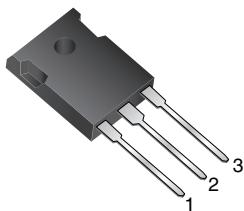


Dual Common Cathode Schottky Rectifier


TO-3P (TO-247AD)


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

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-3P (TO-247AD)
Circuit configuration	Common cathode

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-3P (TO-247AD)

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

PARAMETER	SYMBOL	SBL3030PT	SBL3040PT	UNIT
Thermal resistance, junction to case per diode	R_{thJC}		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

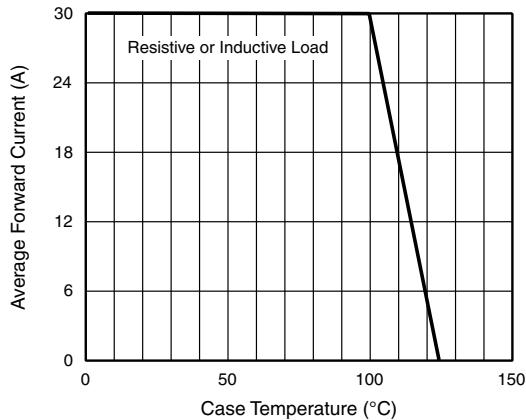
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

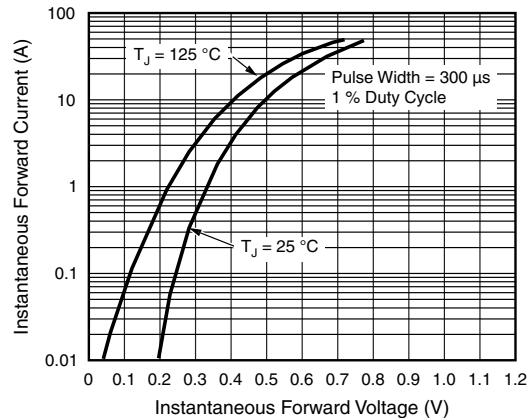


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

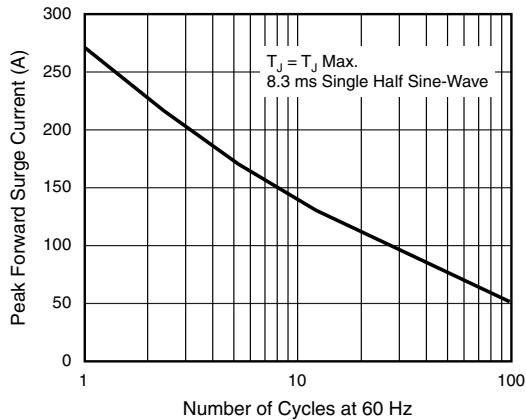


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

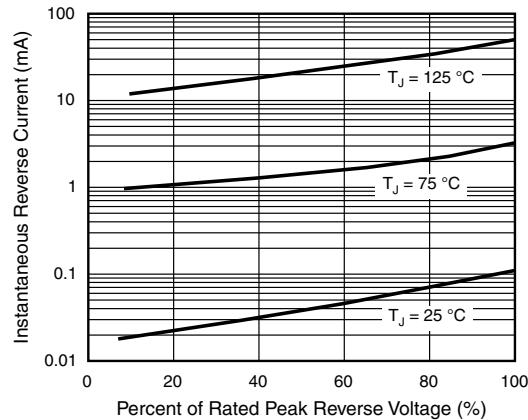


Fig. 4 - Typical Reverse Characteristics Per Diode

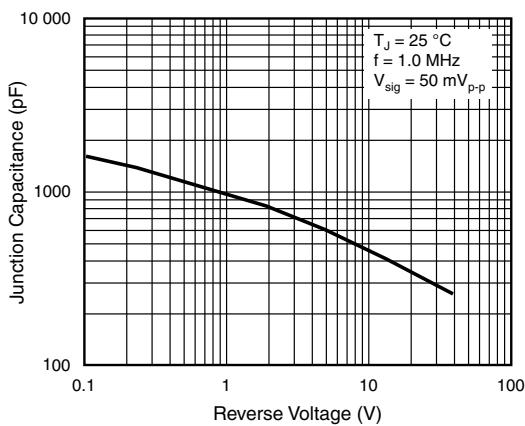


Fig. 5 - Typical Junction Capacitance Per Diode

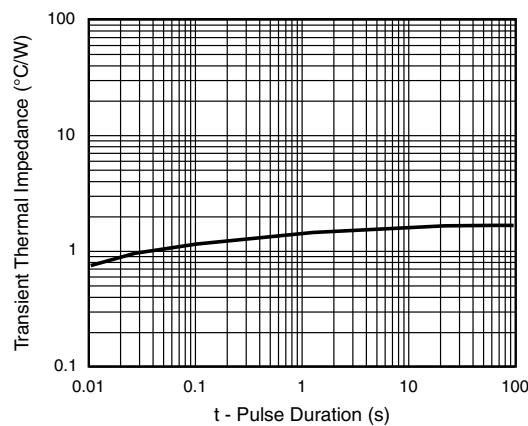
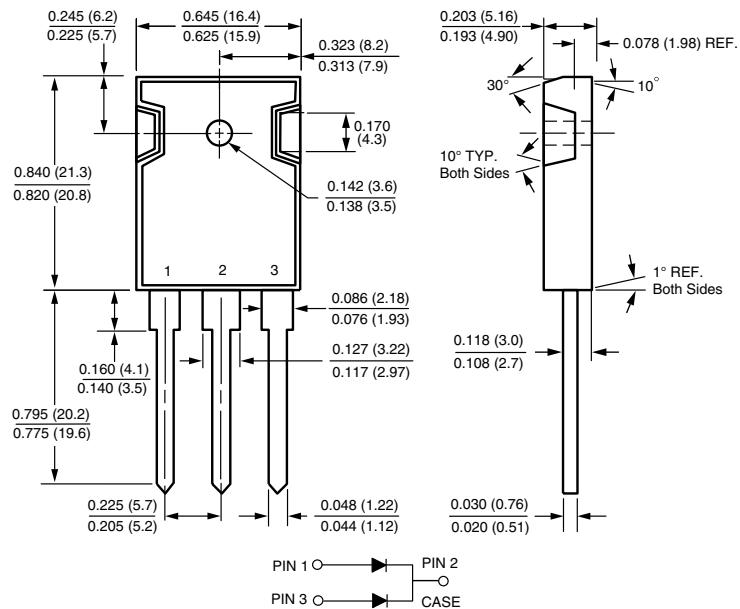


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

TO-3P (TO-247AD)



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