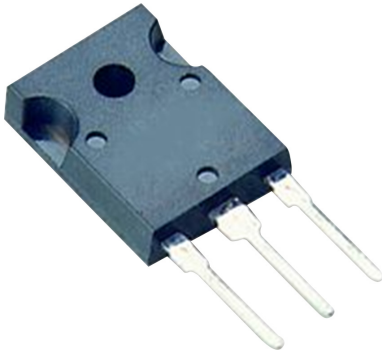


Diode Schottky



RoHS
Compliant



Features:

- Plastic material
- Metal silicon rectifier, 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 over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 0.17" (4.3mm) from case

Specifications:

Mechanical Data:

Cases	: JEDEC TO-3P/TO-247AD moulded plastic body
Terminals	: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
Polarity	: As marked
Mounting Position	: Any
Mounting Torque	: 10in. - lbs. Max.
Weight	: 0.2oz, 5.6g

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbol	MBR4035PT	MBR4045PT	MBR4060PT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	60	V
Maximum RMS Voltage	V_{RMS}	24	31	42	
Maximum DC Blocking Voltage	V_{DC}	35	45	60	
Maximum Average Forward Rectified Current at $T_C = 125^\circ\text{C}$	$I_{(AV)}$	40			A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20kHz) at $T_C = 120^\circ\text{C}$	I_{FRM}	40			
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	330			

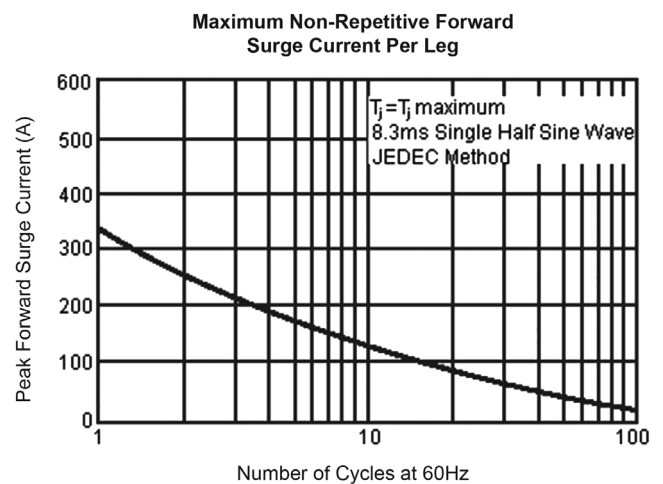
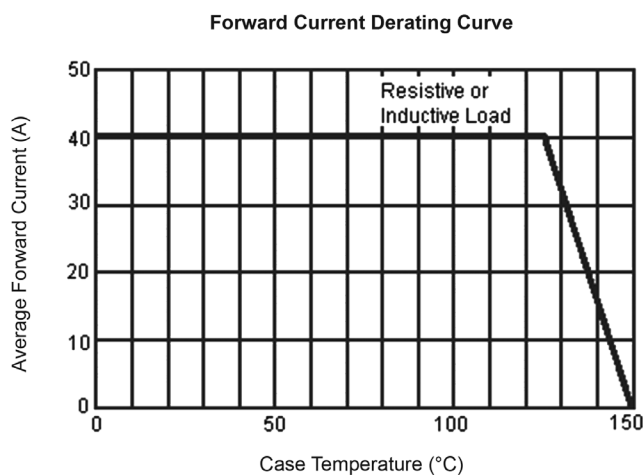
Parameter	Symbol	MBR4035PT	MBR4045PT	MBR4060PT	Units
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	2	1		A
Maximum Instantaneous Forward Voltage at: (Note 2) $I_F = 20A, T_C = 25^\circ C$ $I_F = 20A, T_C = 125^\circ C$ $I_F = 40A, T_C = 25^\circ C$ $I_F = 40A, T_C = 125^\circ C$	V_F	0.75 0.65 0.8 0.75	0.77 0.67 - -		V
Maximum Instantaneous Reverse Current at $T_C = 25^\circ C$ at Rated DC Blocking Voltage at $T_C = 125^\circ C$ (Note 2)	I_R	1			μA μA
		30		20	
Voltage Rate of Change (Rated V_R)	dV/dt	10,000	1,000		$V/\mu S$
Maximum Typical Thermal Resistance, (Note 3)	$R_{\theta JC}$	1.2			$^\circ C/W$
Operating Junction Temperature Range	T_J	-65 to +150			$^\circ C$
Storage Temperature Range	T_{STG}	-65 to +175			

Note: 1. 2 μs Pulse Width, $f = 1kHz$.

Note: 2. Pulse Test: 300 μs Pulse Width, 1% Duty Cycle.

Note: 3. Thermal Resistance from Junction to Case Per Leg.

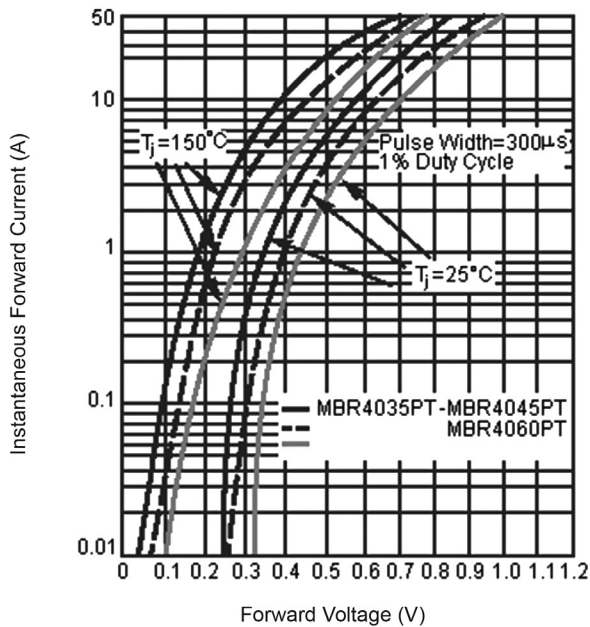
Ratings and Characteristic Curves (MBR4035PT, MBR4045PT and MBR4060PT)



