

MBR40L100CTW

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MBR40L100CTW

40.0A 100V Power Low VF Schottky Barrier Rectifier

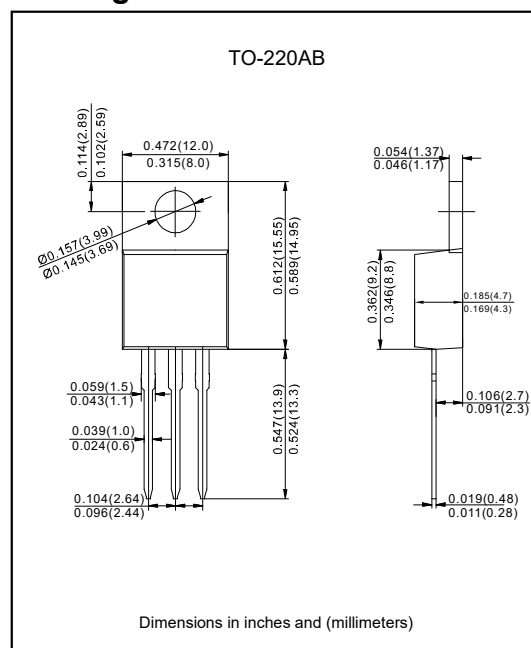
Features

- Ultra low V_F .
- High efficiently operation.
- Low power loss.
- Low stored charge majority carrier conduction.
- High forward surge capability.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates halogen-free parts, ex. MBR40L100CTW-H.

Mechanical data

- Case : Molded plastic, TO-220AB.
- Leads : Solder able per MIL-STD-202, Method 208 .
- Terminals : Puretin plated.
- Polarity : Polarity symbol marking on body.

Package outline



Maximum ratings (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Ratings	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified per device	$I_{(AV)}$	40	A
Maximum average forward rectified per diode		20	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	400	A
Typical thermal resistance per diode (Note 1)	$R_{\theta JC}$	2	$^{\circ}\text{C/W}$
Operating junction temperature	T_J	+150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

