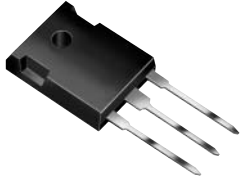




SBL4030PT and SBL4040PT

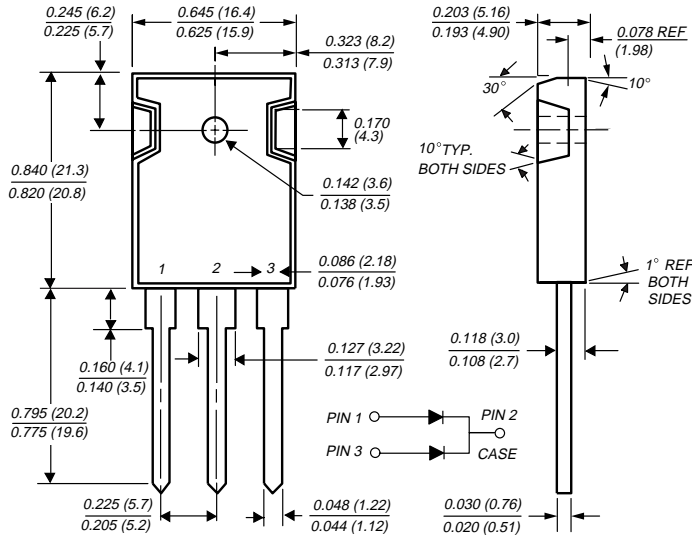
Vishay Semiconductors
formerly General Semiconductor



Dual Schottky Barrier Rectifier

Reverse Voltage 30 to 40V
Forward Current 40A

TO-247AD (TO-3P)



Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Dual rectifier construction, positive center-tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free-wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds, 0.17" (4.3mm) from case

Mechanical Data

- Case:** JEDEC TO-247AD molded plastic body
- Terminals:** Lead solderable per MIL-STD-750, Method 2026
- Polarity:** As marked
- Mounting Position:** Any
- Mounting Torque:** 10 in-lbs max.
- Weight:** 0.2 oz., 5.6 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	SBL4030PT	SBL4040PT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	30	40	V
Maximum working peak reverse voltage	V_{RWM}	21	28	V
Maximum DC blocking voltage	V_{DC}	30	40	V
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	40		A
Peak repetitive forward current per leg at $T_C=95^\circ\text{C}$ (rated V_R , square wave, 20 KHz)	I_{FRM}	40		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400		A
Peak repetitive reverse surge current (NOTE 1)	I_{RRM}	2.0		A
Thermal resistance from junction to case per leg	$R_{\theta JC}$	1.2		$^\circ\text{C}/\text{W}$
Voltage rate of change at (rated V_R)	dv/dt	1,000		$\text{V}/\mu\text{s}$
Operating junction storage temperature range	T_J, T_{STG}	-40 to +125		$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	SBL4030PT	SBL4040PT	Unit
Maximum instantaneous forward voltage per leg at: (NOTE 2) $I_F = 20\text{A}, T_C = 25^\circ\text{C}$ $I_F = 20\text{A}, T_C = 100^\circ\text{C}$	V_F	0.58 0.5		V
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2) $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	I_R	10 100		mA

Notes: (1) 2.0 μs pulse width, $f = 1.0\text{ KHz}$
(2) Pulse test: 300 μs pulse width, 1% duty cycle

