



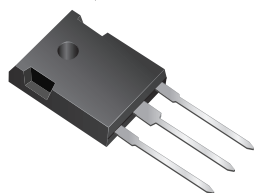
MBR30H90PT & MBR30H100PT

New Product

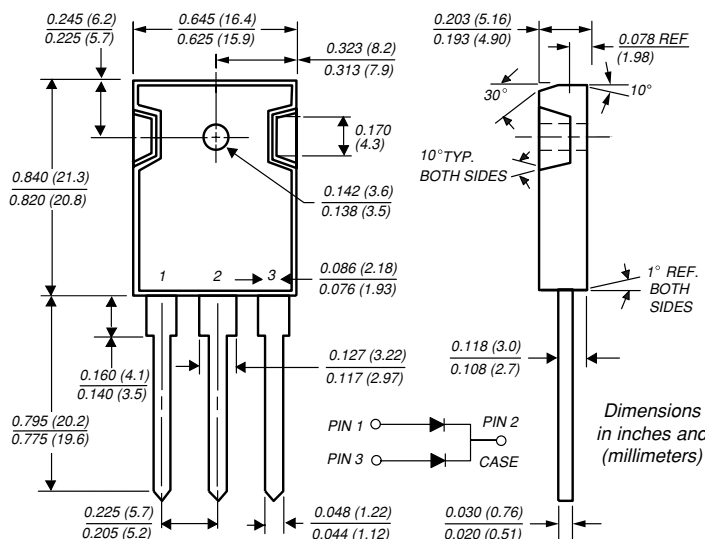
Vishay Semiconductors
formerly General Semiconductor

High-Voltage Dual Schottky Rectifiers

Reverse Voltage 90 to 100V
Forward Current 30A



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 per leg at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Parameter	Symbol	MBR30H90PT	MBR30H100PT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	90	100	V
Maximum working peak reverse voltage	V_{RWM}	90	100	V
Maximum DC blocking voltage	V_{DC}	90	100	V
Maximum average forward rectified current Total device Per leg	$I_F(AV)$	30 15		A
Peak repetitive forward current per leg at $T_C=105^\circ\text{C}$ (rated V_R , square wave, 20 KHz)	I_{FRM}	30		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	265		A
Peak repetitive reverse surge current at $t_p = 2\mu\text{s}$, $f = 1\text{kHz}$	I_{RRM}	1.0		A
Non-repetitive avalanche energy ($I_{AS} = 0.5\text{A}$, $L = 60\text{mH}$)	E_{AS}	7.5		mJ
Voltage rate of change at (rated V_R)	dv/dt	10,000		V/ μs
Thermal resistance from junction to case per leg	$R_{\theta JC}$	1.6		$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J	-65 to +175		$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MBR30H90PT	MBR30H100PT	Unit
Maximum instantaneous forward voltage per leg at: ⁽¹⁾ $I_F = 15\text{A}$, $T_J = 25^\circ\text{C}$ $I_F = 15\text{A}$, $T_J = 125^\circ\text{C}$ $I_F = 30\text{A}$, $T_J = 25^\circ\text{C}$ $I_F = 30\text{A}$, $T_J = 125^\circ\text{C}$	V_F	0.82 0.67 0.93 0.80		V
Maximum instantaneous reverse current at rated DC blocking voltage per leg ⁽¹⁾ $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	I_R	5.0 6.0		μA mA

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

Ratings and Characteristic Curves

Fig. 1 – Forward Derating Curve

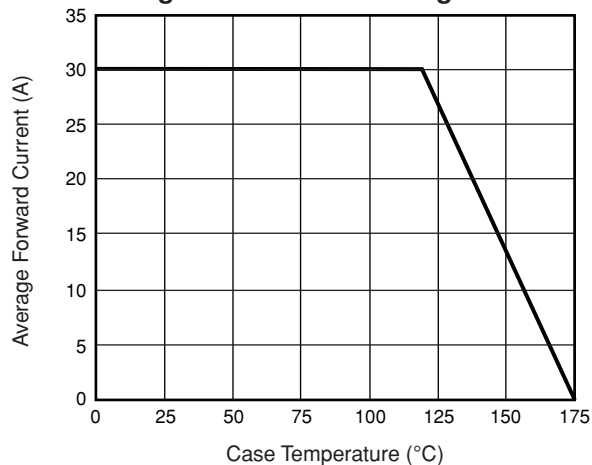


Fig. 2 – Typical Instantaneous Forward Characteristics Per Leg

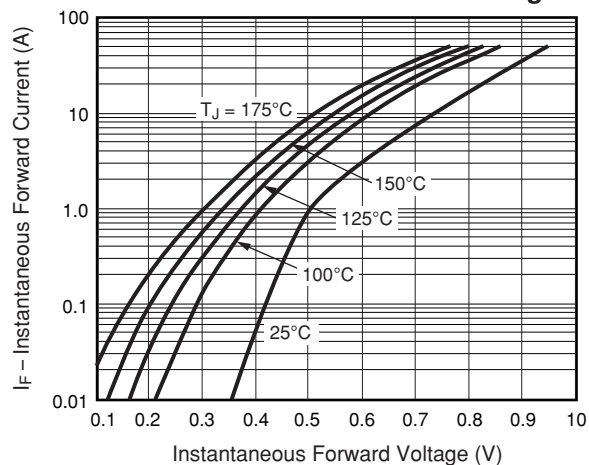


Fig. 3 – Typical Reverse Characteristics Per Leg

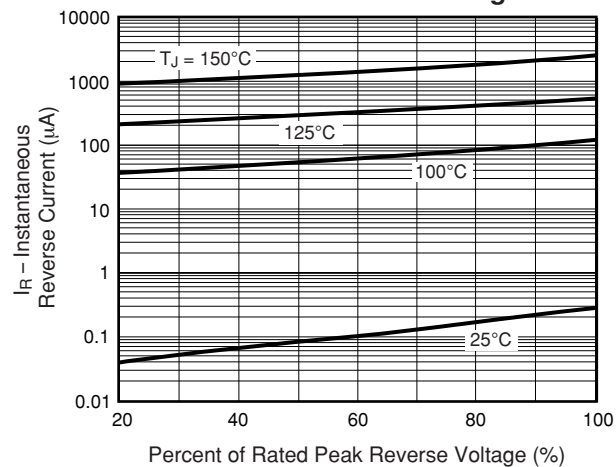


Fig. 4 – Typical Junction Capacitance Per Leg

