MBR2020(F,B,H)CT thru MBR20200(F,B,H)CT

20A Schottky Barrier Rectifier

FEATURE

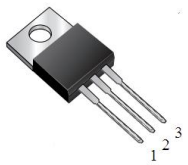
- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High ESD capability
- High temperature soldering guaranteed: 260°C/10s/0.25"(6.35mm) from case

MECHANICAL DATA

- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Mounting position: any

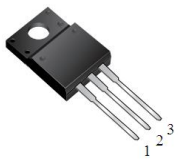
TYPICAL APPLICATIONS

For use in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, DC/DC converters and polarity protection application.



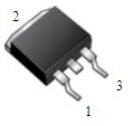
TO-220AB

MBR20XXCT



ITO-220AB

MBR20XXFCT



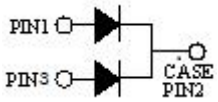
TO-263

MBR20XXBCT



TO-262

MBR20XXHCT



Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS

Parameter		Symbol	MBR 2020CT	MBR 2045CT	MBR 2060CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	20	45	60	100	150	200	V
Maximum RMS Voltage		V_{RMS}	14	32	42	70	105	140	V
Maximum DC Blocking Voltage		V_{DC}	20	45	60	100	150	200	V
Maximum Average Forward Rectified Current at T_C=90°C	total device	$I_{F(AV)}$	20.0						A
	per diode		10.0						
Peak Forward Surge Current 8.3ms Single Half sine-wave superimposed on rate load per diode (JEDEC method)		I_{FSM}	175						A
Junction Capacitance (Note1)		C_J	700			300			pF
Storage Temperature Range		T_{STG}	-55 to +150						°C
Operation Temperature Range		T_J	-55 to +150						°C

ELECTRONICAL CHARACTERISTICS

Parameter		Symbol	MBR 2020CT	MBR 2045CT	MBR 2060CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	units
Maximum Forward Voltage Drop per diode at 10A (Note 2)		V_F	0.55	0.60	0.70	0.85	0.90	0.95	V
Maximum DC Reverse Current at rated DC blocking voltage (Note 2)	@ T_C =25°C	I_R	0.15			0.1			mA
	@ T_C=100°C		40.0			20.0			

THERMAL CHARACTERISTICS

Parameter	Symbol	ITO-220	TO-220	TO-262 TO-263	units
Typical Thermal Resistance (Note 3)	$R_{th\ (JC)}$	3.0	2.0	2.0	°C/W

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc.
2. Pulse test: 300 μs pulse width, 1% duty cycle.
3. Thermal Resistance from Junction to Case Mounted on heatsink.