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

Fig. 1 – Forward Current Derating Curve

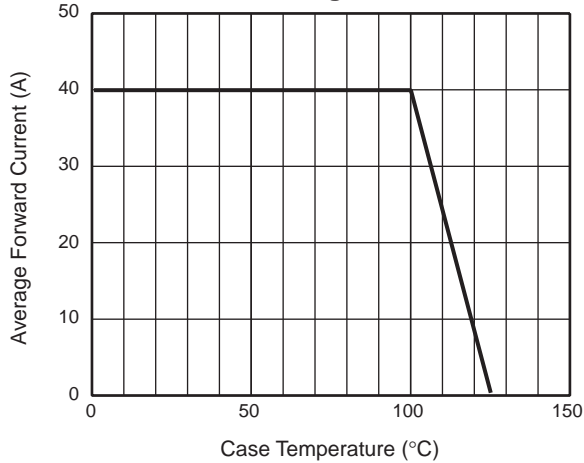


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

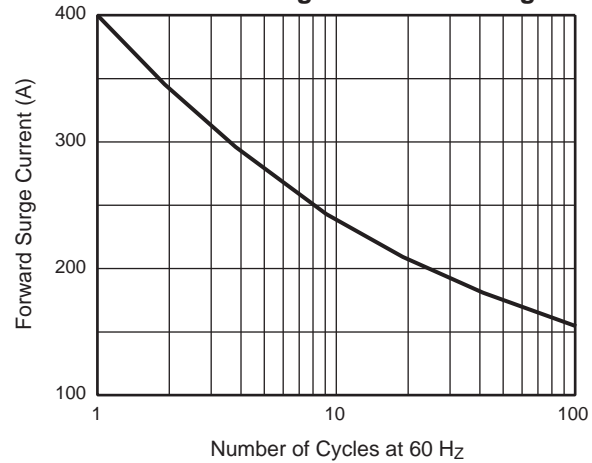


Fig. 3 – Typical Reverse Characteristics Per Leg

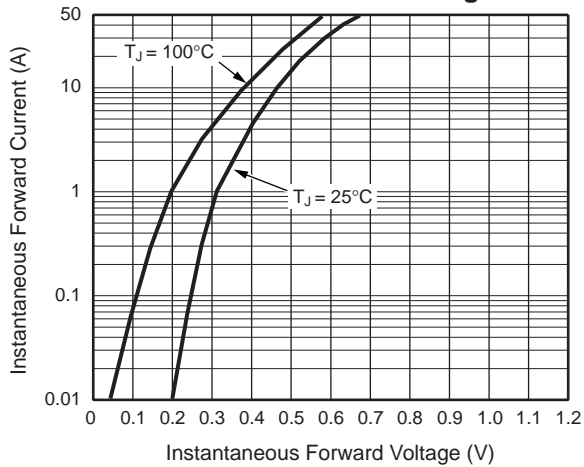


Fig. 4 – Typical Reverse Characteristics Per Leg

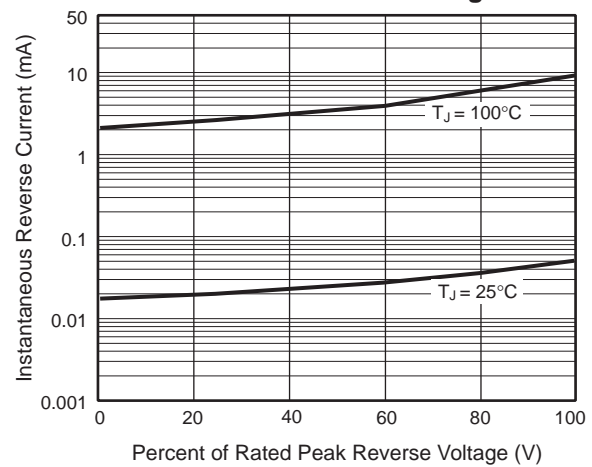


Fig. 5 – Typical Junction Capacitance Per Leg

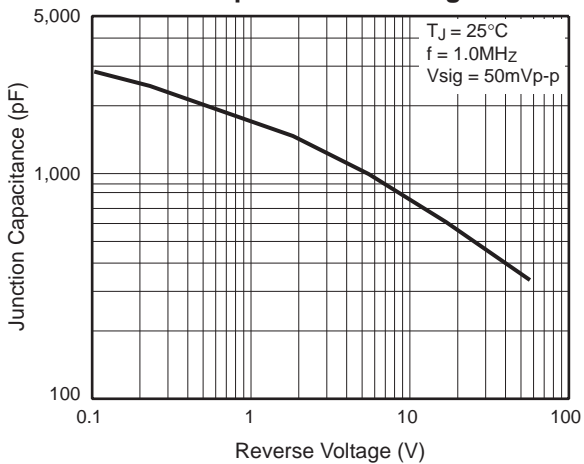


Fig. 6 – Typical Transient Thermal Impedance Per Leg

