

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 730	MBR 740	MBR 750	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	40	50	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	28	35	V
Average Rectified Output Current (Note 4) @ T <sub>C</sub> = +125°C	I <sub>O</sub>	7.5			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	150			A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 4)	R <sub>θJC</sub>	3.5	°C/W
Voltage Rate of Change (Rated V <sub>R</sub> )	dV/dt	10,000	V/μs
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +175	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	MBR 730	MBR 740	MBR 750	Unit
Forward Voltage Drop @ I <sub>F</sub> = 7.5A, T <sub>J</sub> = +25°C (Note 6) @ I <sub>F</sub> = 7.5A, T <sub>J</sub> = +125°C @ I <sub>F</sub> = 15A, T <sub>J</sub> = +25°C @ I <sub>F</sub> = 15A, T <sub>J</sub> = +125°C	V <sub>FM</sub>	— 0.57 0.84 0.72		0.75 0.65 — —	V
Peak Reverse Current @ T <sub>J</sub> = +25°C at Rated DC Blocking Voltage @ T <sub>J</sub> = +125°C	I <sub>RM</sub>	0.1 15		0.5 50	mA
Typical Total Capacitance (Note 5)	C <sub>T</sub>	400			pF

Notes: 4. Thermal resistance junction to case mounted on heatsink.  
 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 6. Short duration pulse test used to minimize self-heating effect.

