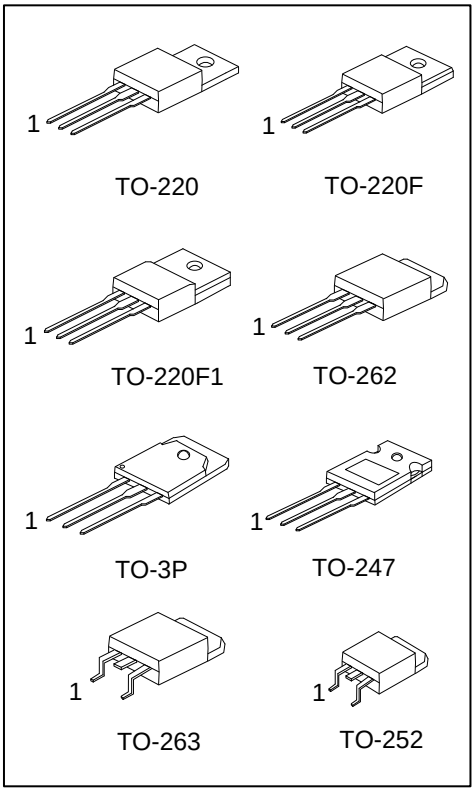
MBR20200C

DIODE

SCHOTTKY BARRIER RECTIFIERS



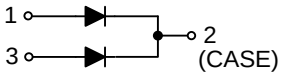
■ DESCRIPTION

The UTC **MBR20200C** is a Schottky Barrier Rectifier with high efficiency, low power dissipation and high current capacity. It can be applied in low voltage, high frequency inverters, polarity protection and free wheeling applications.

■ FEATURES

* High surge capability
* High efficiency, low power dissipation, high current capability, low forward voltage drop

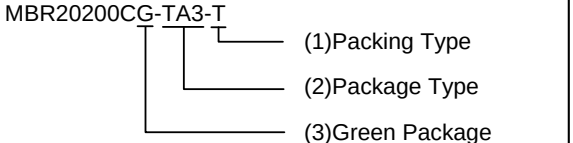
■ SYMBOL



■ ORDERING INFORMATION

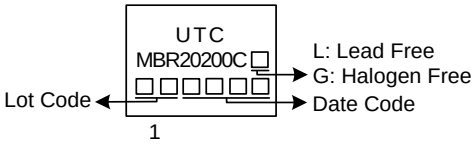
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR20200CL-TA3-T	MBR20200CG-TA3-T	TO-220	A	K	A	Tube
MBR20200CL-TF3-T	MBR20200CG-TF3-T	TO-220F	A	K	A	Tube
MBR20200CL-TF1-T	MBR20200CG-TF1-T	TO-220F1	A	K	A	Tube
MBR20200CL-TN3-R	MBR20200CG-TN3-R	TO-252	A	K	A	Tape Reel
MBR20200CL-T3P-T	MBR20200CG-T3P-T	TO-3P	A	K	A	Tube
MBR20200CL-T47-T	MBR20200CG-T47-T	TO-247	A	K	A	Tube
MBR20200CL-T2Q-T	MBR20200CG-T2Q-T	TO-262	A	K	A	Tube
MBR20200CL-TQ2-T	MBR20200CG-TQ2-T	TO-263	A	K	A	Tube
MBR20200CL-TQ2-R	MBR20200CG-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, T3P: TO-3P, T47: TO-247
T2Q: TO-262, TQ2: TO-263
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



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

PARAMETER		SYMBOL	RATINGS	UNIT
Recurrent Peak Reverse Voltage		V_{RRM}	200	V
RMS Voltage		$V_{R(RMS)}$	140	V
DC Blocking Voltage		V_R	200	V
Average Forward Rectified Output Current (T_C=105°C)	Per Leg	I_O	10	A
	Total		20	
DC Reverse Current (T_C=25°C)		I_R	1.0	mA
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz) (T_C=135°C)		I_{FRM}	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave		I_{FSM}	150	A
Peak Repetitive Reverse Surge Current (Note 3)		I_{RRM}	1.0	A
Voltage Rate of Change (Rated V_R)		dv/dt	10000	V/μs
Junction Capacitance (Note 4)		C_J	320	pF
Operating Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220/TO-262 TO-263	θ_{JC}	2	°C/W
	TO-220F/TO-220F1		4	°C/W
	TO-247		1.5	°C/W
	TO-252		3	°C/W
	TO-3P		1.5	°C/W

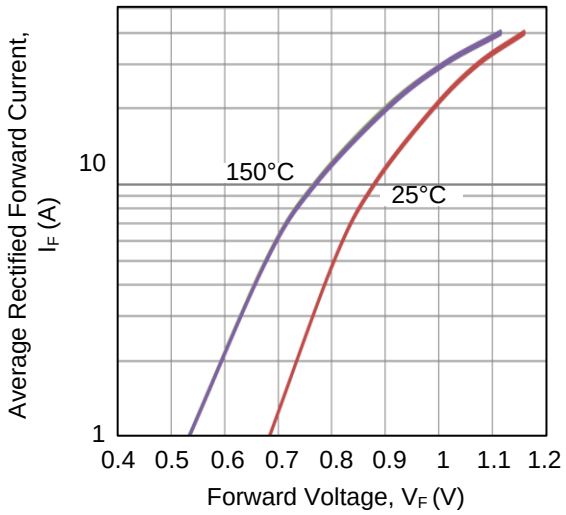
■ ELECTRICAL CHARACTERISTICS (Note 3)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop	V_F	I_F=10A, T_C=25°C			0.99	V
		I_F=10A, T_C=125°C			0.87	
		I_F=20A, T_C=25°C			1.23	
		I_F=20A, T_C=125°C			1.10	
Instantaneous Reverse Current	I_R	Rated DC Voltage, T_C=25°C			1.0	mA
		Rated DC Voltage, T_C=125°C			50	

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

Average Rectified Forward Current vs. Forward Voltage



Reverse Current Vs. Reverse Breakdown Voltage