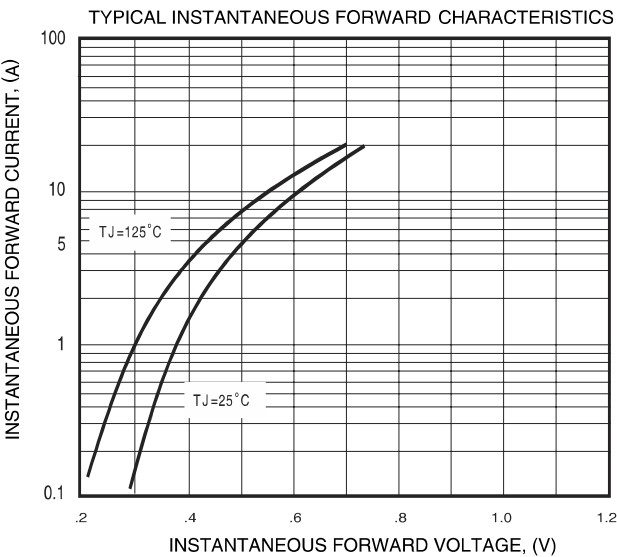
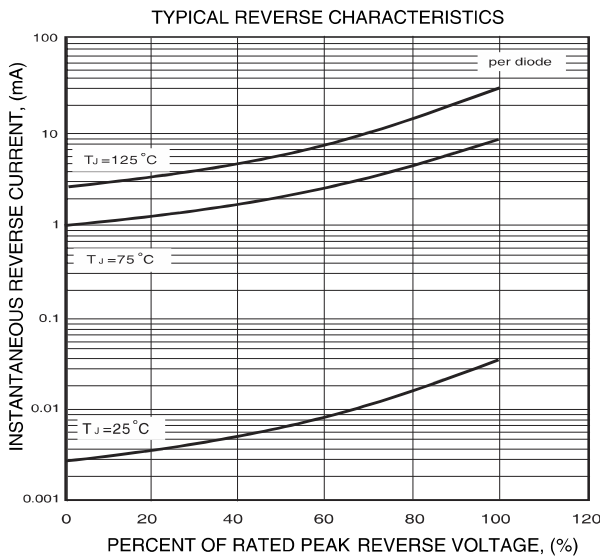
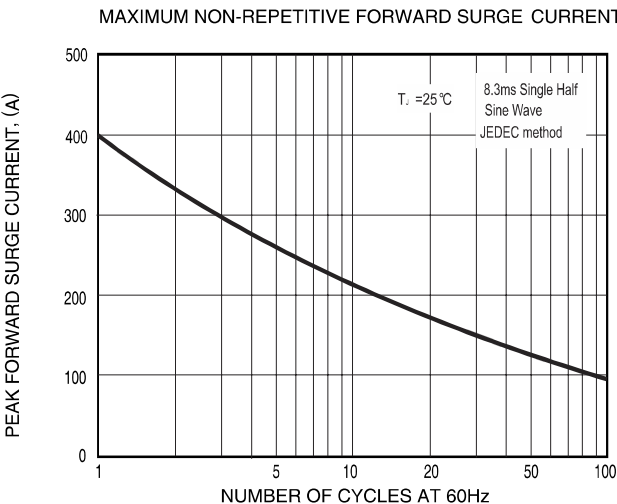
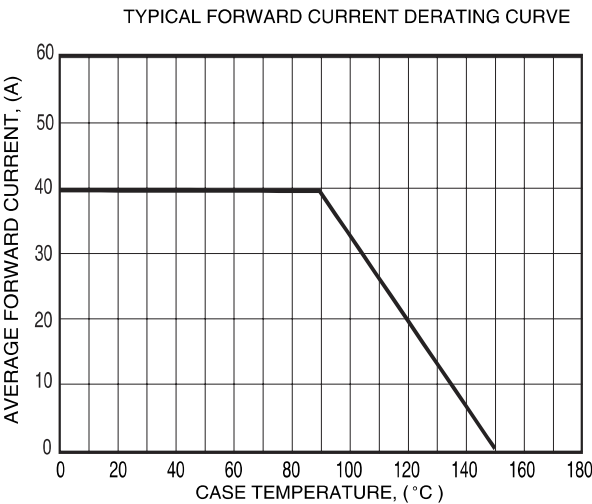
Note : 1. Thermal resistance from junction to case.

MBR40L100CTW

Electrical characteristics (At T_A=25°C unless otherwise noted)

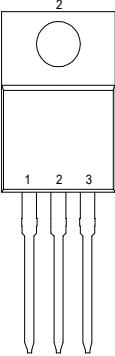
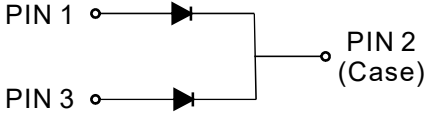
Parameter	Conditions	Symbols	Min.	Typ.	Max.	Units
Breakdown voltage per diode	I _R =0.5mA	V _{BR}	100			V
Instantaneous forward voltage per diode	I _F =20A, T _J =25°C	V _F		0.70	0.73	V
	I _F =20A, T _J =125°C				0.66	
Reverse current per diode	V _R =100V, T _J =25°C	I _R			100	μA
	V _R =100V, T _J =125°C				30	mA

Rating and characteristic curves



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Pinning information

Pin	Simplified outline	Symbol
Pin1 Anode Pin2 Cathode Pin3 Anode		

Marking

Type number	Marking code
MBR40L100CTW	MBR40L100CTW

Tube packing

TYPE NUMBER	PACKAGE	TUBE (pcs)	BOX (pcs)
MBR40L100CTW	TO-220AB	50	2,000

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Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave-soldering

