

Schottky Barrier Rectifier

MBRF40100CT

FEATURES

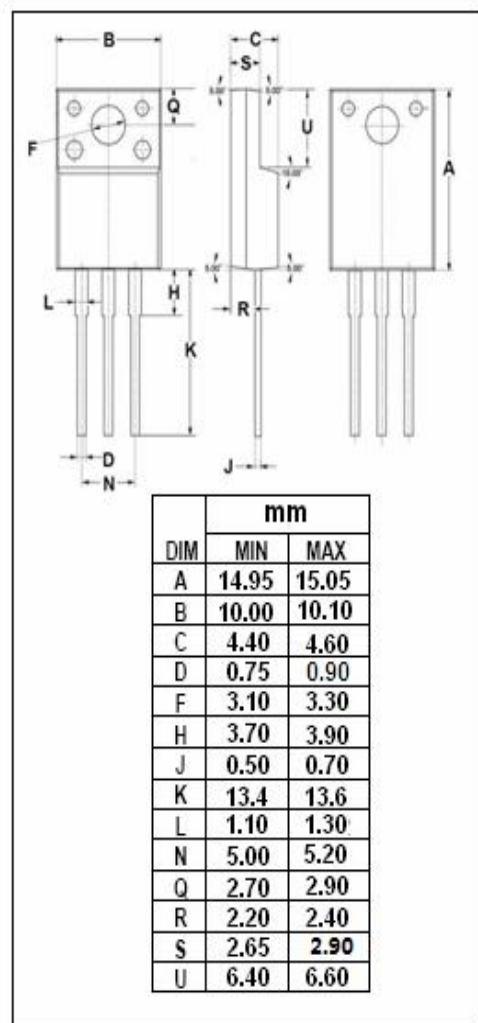
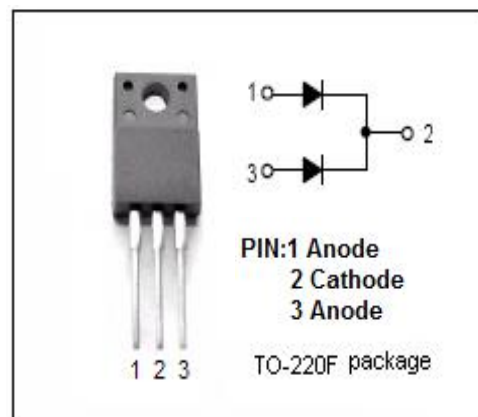
- With TO-220F packaging
- High Junction Temperature Capability
- Low forward voltage drop
- High current capability
- Low power loss, high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching power supply
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current@ $T_c=135^{\circ}\text{C}$	40	A
I_{FSM}	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions)	280	A
T_J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.5	$^{\circ}C/W$

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 1%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	$I_F = 10A ; T_c = 25^{\circ}C$ $I_F = 10A ; T_c = 125^{\circ}C$ $I_F = 20A ; T_c = 25^{\circ}C$ $I_F = 20A ; T_c = 125^{\circ}C$	0.70 0.59 0.80 0.70	V
I_R	Maximum Instantaneous Reverse Current	$V_R = \text{rated } V_{RRM} ; T_j = 25^{\circ}C$ $V_R = \text{rated } V_{RRM} ; T_j = 125^{\circ}C$	1.0 20	mA

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