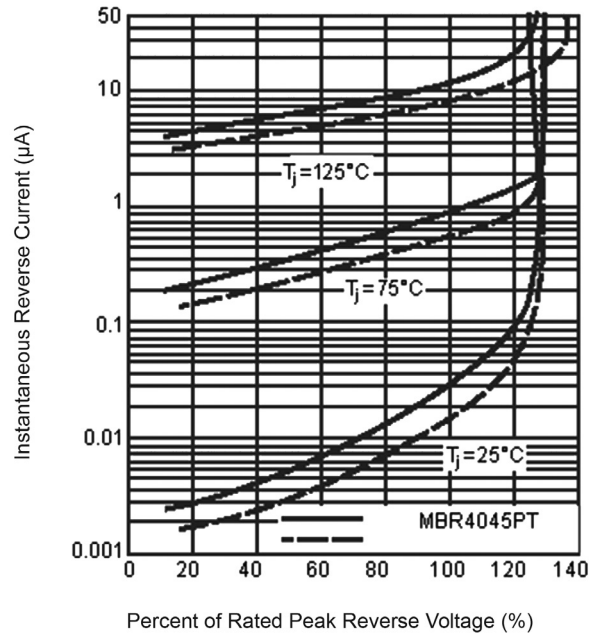
Diode Schottky



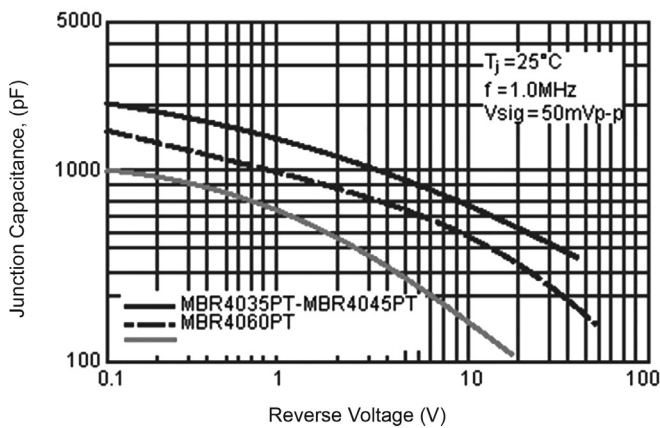
Typical Instantaneous Forward Characteristics Per Leg



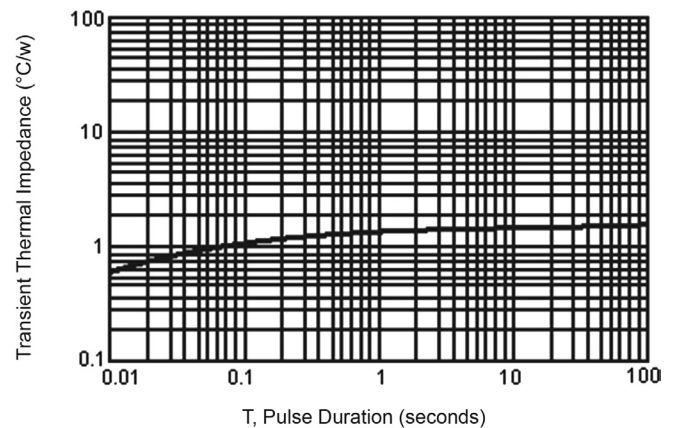
Typical Reverse Characteristics Per Leg



Typical Junction Capacitance Per Leg



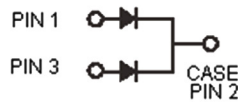
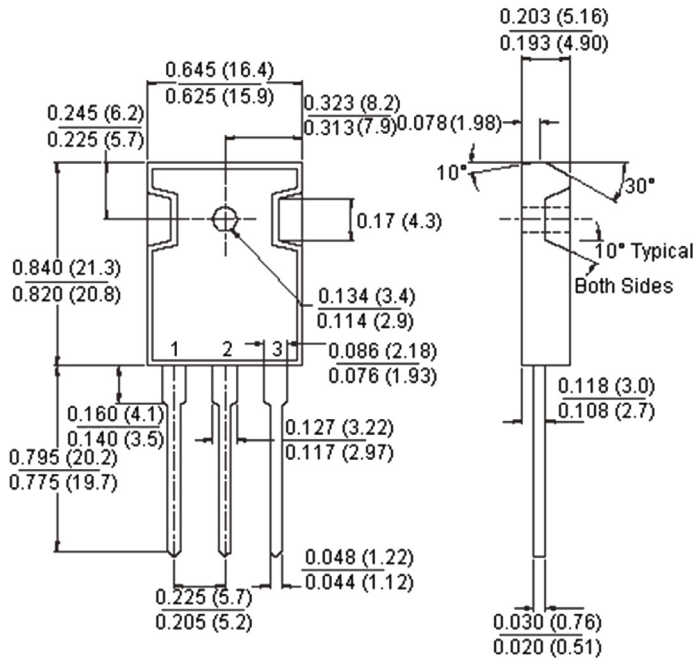
Typical Transient Thermal Impedance Per Leg



Diode Schottky



TO-3P/TO-247AD



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 40A, 35V	MBR4035PT
Diode, Schottky, 40A, 45V	MBR4045PT
Diode, Schottky, 40A, 60V	MBR4060PT

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.

www.element14.com
www.farnell.com
www.newark.com

