

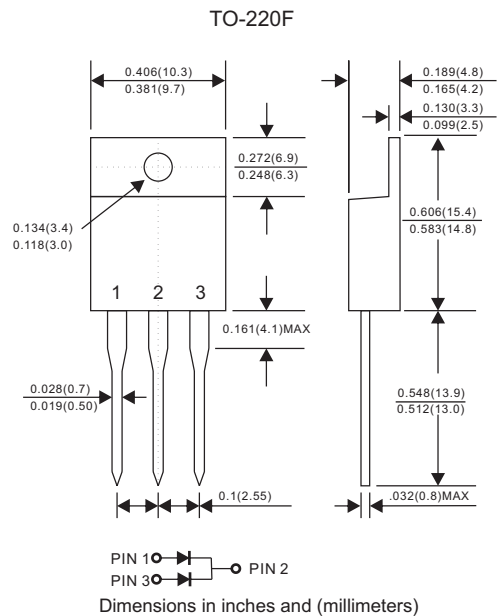
MBR4040FCT THRU MBR40200FCT

40A 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. MBR4040FCT-H.

Package outline



Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : JEDEC TO-220F 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 1.70 gram

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

PARAMETER	SYMBOLS	MBR 4040FCT	MBR 4045FCT	MBR 4050FCT	MBR 4060FCT	MBR 4080FCT	MBR 40100FCT	MBR 40150FCT	MBR 40200FCT	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	40								A
Peak forward surge current 8.3ms single half sine-wave(JEDEC method)	I_{FSM}	250								A
Operating junction temperature range	T_J	-55 to +150						-55 to +175		$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-65 to +175								$^{\circ}\text{C}$

