



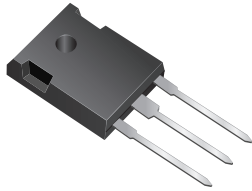
MBR30H90PT & MBR30H100PT

New Product

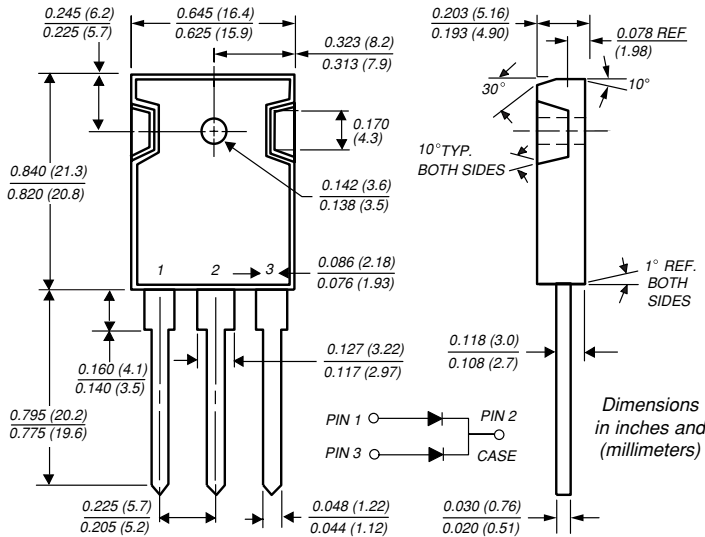
Vishay Semiconductors
formerly General Semiconductor

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°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 <small>Total device Per leg</small>	I _{F(AV)}	30 15		A
Peak repetitive forward current per leg at T _C =105°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 = 2μs, f = 1kHz	I _{RRM}	1.0		A
Non-repetitive avalanche energy (I _{AS} = 0.5A, L = 60mH)	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 _{θJC}	1.6		°C/W
Operating junction and storage temperature range	T _J	-65 to +175		°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 = 15A, T _J = 25°C I _F = 15A, T _J = 125°C I _F = 30A, T _J = 25°C I _F = 30A, T _J = 125°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°C T _J = 125°C	I _R	5.0 6.0		μA mA

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

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Ratings and Characteristic Curves

Fig. 1 – Forward Derating Curve

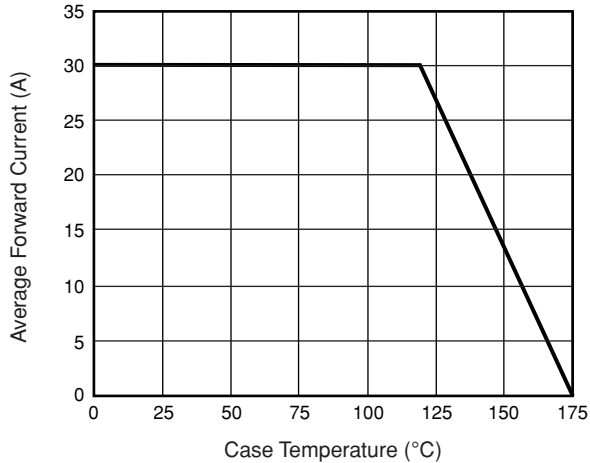


Fig. 2 – Typical Instantaneous Forward Characteristics Per Leg

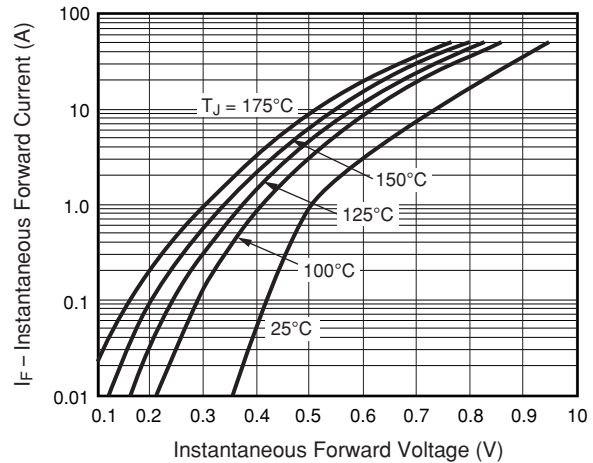


Fig. 3 – Typical Reverse Characteristics Per Leg

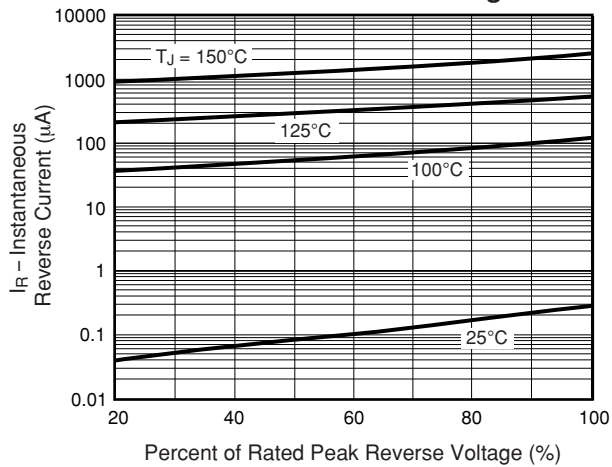
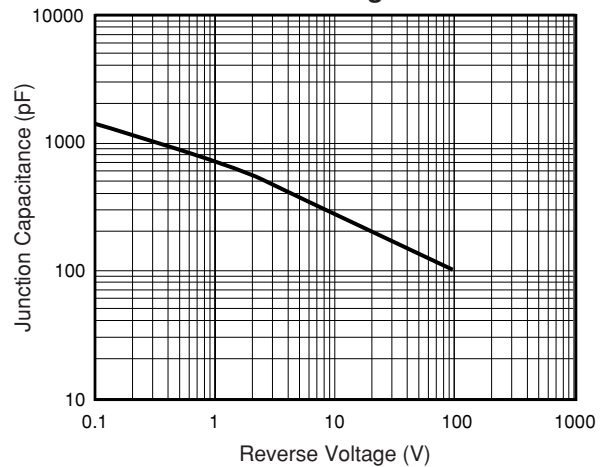


Fig. 4 – Typical Junction Capacitance Per Leg



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