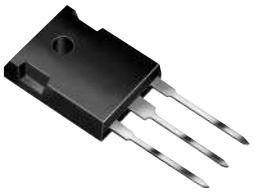
SBL2030PT and SBL2040PT

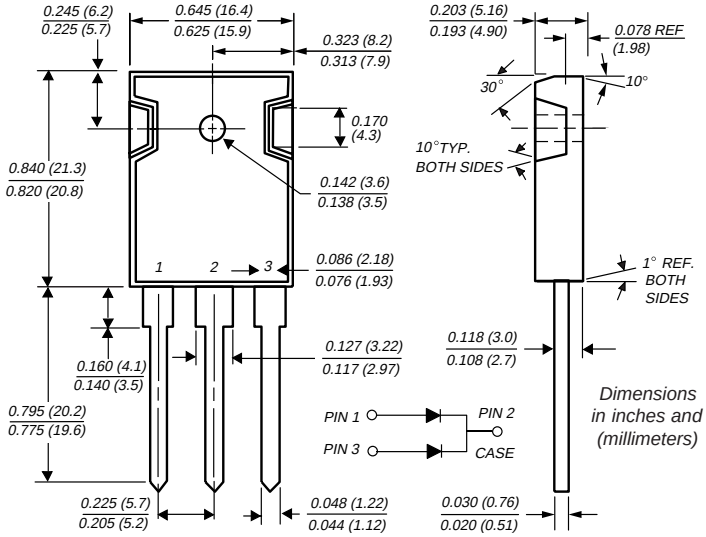
Vishay Semiconductors
formerly General Semiconductor

Dual Schottky Barrier Rectifier

Reverse Voltage 30 and 40V
Forward Current 20A



TO-247AD



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

Mechanical Data

Case: JEDEC TO-247AD molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed: 250°C/10 seconds , 0.17" (4.3mm) from case
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	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 (See Fig. 1)	$I_{F(AV)}$	20		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250		A
Thermal resistance from junction to case per leg	$R_{\Theta JC}$	1.5		°C/W
Operating junction and storage temperature range	T_J, T_{STG}	–40 to +125		°C

Electrical Characteristics

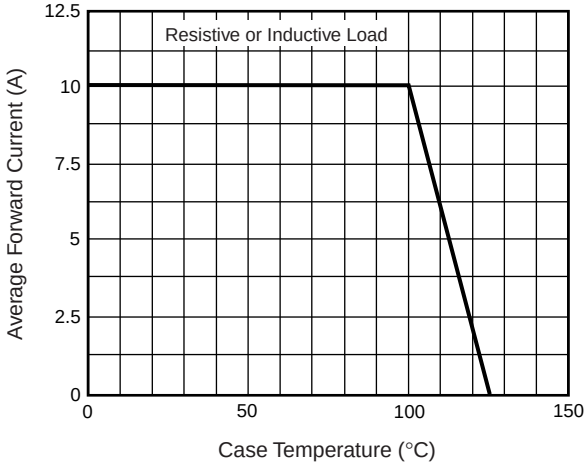
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	SBL2030PT	SBL2040PT	Unit
Maximum instantaneous forward voltage per leg at 10A(1)		V_F	0.60		V
Maximum instantaneous reverse current at rated DC blocking voltage per leg (1)	T_C = 25°C	I_R	1.0		mA
	T_C = 100°C		50		

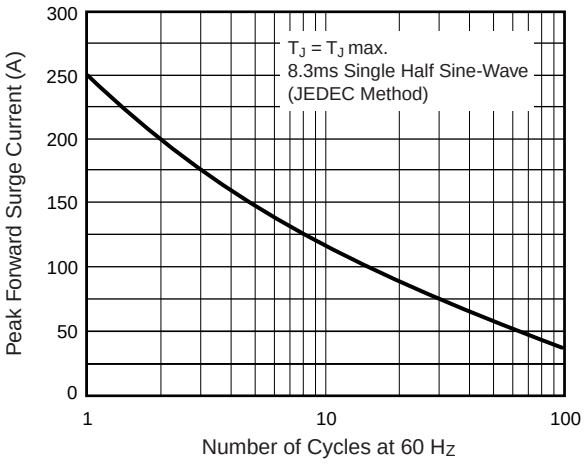
Notes: (1) Pulse test: 300µs pulse width, 1% duty cycle

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

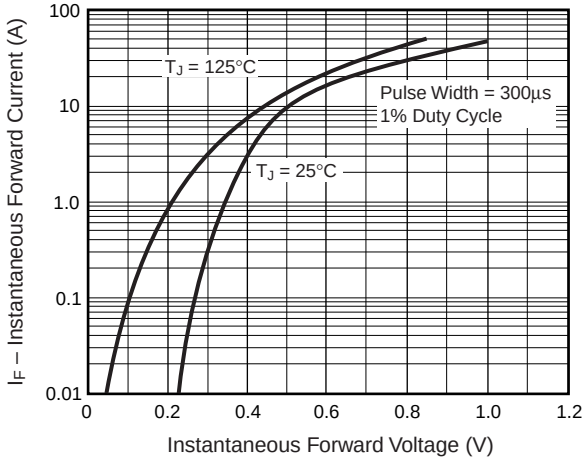
Forward Current Derating Curve



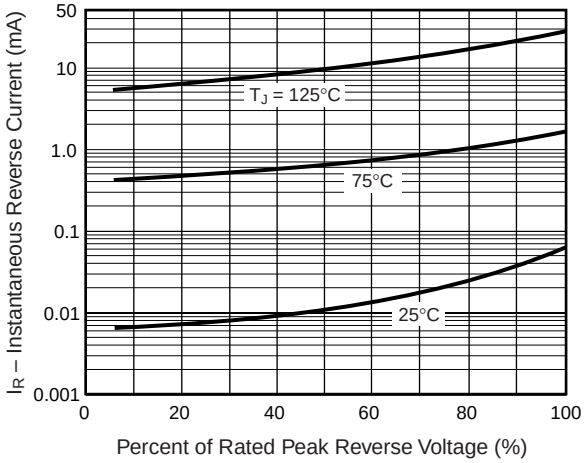
Maximum Non-Repetitive Peak Forward Surge Current Per Leg



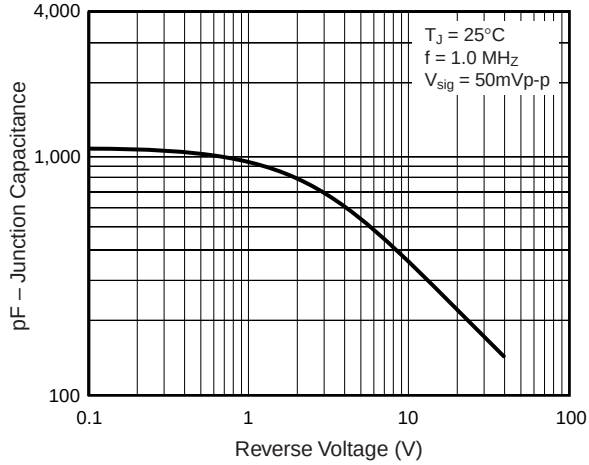
Typical Instantaneous Forward Characteristics Per Leg



Typical Reverse Characteristics Per Leg



Typical Junction Capacitance Per Leg



Typical Transient Thermal Impedance Per Leg