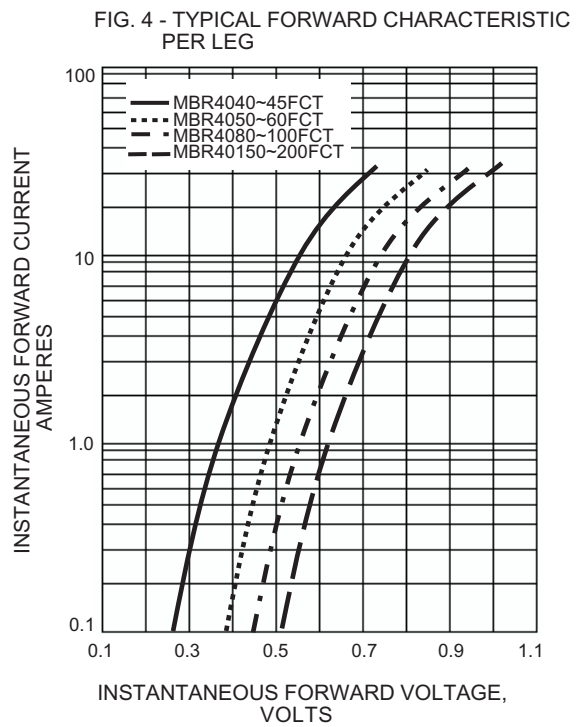
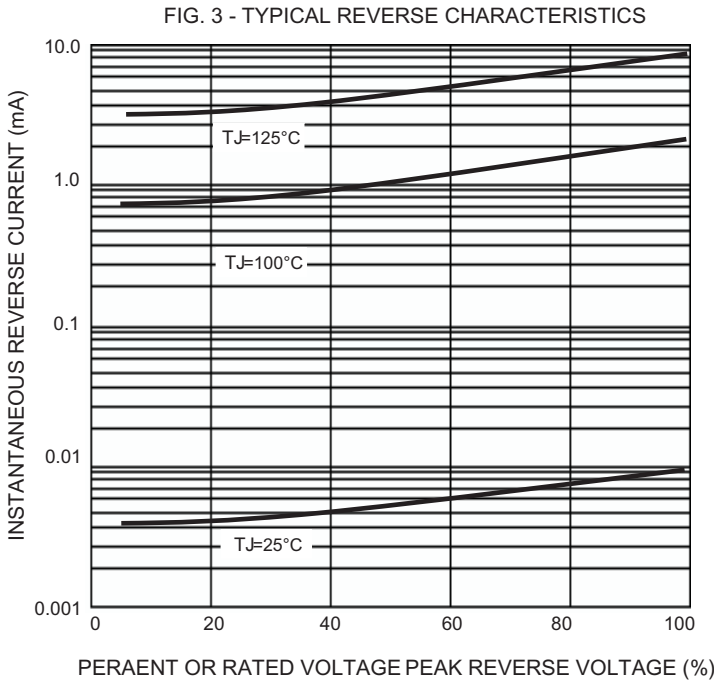
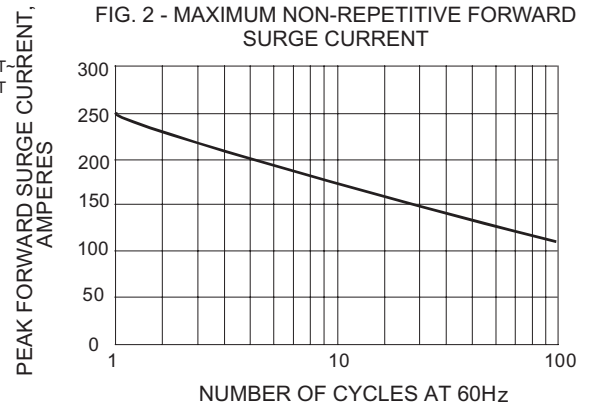
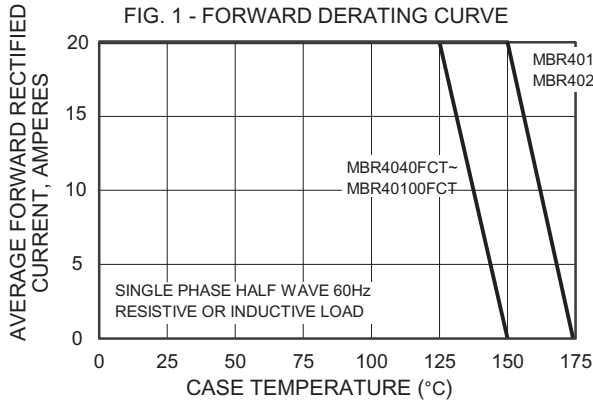
Electrical characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	MBR 4040FCT	MBR 4045FCT	MBR 4050FCT	MBR 4060FCT	MBR 4080FCT	MBR 40100FCT	MBR 40150FCT	MBR 40200FCT	UNIT
Maximum forward voltage per leg at $I_F=20\text{A}$	V_F	0.65		0.75		0.85		0.95		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	0.1			15			0.01		mA mA

Thermal characteristics

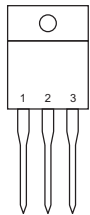
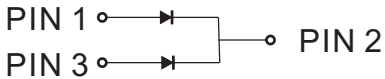
PARAMETER	SYMBOLS	MBR 4040FCT	MBR 4045FCT	MBR 4050FCT	MBR 4060FCT	MBR 4080FCT	MBR 40100FCT	MBR 40150FCT	MBR 40200FCT	UNIT
Typical thermal resistance junction to case per leg	$R_{\theta JC}$	2.0								$^{\circ}\text{C}/\text{W}$

Rating and characteristic curves (MBR4040FCT THRU MBR40200FCT)



MBR4040FCT THRU MBR40200FCT

Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBRF4040CT	MBRF4040CT
MBRF4045CT	MBRF4045CT
MBRF4050CT	MBRF4050CT
MBRF4060CT	MBRF4060CT
MBRF4080CT	MBRF4080CT
MBRF40100CT	MBRF40100CT
MBRF40150CT	MBRF40150CT
MBR40200CT	MBRF40200CT

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-220F	50	525*32*7.0	1,000	555*150*40	580*230*175	5,000	15.0

MBRF4040CT THRU MBRF40200CT

Suggested thermal profiles for soldering processes

1. Lead free temperature profile wave-soldering

