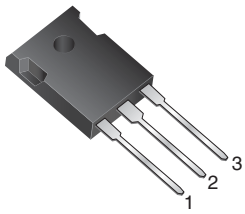
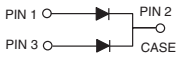
Dual Common Cathode Schottky Rectifier



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

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.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	30 A
V_{RRM}	30 V, 40 V
I_{FSM}	275 A
V_F	0.55 V
T_J max.	125 °C
Package	TO-247AD (TO-3P)
Diode variations	Common cathode

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

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

PARAMETER	SYMBOL	TEST CONDITIONS		SBL3030PT	SBL3040PT	UNIT
Maximum instantaneous forward voltage per diode	V_F (1)	15 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	75		mA

Note

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

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)				
PARAMETER	**SYMBOL**	**SBL3030PT**	**SBL3040PT**	**UNIT**
Thermal resistance, junction to case per diode	$R_{\theta JC}$	1.5		°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 °C unless otherwise noted)

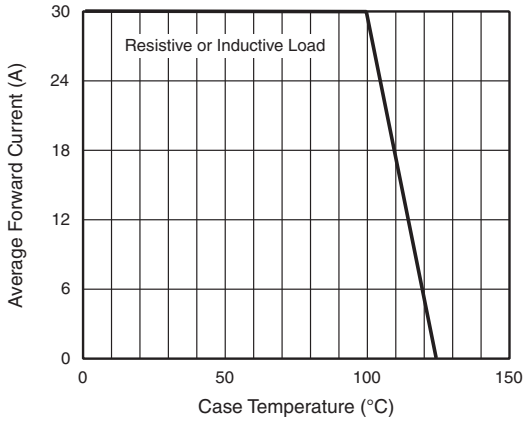


Fig. 1 - Forward Current Derating Curve

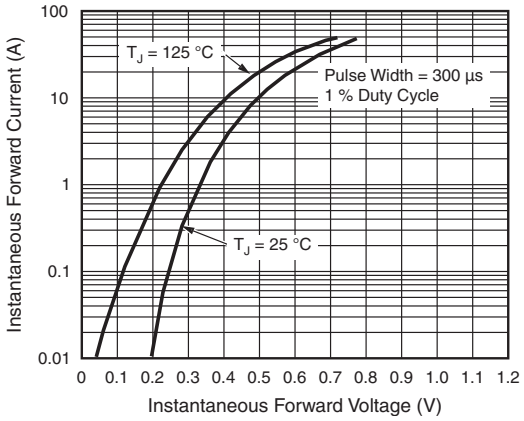


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

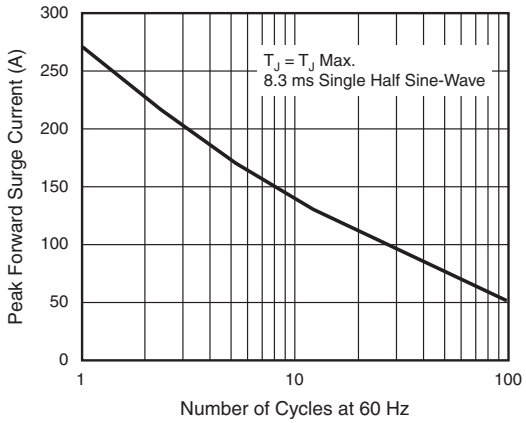


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

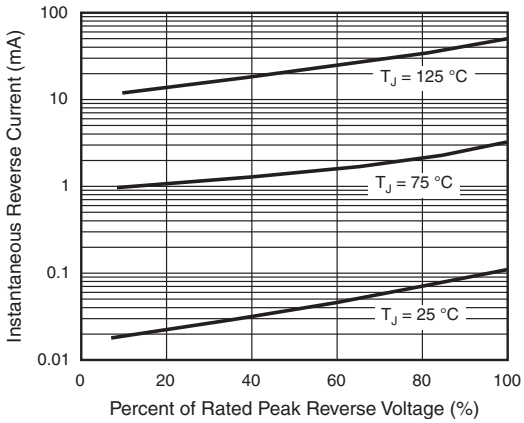


Fig. 4 - Typical Reverse Characteristics Per Diode

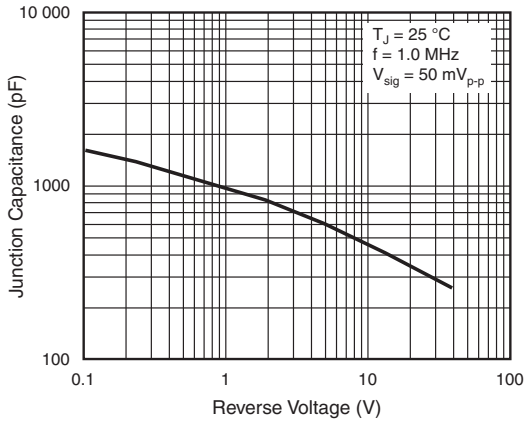


Fig. 5 - Typical Junction Capacitance Per Diode

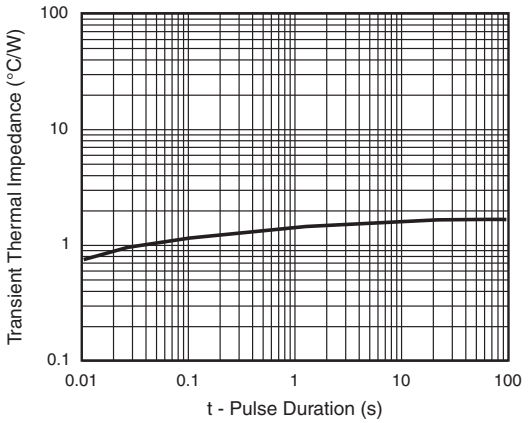
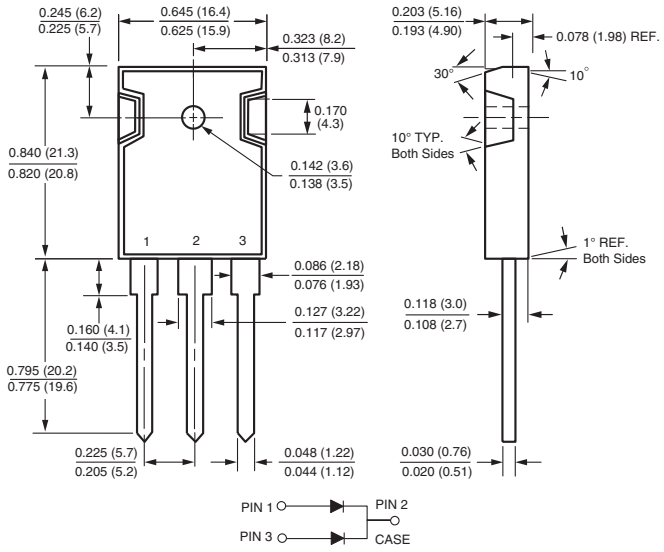


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-247AD (TO-3P)



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