

## Schottky Barrier Rectifier

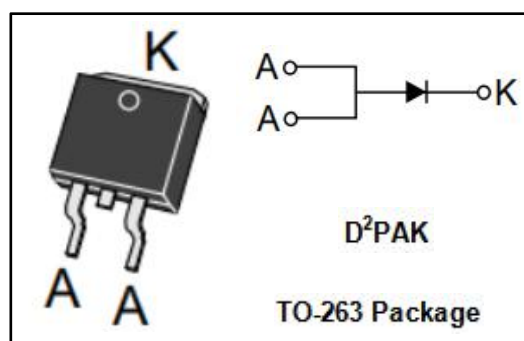
## MBRB40250TG

## FEATURES

- Guard -Ring for Stress Protection
- Low Forward Voltage
- High Operating Junction Temperature
- Low Power Loss/High Efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## MECHANICAL CHARACTERISTICS

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds



## ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	250	V
I <sub>F(AV)</sub>	Average Rectified Forward Current (Rated V <sub>R</sub> ) T <sub>C</sub> = 105°C	40	A
I <sub>FRM</sub>	Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20kHz) T <sub>C</sub> = 105°C	80	A
I <sub>FSM</sub>	Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	150	A
T <sub>J</sub>	Junction Temperature	-65~175	°C
T <sub>stg</sub>	Storage Temperature Range	-65~175	°C
dv/dt	Voltage Rate of Change (Rated V <sub>R</sub> )	10,000	V/μs

## THERMAL CHARACTERISTICS

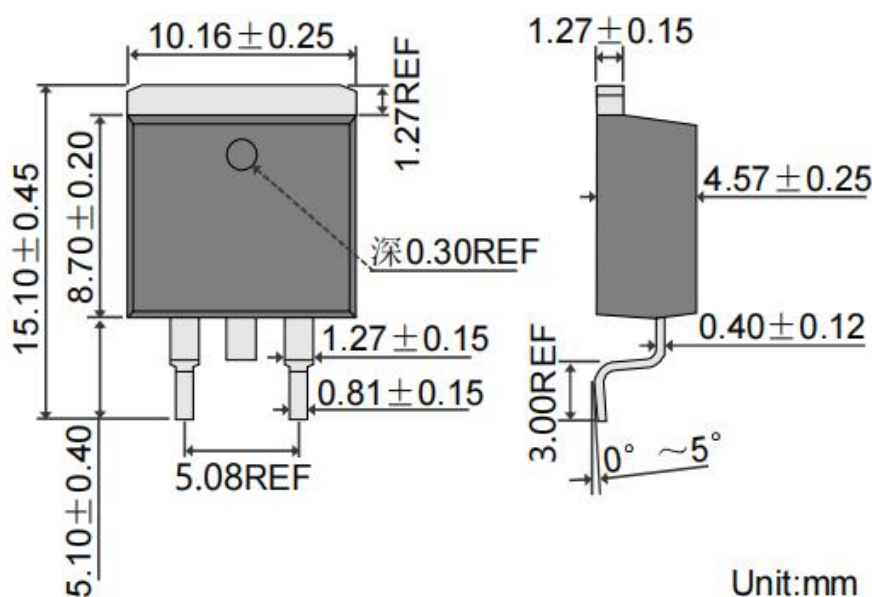
SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	2.0	°C/W

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**ELECTRICAL CHARACTERISTICS** (Pulse Test: Pulse Width=300  $\mu$ s, Duty Cycle $\leq$ 2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
$V_F$	Maximum Instantaneous Forward Voltage	$I_F=20A$ ; $T_C=25^\circ C$ $I_F=20A$ ; $T_C=125^\circ C$	0.89 0.78	V
$I_R$	Maximum Instantaneous Reverse Current	Rated DC Voltage, $T_C=25^\circ C$ Rated DC Voltage, $T_C=125^\circ C$	0.25 30	mA


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