

International IOR Rectifier

PD-2.326 rev. A 12/97

MBR7535 MBR7545

SCHOTTKY RECTIFIER

70 Amp

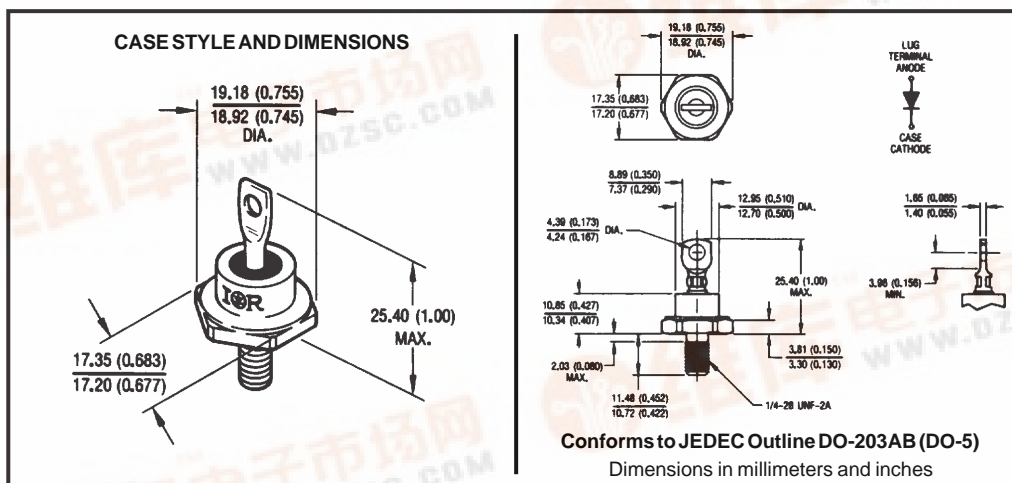
Major Ratings and Characteristics

Characteristics	MBR75..	Units
$I_{F(AV)}$ Rectangular waveform	70	A
V_{RRM}	35/45	V
I_{FSM} @ 60Hz	1000	A
V_F @ 60 Apk, $T_J = 125^\circ\text{C}$	0.60	V
T_J	-65 to 150	$^\circ\text{C}$

Description/Features

The MBR75.. Schottky rectifier has been optimized for low reverse leakage at high temperature. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

- 150°C T_J operation
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Hermetic packaging



Voltage Ratings

Part number	MBR7535	MBR7545
V_R Max. DC Reverse Voltage (V)	35	45
V_{RWM} Max. Working Peak Reverse Voltage (V)		

Absolute Maximum Ratings

Parameters	MBR75..	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current	70	A	@ $T_C = 90^\circ\text{C}$, (Rated V_R)
I_{FSM} Non-Repetitive Peak Surge Current	9000	A	5 μs Sine or 3 μs Rect. pulse Following any rated load condition and with rated V_{RWM} applied Surge applied at rated load condition half wave single phase 60Hz
	1000		

Electrical Specifications

Parameters	MBR75..	Units	Conditions
V_{FM} Max. Forward Voltage Drop (1)	0.60	V	@ 60A
	0.90	V	@ 220A
I_{RM} Max. Instantaneous Reverse Current (1)	150	mA	$T_J = 125^\circ\text{C}$ Rated DC voltage
C_T Max. Junction Capacitance	4000	pF	$V_R = 5V_{DC}$, (test signal range 100Khz to 1Mhz) 25 $^\circ\text{C}$
L_S Typical Series Inductance	7.5	nH	Measured from top of terminal to mounting plane
dv/dt Max. Voltage Rate of Change (Rated V_R)	1000	V/ μs	

(1) Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications

Parameters	MBR75..	Units	Conditions
T_J Max. Junction Temperature Range	-65 to 150	$^\circ\text{C}$	
T_{stg} Max. Storage Temperature Range	-65 to 150	$^\circ\text{C}$	
R_{thJC} Max. Thermal Resistance Junction to Case	0.83	$^\circ\text{C}/\text{W}$	DC operation
R_{thCS} Typical Thermal Resistance, Case to Heatsink	0.25	$^\circ\text{C}/\text{W}$	Mounting surface, smooth and greased
wt Approximate Weight	15(0.53)	g(oz.)	
T Mounting Torque	Min.	23(20)	Kg-cm (lbf-in)
	Max.	46(40)	
Case Style	DO-203AB(DO-5)		JEDEC

* For Additional Informations and Graphs, Please See the 75HQ Series