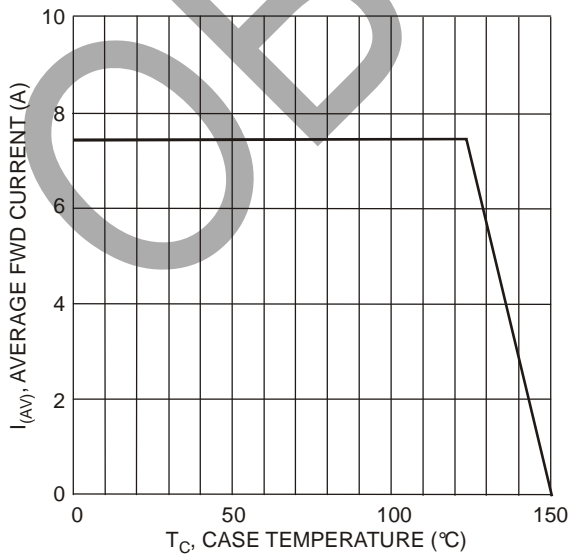


Fig. 1 Fwd Current Derating Curve

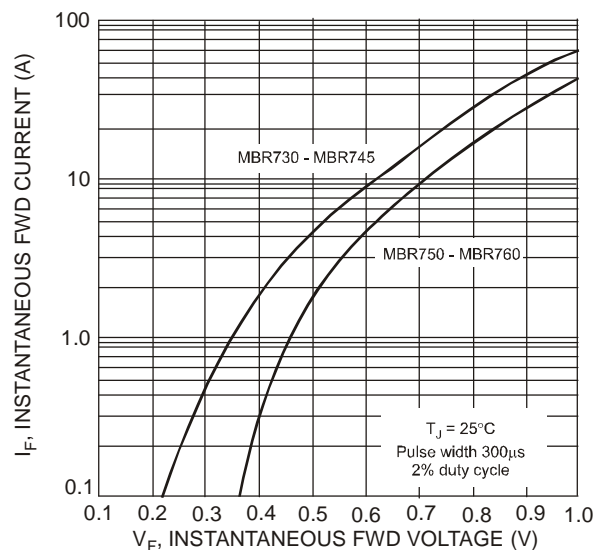


Fig. 2 Typ Instantaneous Fwd Characteristics

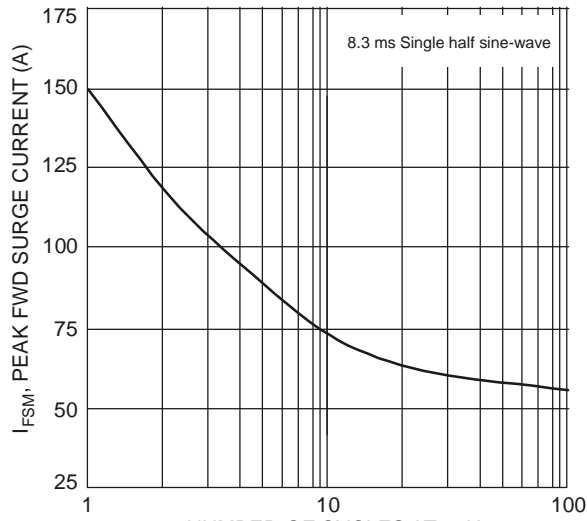


Fig. 3 Max Non-Repetitive Surge Current

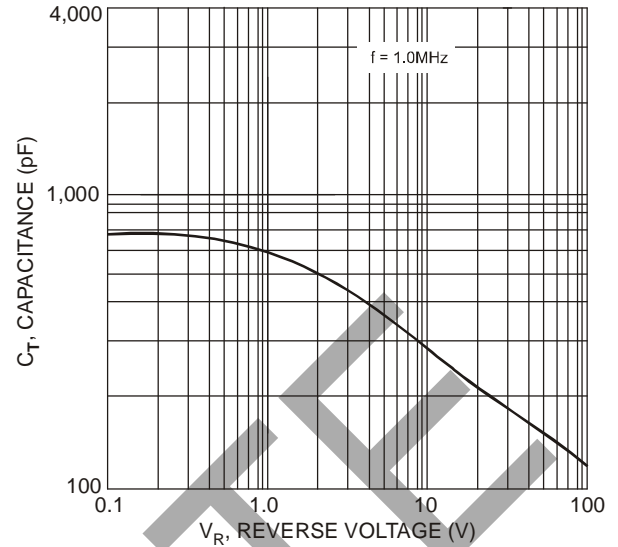


Fig. 4 Typical Total Capacitance

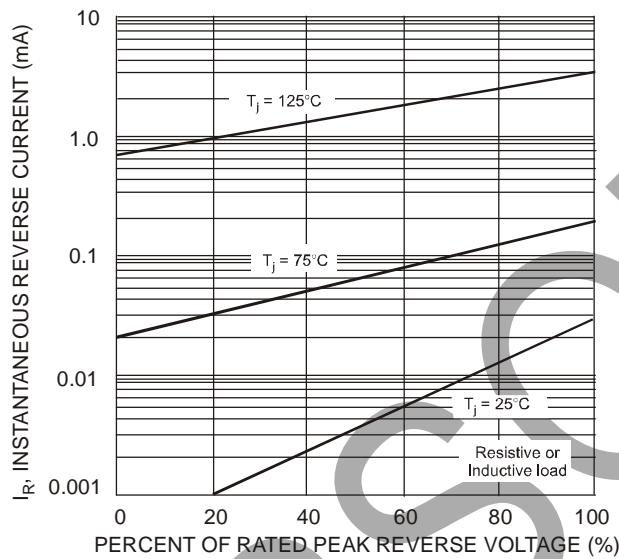
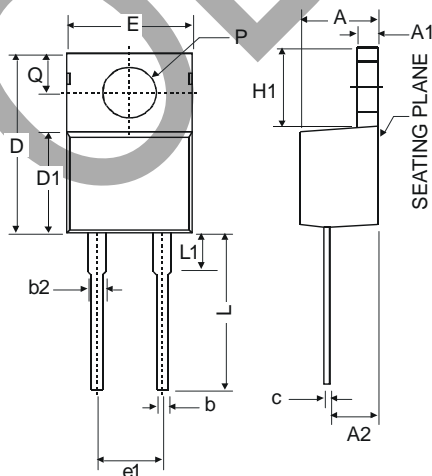


Fig. 5 Typical Reverse Characteristics

## Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



TO220AC			
Dim	Min	Typ	Max
A	3.56	-	4.82
A1	0.51	-	1.39
A2	2.04	-	2.92
b	0.39	0.81	1.01
b2	1.15	1.24	1.77
c	0.356	-	0.61
D	14.22	-	16.51
D1	8.39	-	9.01
e1	5.08		
E	9.66	-	10.66
H1	5.85	-	6.85
L	12.70	-	14.73
L1	-	-	6.35
P	3.54	-	4.08
Q	2.54	-	3.42
All Dimensions in mm			

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