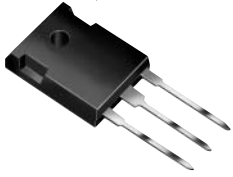




MBR4035PT thru MBR4060PT

Vishay Semiconductors
formerly General Semiconductor



Dual Schottky Barrier Rectifier

Reverse Voltage 35 to 60V
Forward Current 40A

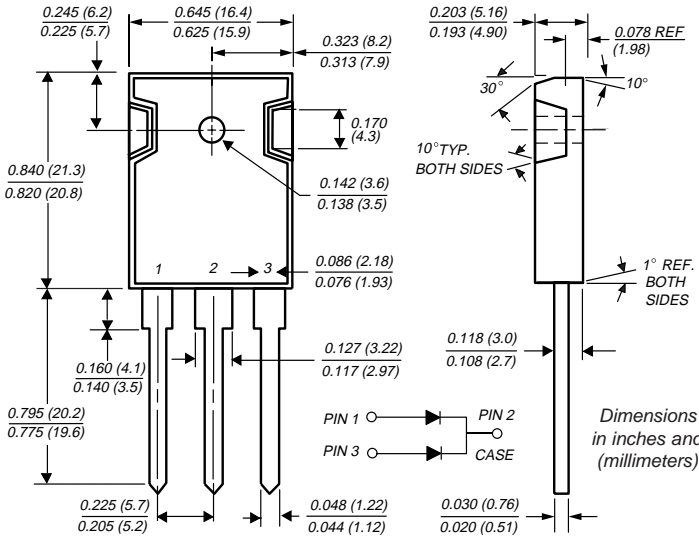
TO-247AD (TO-3P)

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	MBR4035PT	MBR4045PT	MBR4050PT	MBR4060PT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	35	45	50	60	V
Maximum working peak reverse voltage	V_{RWM}	35	45	50	60	V
Maximum DC blocking voltage	V_{DC}	35	45	50	60	V
Maximum average forward rectified current at $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	40				A
Peak repetitive forward current per leg at $T_C=120^\circ\text{C}$ (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		1.0		A
Maximum 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	10,000				$\text{V}/\mu\text{s}$
Operating junction temperature range	T_J	-65 to +150				$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +175				$^\circ\text{C}$

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

Parameter	Symbol	MBR4035PT	MBR4045PT	MBR4050PT	MBR4060PT	Unit
Maximum instantaneous forward voltage per leg at: (NOTE 2) $I_F = 20\text{A}, T_C = 25^\circ\text{C}$ $I_F = 20\text{A}, T_C = 125^\circ\text{C}$ $I_F = 40\text{A}, T_C = 25^\circ\text{C}$ $I_F = 40\text{A}, T_C = 125^\circ\text{C}$	V_F	0.70		0.72		V
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2)	I_R		1.0		100	mA

