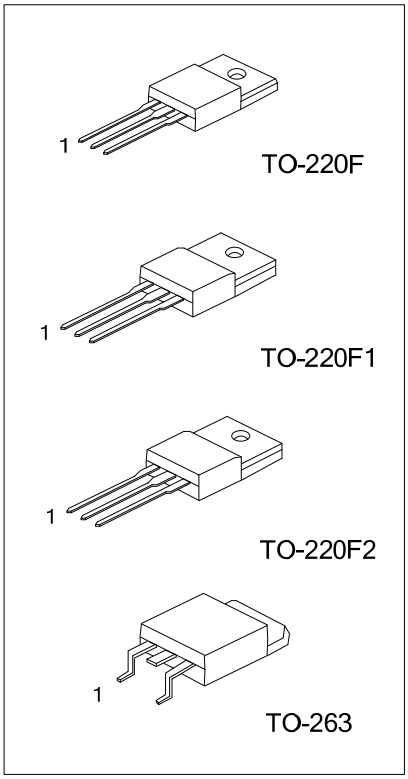
MBR10150C

DIODE

HIGH VOLTAGE POWER SCHOTTKY RECTIFIER



■ DESCRIPTION

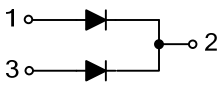
The UTC **MBR10150C** is a high voltage dual schottky rectifier, providing the designers with high current capacity and guard-ring for stress protection.

The UTC **MBR10150C** is suitable for medium voltage operation and high frequency circuits where low switching losses and low noise are required

■ FEATURES

* High surge capacity
* Low Forward Voltage
* Guard-ring for stress protection

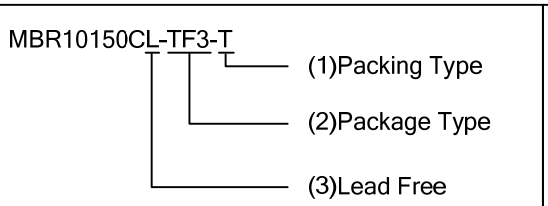
■ SYMBOL



■ ORDERING INFORMATION

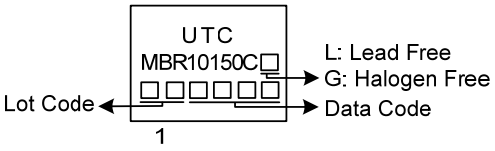
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MBR10150CL-TF1-T	MBR10150CG-TF1-T	TO-220F1	A	K	A	Tube
MBR10150CL-TF2-T	MBR10150CG-TF2-T	TO-220F2	A	K	A	Tube
MBR10150CL-TF3-T	MBR10150CG-TF3-T	TO-220F	A	K	A	Tube
MBR10150CL-TQ2-T	MBR10150CG-TQ2-T	TO-263	A	K	A	Tube
MBR10150CL-TQ2-R	MBR10150CG-TQ2-R	TO-263	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



(1) T: Tube, R: Tape Reel
(2) TF1: TO-220F1, TF2: TO-220F2, TF3: TO-220F, TQ2: TO-263
(3) L: Lead Free, G: Halogen Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (Per Diode Leg)

PARAMETER		SYMBOL	RATINGS	UNIT
DC Blocking Voltage		V_R	150	V
Peak Repetitive Reverse Voltage		V_{RRM}		
Working Peak Reverse Voltage		V_{RWM}		
Average Rectified Forward Current (Rated V_R) T_C=142°C	Per Leg	I_O	5	A
	Total		10	A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz) T_C=142°C		I_{FRM}	10	A
Non-Repetitive Peak Surge Current (Surge Applied At Rated Load Conditions Half Wave, Single Phase, 60Hz)		I_{FSM}	100	A
Voltage Rate of Change (Rated V_R)		dv/dt	10000	V/μs
Operating Junction Temperature (Note 2)		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ 150	°C

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. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J<1/\theta_{JA}$.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient		θ_{JA}	60	°C/W
Junction to Case	TO-263	θ_{JC}	2	°C/W
	TO-220F/TO-220F1 TO-220F2		4.5	°C/W

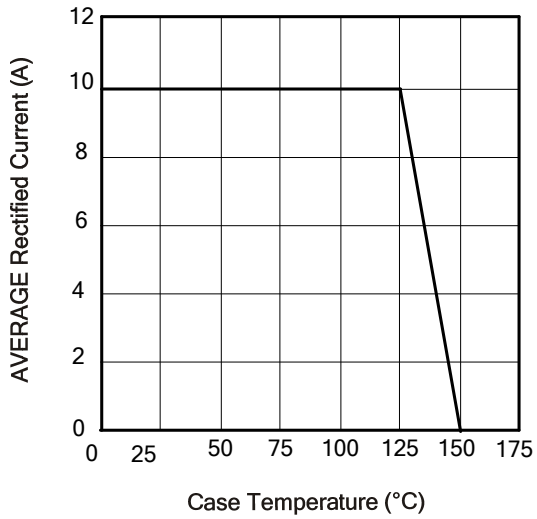
■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage Drop (Note 1)	V_F	I_F=5A, T_C=25°C			0.92	V
		I_F=5A, T_C=125°C			0.82	
Instantaneous Reverse Current (Note 1)	I_R	Rated DC Voltage, T_C=25°C			0.1	mA
		Rated DC Voltage, T_C=125°C			15.0	

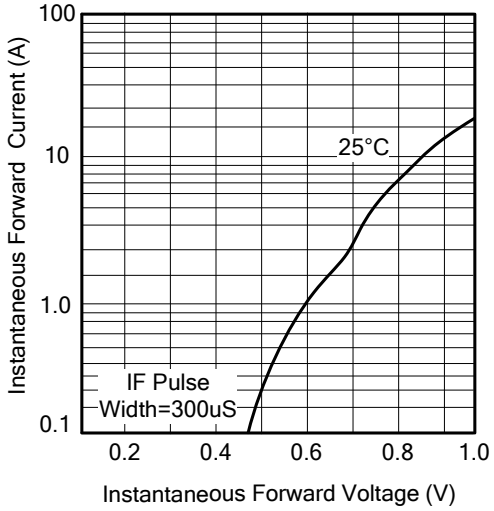
Notes: Pulse Test: Pulse Width=300μs, Duty Cycle ≤ 2.0%.

■ TYPICAL CHARACTERISTICS

Forward Derating Curve



Typical Forward Characteristics



Typical Reverse Characteristics