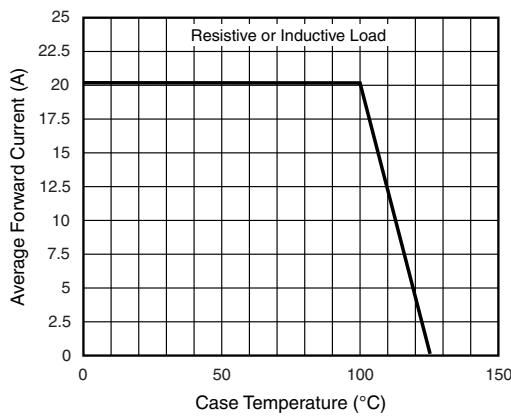


Fig. 1 - Forward Current Derating Curve

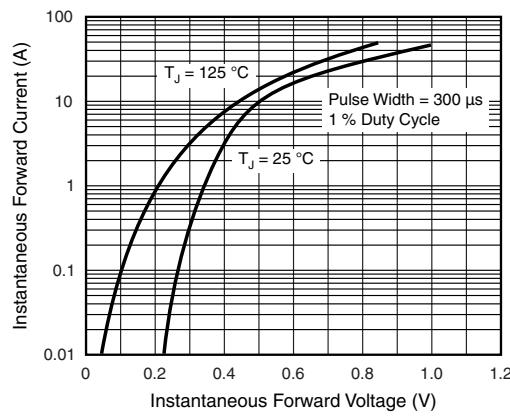


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

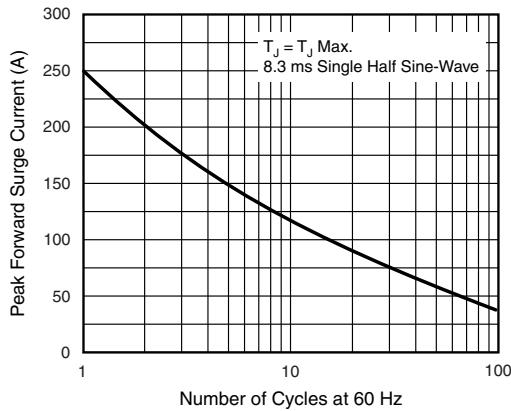


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

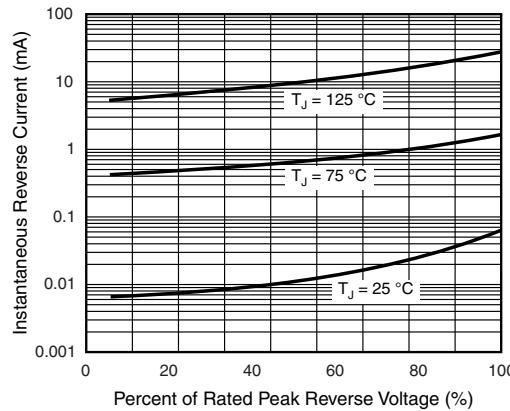


Fig. 4 - Typical Reverse Characteristics Per Diode

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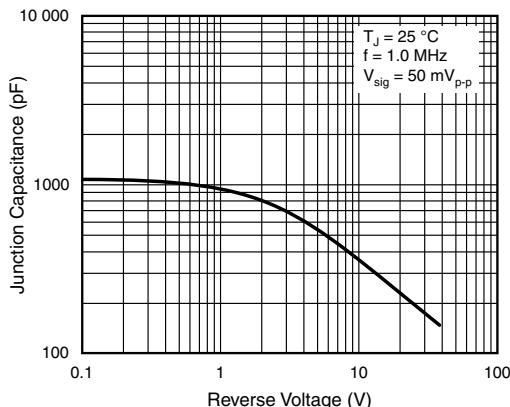


Fig. 5 - Typical Junction Capacitance Per Diode

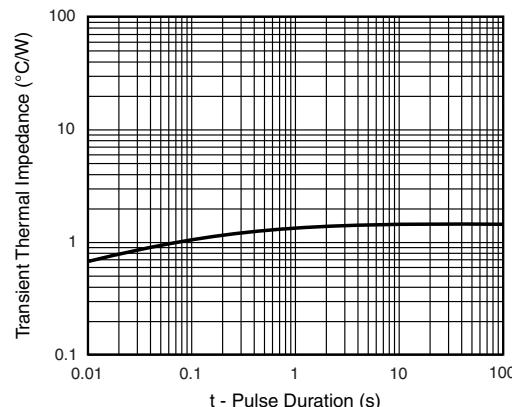
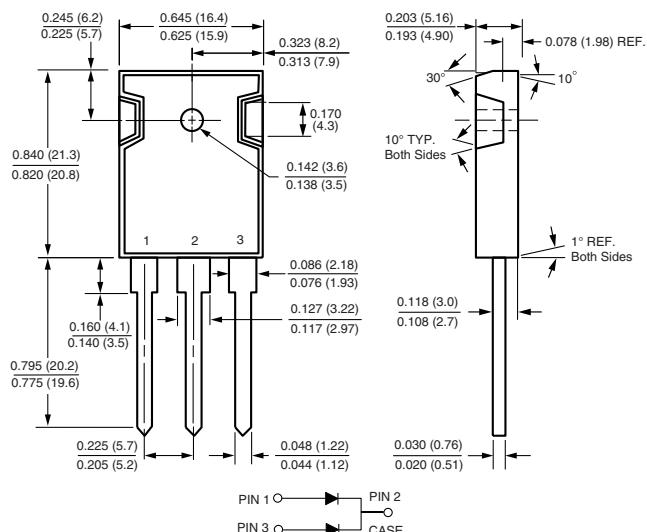


Fig. 6 - Typical Transient Thermal Impedance Per Diode

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### TO-247AD (TO-3P)





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