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

MBR4035PT thru MBR4060PT



Vishay Semiconductors
formerly General Semiconductor

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

Fig. 1 - Forward Current Derating Curve

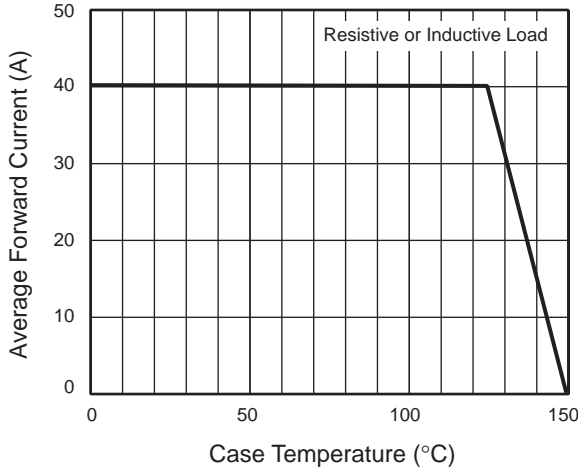


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

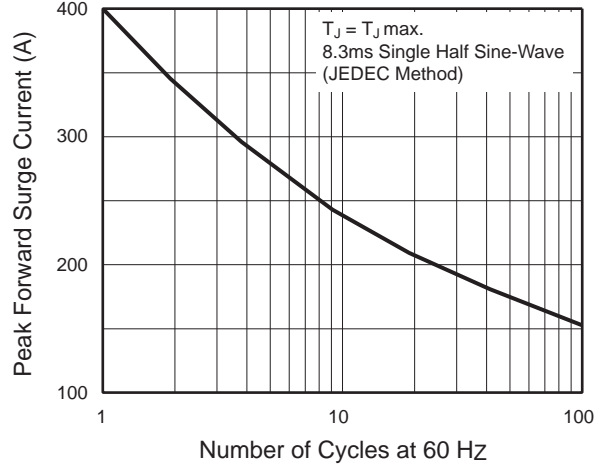


Fig. 3 - Typical Instantaneous Forward Characteristics Per Leg

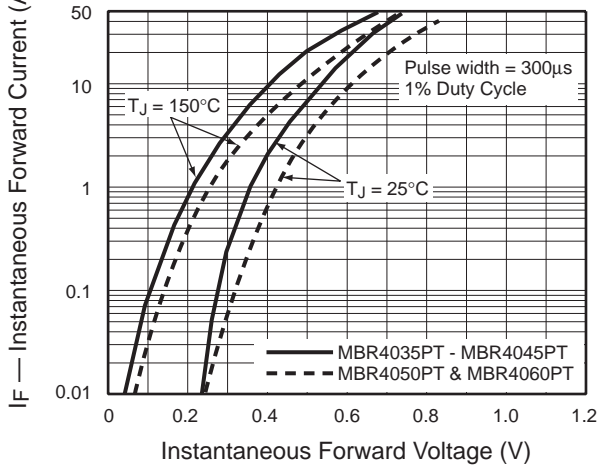


Fig. 4 - Typical Reverse Characteristics Per Leg

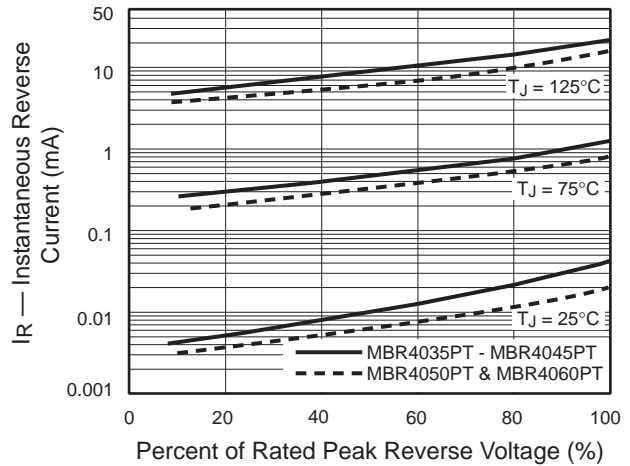


Fig. 5 - Typical Junction Capacitance Per Leg

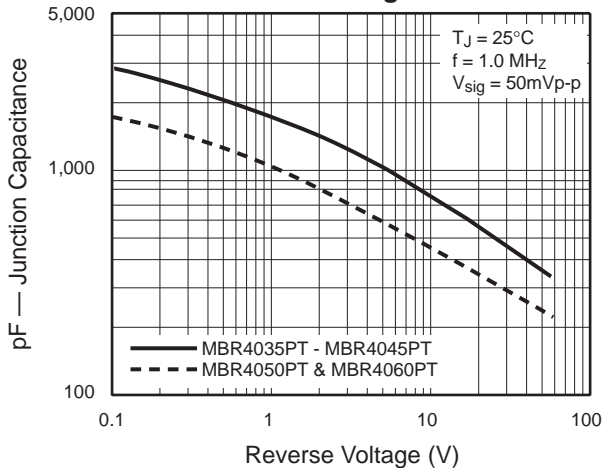
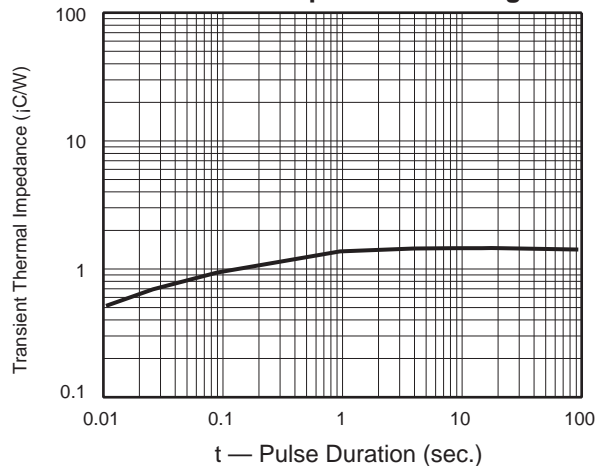


Fig. 6 - Typical Transient Thermal Impedance Per Leg





Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.