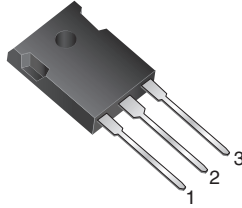
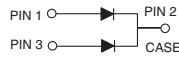


## Dual Common-Cathode Schottky Rectifier



TO-247AD (TO-3P)



### FEATURES

- Guardring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS  
COMPLIANT

### TYPICAL APPLICATIONS

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

### MECHANICAL DATA

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

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

**Polarity:** As marked

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

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	30 A
$V_{RRM}$	30 V, 40 V
$I_{FSM}$	275 A
$V_F$	0.55 V
$T_J \text{ max.}$	125 °C

### MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	SBL3030PT	SBL3040PT	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)	$I_{F(AV)}$	30		A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	275		A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 40 to + 125		°C

### ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	SBL3030PT	SBL3040PT	UNIT
Maximum instantaneous forward voltage per diode (1)	15 A	$V_F$	0.55		V
Maximum instantaneous reverse current at rated DC blocking voltage per diode (1)	$T_C = 25\text{ °C}$ $T_C = 100\text{ °C}$	$I_R$	1.0 75		mA

**Note:**

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

THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	SBL3030PT	SBL3040PT	UNIT
Thermal resistance from junction to case per diode	$R_{\theta JC}$	1.5		$^\circ\text{C/W}$

ORDERING INFORMATION (Example)					
PACKAGE	PREFERRED P/N	UNIT WEIGHT (g)	PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
TO-247AD	SBL3030PT-E3/45	6.13	45	30/tube	Tube

## RATINGS AND CHARACTERISTICS CURVES

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

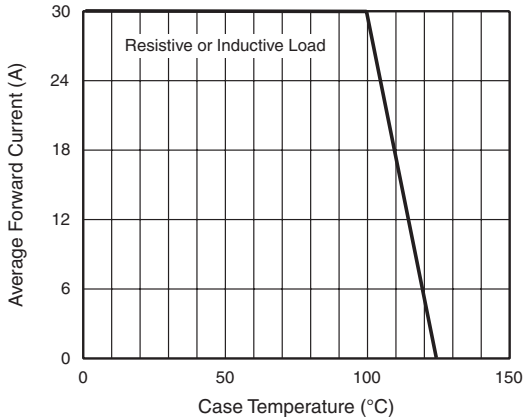


Figure 1. Forward Current Derating Curve

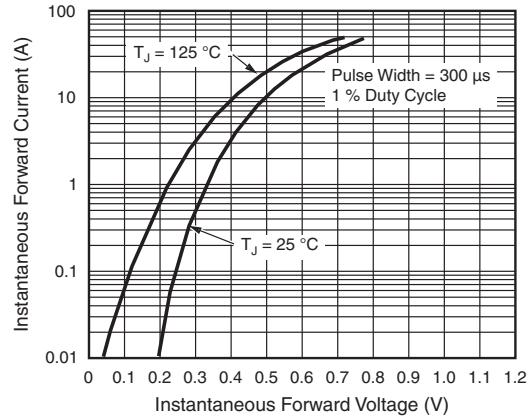


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

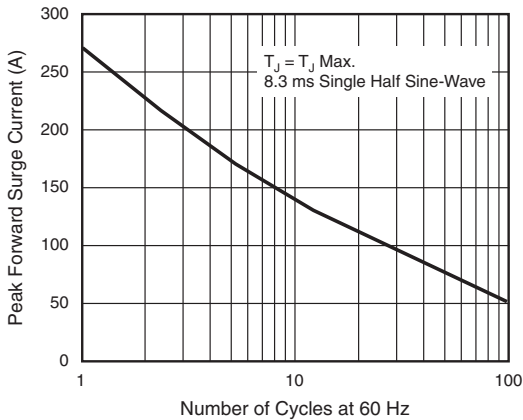


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

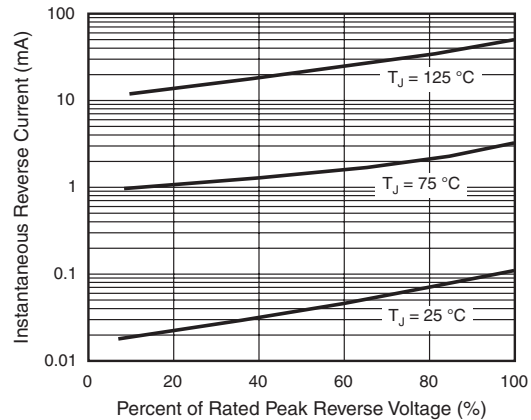


Figure 4. Typical Reverse Characteristics Per Diode

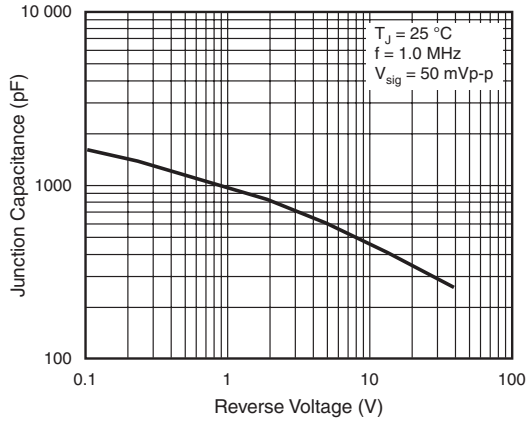


Figure 5. Typical Junction Capacitance Per Diode

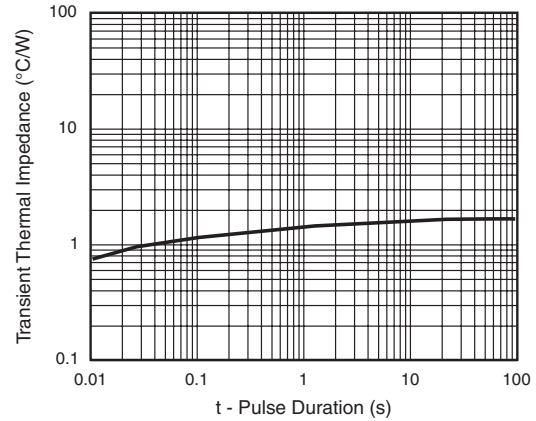
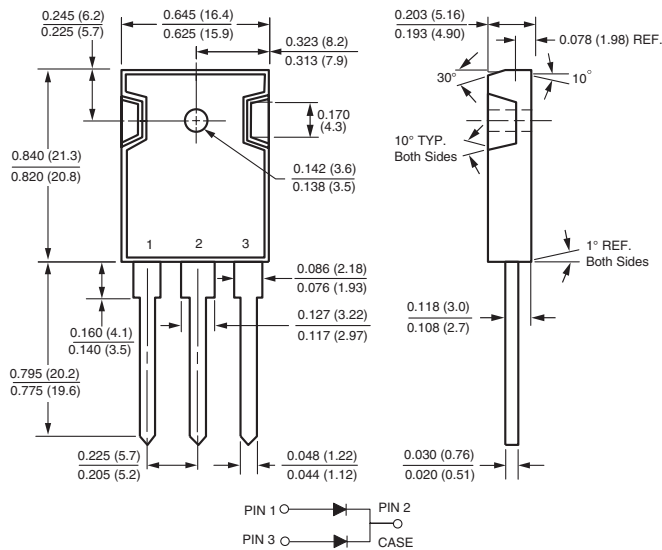


Figure 6. Typical Transient Thermal Impedance Per Diode

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

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





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