

MBR2040CT THRU MBR20200CT

20A High Barrier Power Schottky Rectifiers - 40V-200V

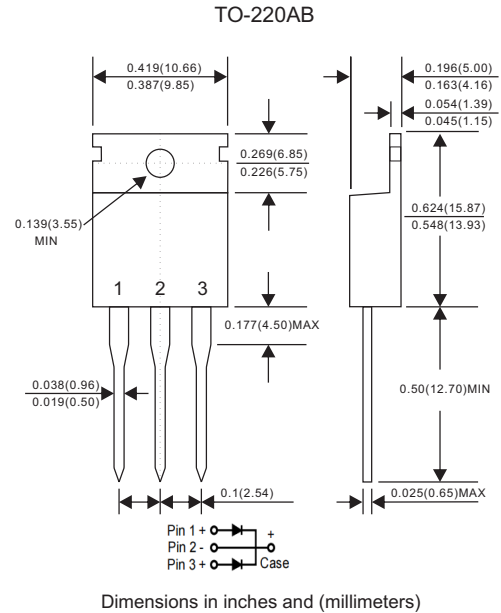
Features

- Low power loss, high efficiency.
- High current capability
- High surge capability.
- Guardring for overvoltage protection.
- Low stored charge majority carrier conduction
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free parts, ex. MBR2040CT-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : JEDEC TO-220AB molded plastic body over passivated chip
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- Mounting Position : Any
- Weight : Approximated 2.10 gram

Package outline



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

PARAMETER	SYMBOLS	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	MBR 2080CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	31.5	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	40	45	50	60	80	100	150	200	V
Maximum average forward rectified current Per device	I_o	20								A
Peak forward surge current 8.3ms single half sine-wave(JEDEC method)	I_{FSM}	150								A
Operating junction temperature range	T_J	-55 to +150						-55 to +175		$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-65 to +175								$^{\circ}\text{C}$

