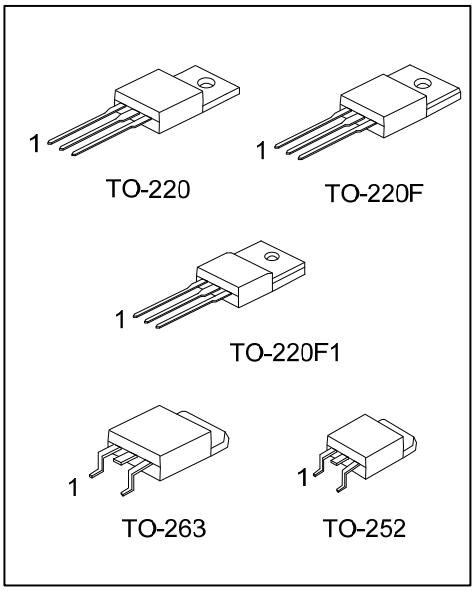
MBR10200C

DIODE

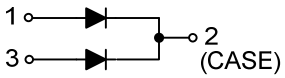
SCHOTTKY BARRIER RECTIFIER



■ FEATURES

* 10 amps total (5 amps per diode leg)
* Guard ring for transient protection
* Low forward voltage drop
* High surge capability
* Low power loss/High efficiency

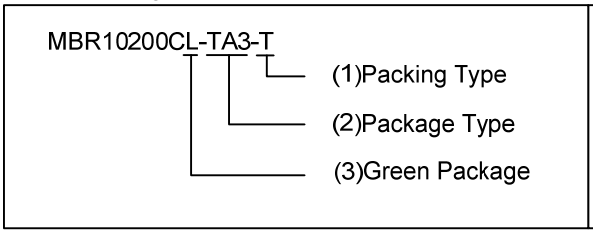
■ SYMBOL



■ ORDERING INFORMATION

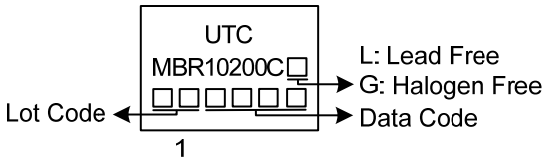
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10200CL-TA3-T	MBR10200CG-TA3-T	TO-220	A	K	A	Tube
MBR10200CL-TF3-T	MBR10200CG-TF3-T	TO-220F	A	K	A	Tube
MBR10200CL-TF1-T	MBR10200CG-TF1-T	TO-220F1	A	K	A	Tube
MBR10200CL-TN3-R	MBR10200CG-TN3-R	TO-252	A	K	A	Tape Reel
MBR10200CL-TQ2-T	MBR10200CG-TQ2-T	TO-263	A	K	A	Tube
MBR10200CL-TQ2-R	MBR10200CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



(1) T: Tube, R: Tape Reel
(2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1
TN3: TO-252, TQ2: TO-263
(3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	200	V
Maximum non-repetitive Peak Reverse Voltage		V_{RM}	200	V
Maximum DC Blocking Voltage		V_R	200	V
Average Forward Rectified Output Current	Per Leg	I_O	5	A
	Total		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		I_{FSM}	150	A
Junction Capacitance (Note 4)		C_J	300	pF
Operating Temperature		T_J	-65 ~ +150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°C

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220	θ_{JC}	2	°C/W
	TO-220F/TO-220F1		4	°C/W
	TO-252		6	°C/W

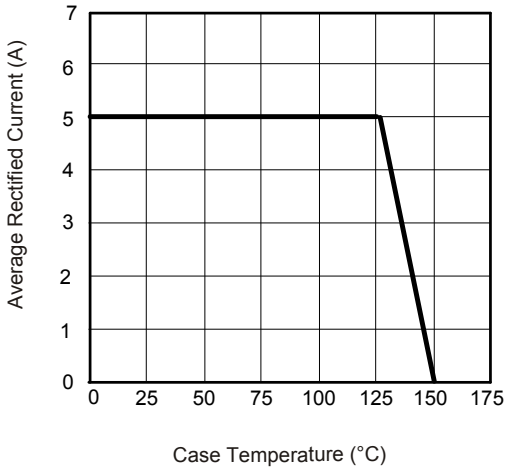
■ ELECTRICAL CHARACTERISTICS (Note 3)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V_F	I_F=5A, T_C=25°C			0.95	V
		I_F=5A, T_C=125°C			0.85	V
		I_F=10A, T_C=25°C			1	V
		I_F=10A, T_C=125°C			0.95	V
Instantaneous Reverse Current	I_R	Rated DC Voltage, T_C=25°C			500	μA
		Rated DC Voltage, T_C=125°C			20	mA

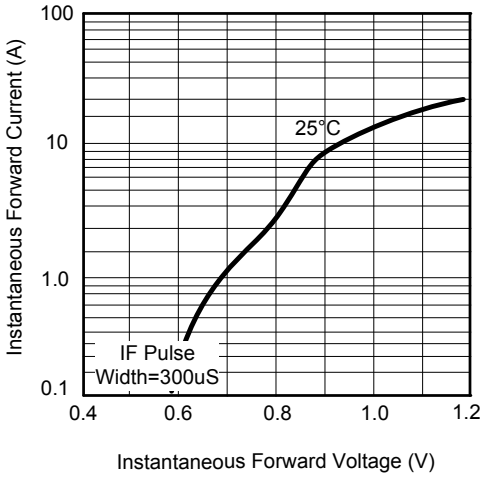
Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. 2.0μs Pulse Width, f = 1.0KHz.
3. Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.
4. Applied V_R = 4.0V and f = 1.0MHz.

■ TYPICAL CHARACTERISTICS

Forward Derating Curve



Typical Forward Characteristics



Typical Reverse Characteristics