

Schottky Barrier Rectifier

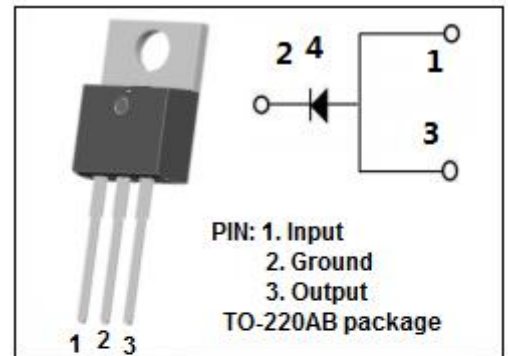
MBR10300

FEATURES

- Metal silicon junction, majority carrier conduction
- Low Power Loss/High Efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- High temperature soldering guaranteed
- RoHS product
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

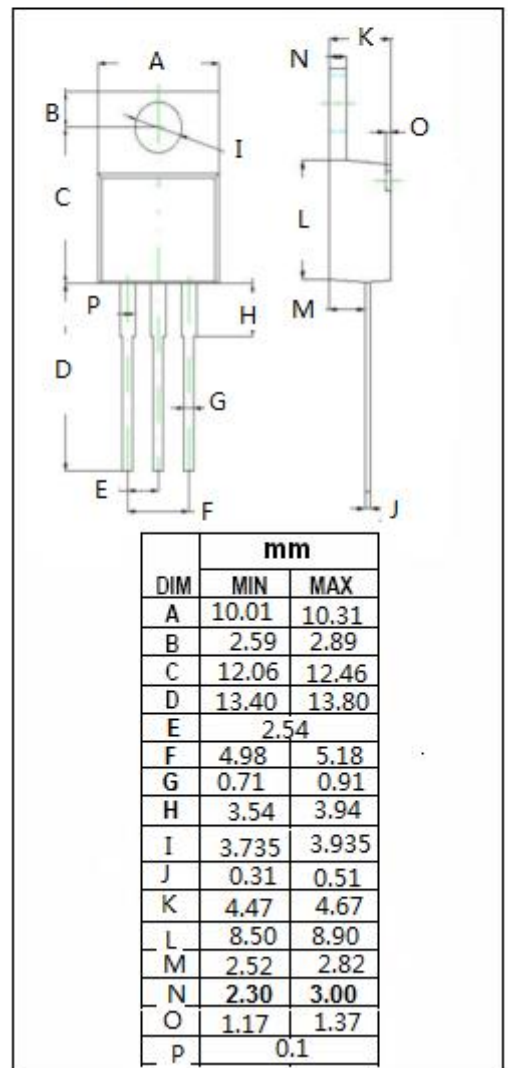
APPLICATIONS

- Designed for low-voltage, high frequency inverters, free wheeling and polarity protection applications .



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	300	V
I _{F(AV)}	Average Rectified Forward Current (Rated V _R) T _C = 125°C	10	A
I _{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	180	A
I _{RRM}	Peak Repetitive Reverse Surge Current (20 μs, 1.0kHz)	0.5	A
T _J	Junction Temperature	-40~150	°C
T _{stg}	Storage Temperature Range	-40~175	°C
dv/dt	Voltage Rate of Change (Rated V _R)	10,000	V/ μs



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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3.0	°C/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F	Maximum Instantaneous Forward Voltage	I _F = 10A ; T _C = 25°C	1.1	V
I _R	Maximum Instantaneous Reverse Current	Rated DC Voltage, T _C = 125°C Rated DC Voltage, T _C = 25°C	3.0 0.01	mA

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