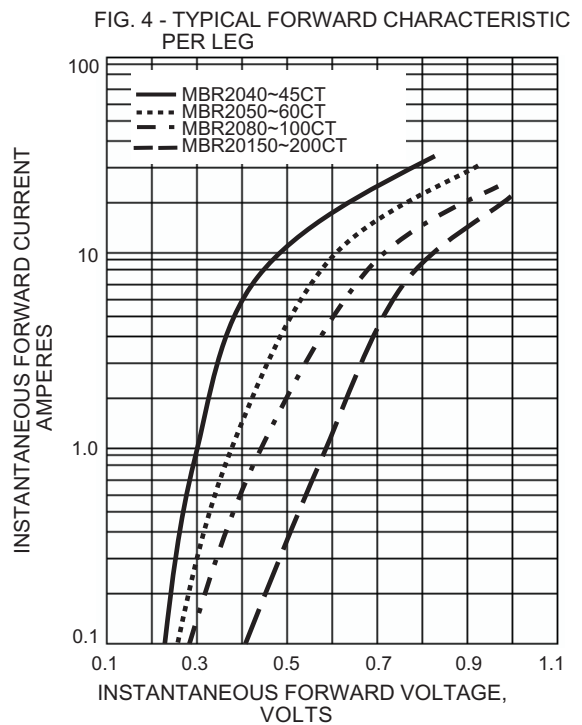
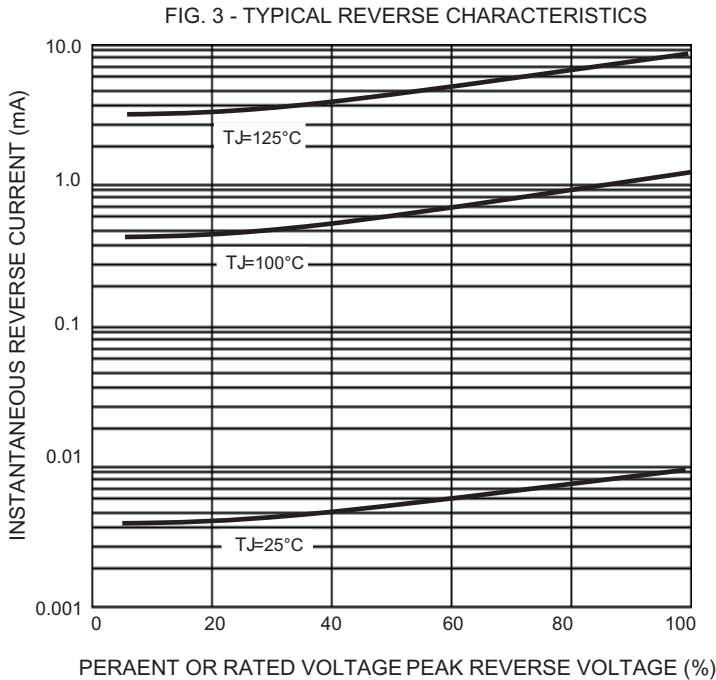
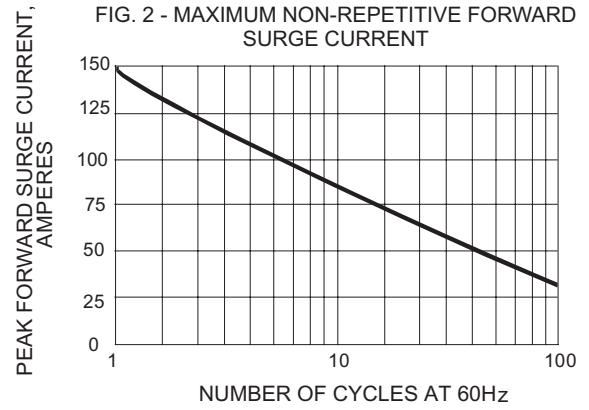
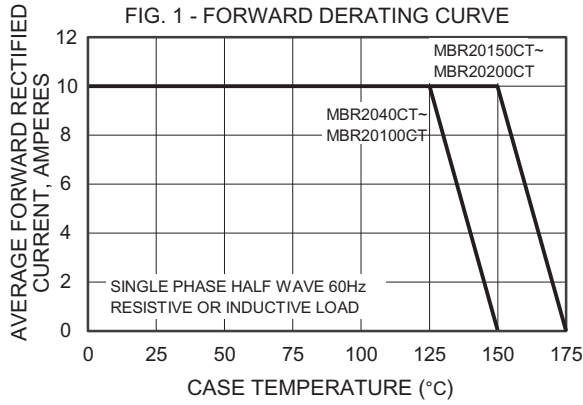
Electrical characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	MBR 2080CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	UNIT
Maximum forward voltage per leg at $I_F=10\text{A}$ at $I_F=20\text{A}$	V_F	0.65 0.84		0.75 0.85		0.85 0.95		0.92 1.00		V V
Maximum DC reverse current at $T_J=25^{\circ}\text{C}$ at rated DC blocking voltage at $T_J=125^{\circ}\text{C}$	I_R	0.05 10				0.01 10				mA mA

Thermal characteristics

PARAMETER	SYMBOLS	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	MBR 2080CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	UNIT
Typical thermal resistance junction to case per leg	$R_{\theta JC}$	2.0								$^{\circ}\text{C}/\text{W}$

Rating and characteristic curves (MBR2040CT THRU MBR20200CT)



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Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBR2040CT	MBR2040CT
MBR2045CT	MBR2045CT
MBR2050CT	MBR2050CT
MBR2060CT	MBR2060CT
MBR2080CT	MBR2080CT
MBR20100CT	MBR20100CT
MBR20150CT	MBR20150CT
MBR20200CT	MBR20200CT

Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
TO-220AB	50	525*32*7.5	1,000	555*150*40	580*230*175	5,000	15.0

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Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave-soldering

