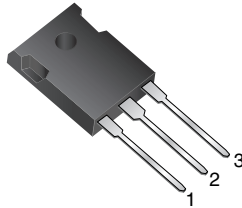
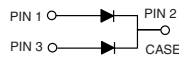


Dual Common-Cathode Schottky Rectifier


TO-247AD (TO-3P)


PRIMARY CHARACTERISTICS

$I_{F(AV)}$	20 A
V_{RRM}	30 V, 40 V
I_{FSM}	250 A
V_F	0.55 V
$T_J \text{ max.}$	125 °C

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
- Compliant to RoHS directive 2002/95/EC and in accordance to 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 94 V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

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

Polarity: As marked

Mounting Torque: 10 in-lbs maximum

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

PARAMETER	TEST CONDITIONS	SYMBOL	SBL2030PT	SBL2040PT	UNIT
Maximum instantaneous forward voltage per diode ⁽¹⁾	10 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 50		mA

Note

⁽¹⁾ Pulse test: 300 µs pulse width, 1 % duty cycle

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

PARAMETER	SYMBOL	SBL2030PT	SBL2040PT	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	SBL2030PT-E3/45	6.13	45	30/tube	Tube

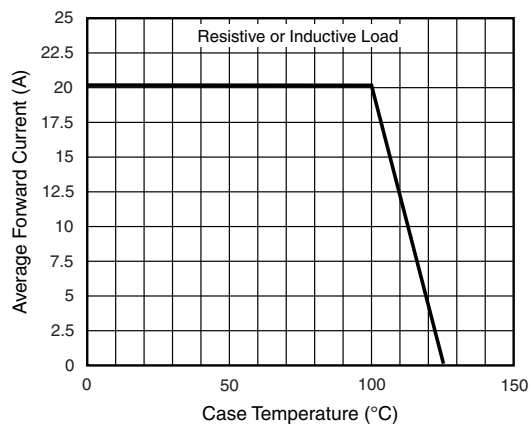
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Figure 1. Forward Current Derating Curve

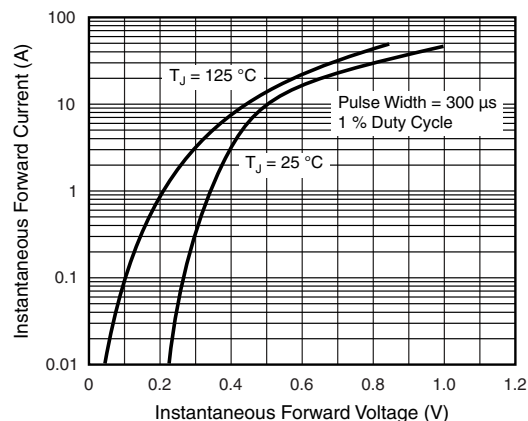


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

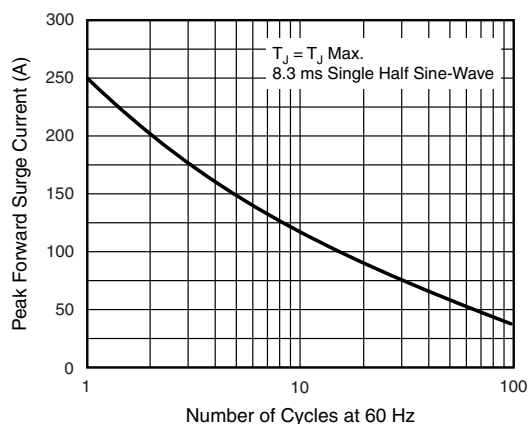


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

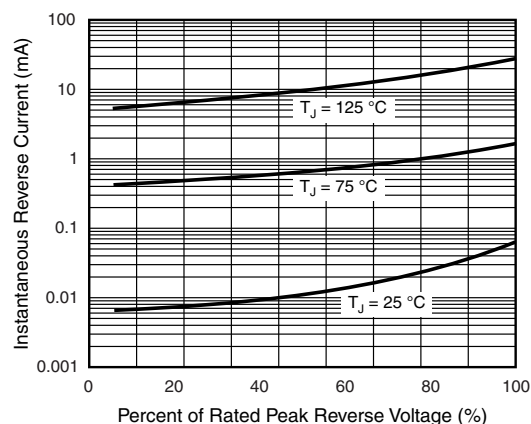


Figure 4. Typical Reverse Characteristics Per Diode

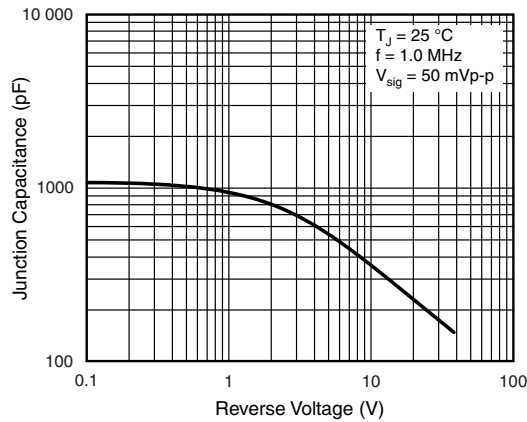


Figure 5. Typical Junction Capacitance Per Diode

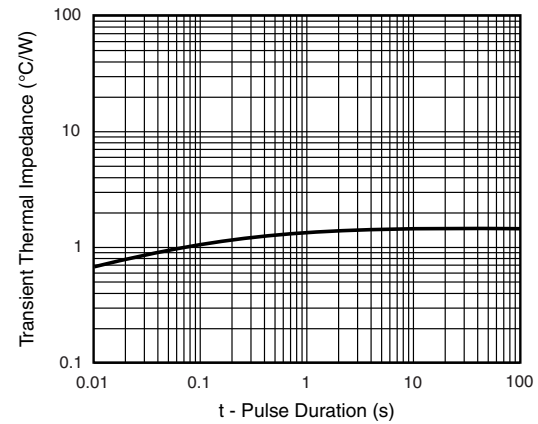
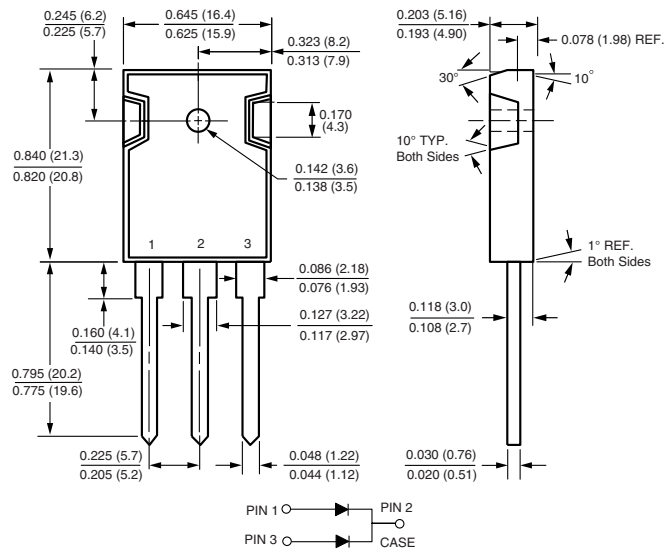


Figure 6. Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-247AD (TO-3P)





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