

Schottky Barrier Rectifier

MBR40120

FEATURES

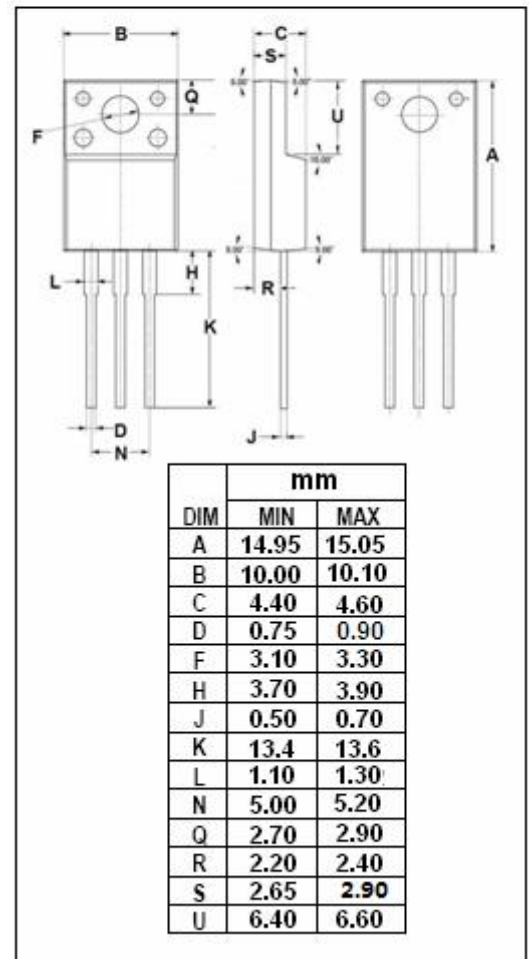
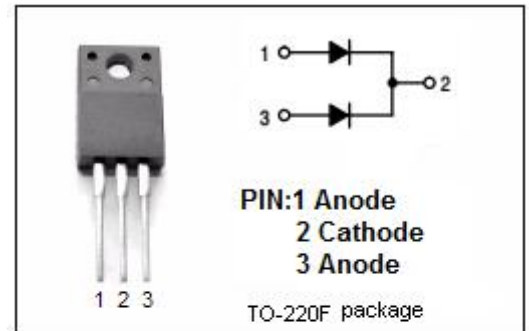
- Low forward voltage
- High surge capacity
- Low Power Loss, High Efficiency
- Guard ring for stress protection
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power supply-output rectification
- Power management
- Instrumentation

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RMS} V _R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	120	V
I _{F(AV)}	Average Rectified Forward Current	40	A
I _{FSM}	Nonrepetitive Peak Surge Current 8.3ms single half sine-wave superimposed on rated load conditions	330	A
T _J	Junction Temperature	-65~150	°C
T _{stg}	Storage Temperature Range	-65~175	°C
dv/dt	Voltage Rate of Change (Rated V _R)	1000	V/μs



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.2	°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	$I_F = 20A ; T_c = 25^\circ C$	0.95	V
		$I_F = 20A ; T_c = 125^\circ C$	0.92	
		$I_F = 40A ; T_c = 25^\circ C$	1.02	
		$I_F = 40A ; T_c = 125^\circ C$	0.98	
I_R	Maximum Instantaneous Reverse Current	$V_R = V_{RWM} ; T_c = 25^\circ C$	1	mA
		$V_R = V_{RWM} ; T_c = 125^\circ C$	100	

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