

MBR1040W Thru MBR10200W

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MBR1040W Thru MBR10200W

10.0A Power Schottky Barrier Rectifiers : 40V ~ 200V

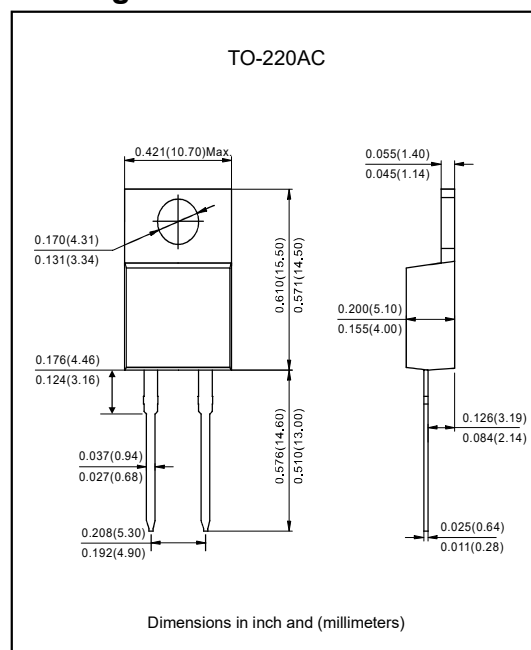
Features

- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 250°C/10 seconds at terminals.
- Construction utilizes void-free molded plastic technique.
- Lead free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. MBR1040W-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic , TO-220AC.
- Terminals: Solder plated, solder able per MIL-STD-750, Method 2026.
- Mounting Position: Any.

Package outline



Maximum ratings and electrical characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

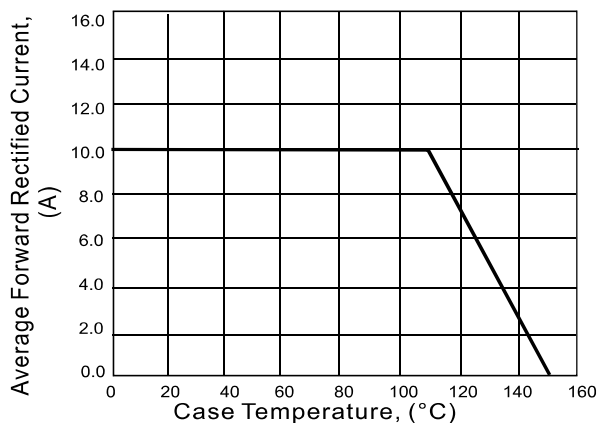
Parameter	Symbol	MBR 1040W	MBR 1045W	MBR 1060W	MBR 10100W	MBR 10150W	MBR 10200W	Unit
Repetitive peak reverse voltage	V _{RRM}	40	45	60	100	150	200	V
RMS voltage	V _{RMS}	28	31.5	42	70	105	140	V
DC blocking voltage	V _{DC}	40	45	60	100	150	200	V
Maximum average forward rectified current T _C =110°C	I _(AV)	10						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150						A
Maximum instantaneous forward voltage at 10.0A	V _F	0.55		0.70	0.85	0.95		V
Maximum DC reverse current T _A =25°C	I _R	0.1			0.05			mA
at rated DC blocking voltage T _A =125°C		50			10			
Typical thermal resistance	R _{θJC}	3.5						°C/W
Operating junction temperature	T _J	+150						°C
Storage temperature range	T _{STG}	-55 to +150						°C

Note: 1. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

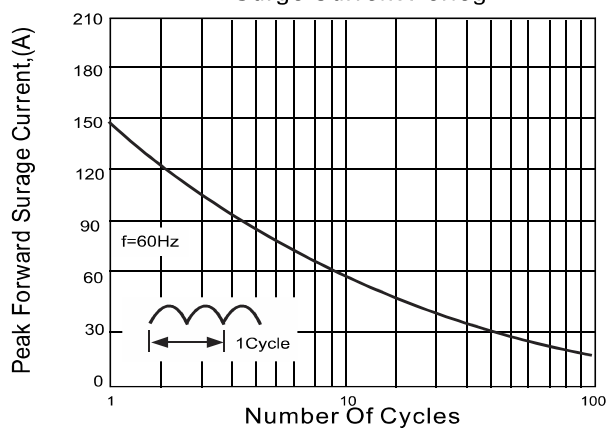
MBR1040W Thru MBR10200W

Rating and characteristic curves

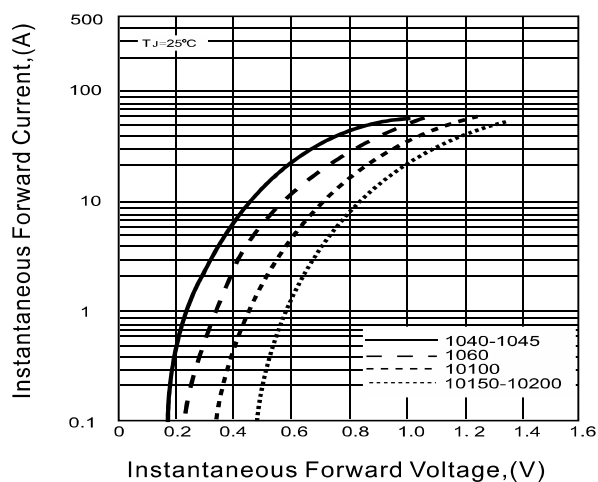
Derating Curve Output Rectified Current



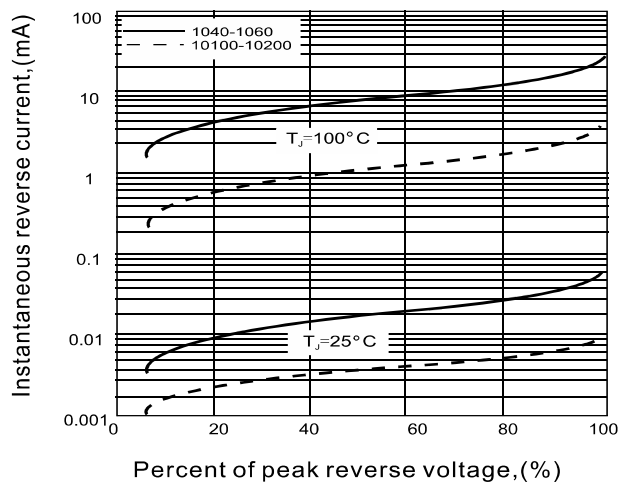
Maximum Non-Repetitive Peak Forward Surge Current Perleg



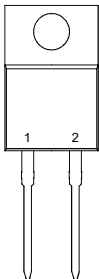
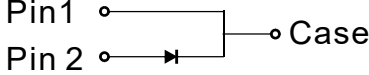
Typical forward voltage characteristics



Typical reverse leakage characteristics



MBR1040W Thru MBR10200W**Pinning information**

Pin	Simplified outline	Symbol
Pin1 Cathode Pin2 Anode		

Marking

Type number	Marking code
MBR1040W	MBR1040
MBR1045W	MBR1045
MBR1060W	MBR1060
MBR10100W	MBR10100
MBR10150W	MBR10150
MBR10200W	MBR10200

Tube packing

Package	Tube (pcs)	Tube Size (m/m)	Box (pcs)	Carton (pcs)
TO-220AC	50	525 x 31.9 x 6.4	1,000	5,000

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Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave-soldering

