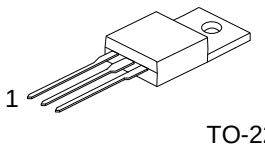
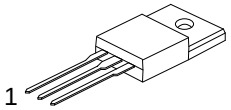
MGBR20L200

Preliminary ***DIODE***

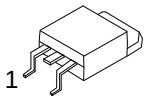
MOS GATED BARRIER RECTIFIER



TO-220



TO-220F



TO-252

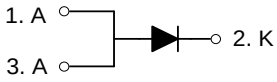
■ DESCRIPTION

The UTC **MGBR20L200** is a surface mount mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high switching speed, etc.

■ FEATURES

* Low forward voltage drop
* High switching speed

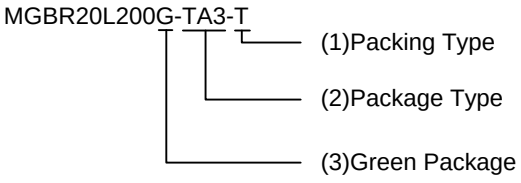
■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR20L200L-TA3-T	MGBR20L200G-TA3-T	TO-220	A	K	A	Tube
MGBR20L200L-TF3-T	MGBR20L200G-TF3-T	TO-220F	A	K	A	Tube
MGBR20L200L-TN3-R	MGBR20L200G-TN3-R	TO-252	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Common Cathode

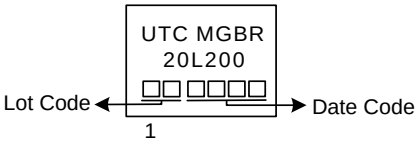


(1) T: Tube, R: Tape Reel

(2) TA3: TO-220, TF3: TO-220F, TN3: TO-252

(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



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

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		V_{RM}	200	V
Working Peak Reverse Voltage		V_{RWM}	200	V
Peak Repetitive Reverse Voltage		V_{RRM}	200	V
Average Rectified Output Current	T_C=140°C	I_O	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	300	A
Operating Junction Temperature		T_J	-65 ~ +150	°C
Storage Temperature		T_{STG}	-65 ~ +150	°C

Note: 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.

■ THERMAL CHARACTERISTICS (PER LEG)

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

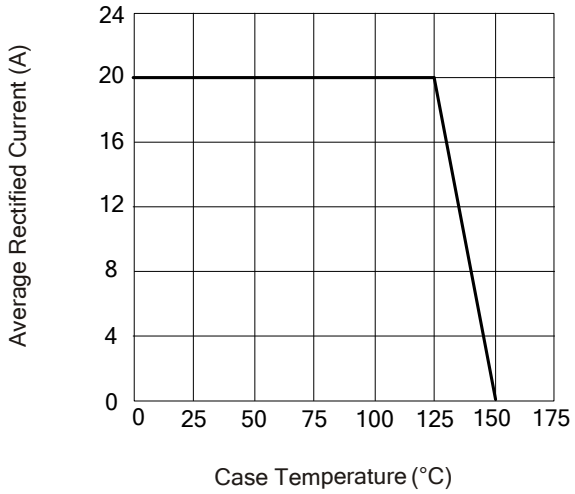
■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C,unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.5mA	200			V
Forward Voltage Drop	V_{FM}	I_F=5A, T_J=25°C		0.71		V
		I_F=5A, T_J=125°C		0.58		V
		I_F=10A, T_J=25°C		0.75		V
		I_F=10A, T_J=125°C		0.65		V
		I_F=20A, T_J=25°C		0.80	0.90	V
		I_F=20A, T_J=125°C		0.75	0.80	V
Leakage Current	I_{RM}	V_R=200V, T_J=25°C		0.50	100	μA
		V_R=200V, T_J=125°C		0.05	10	mA

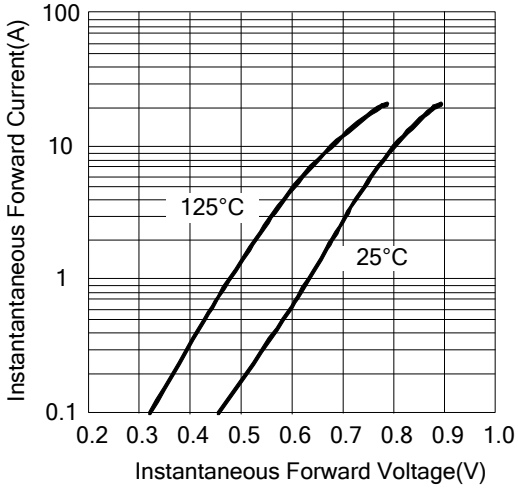
Note: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.

■ TYPICAL CHARACTERISTICS

Forward Derating Curve



Typical Forward Characteristics



Typical Reverse Characteristics