

Ultra-fast Recovery Rectifier

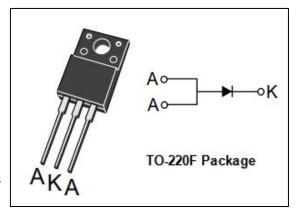
MBRF40250TG

FEATURES

- With TO-220F Package
- · Ultra-fast switching
- High surge current capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Anti-parallel diode for high frequency switching devices
- Uninterruptible Power Supplies (UPS)
- Free wheeling diode in converters and motor control circuits



ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER		UNIT
V _{RRM} V _{RWM} V _R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	250	V
I _{F(AV)}	Average Rectified Forward Current	40	А
I _{FSM}	Nonrepetitive Peak Surge Current@45℃ (Surge applied at rated load conditions half-wave, single phase, 60Hz)	80	А
TJ	Junction Temperature	-65~150	${\mathbb C}$
T _{stg}	Storage Temperature Range	-65~175	${\mathbb C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	2.0	°C/W

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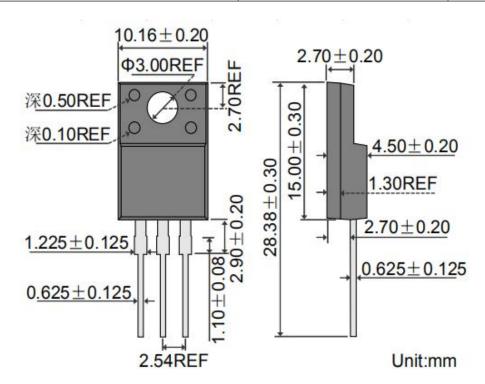


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ELECTRICAL CHARACTERISTICS(T_a=25°C) (Pulse Test: Pulse Width=300 µ s,Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V _F *	Maximum Instantaneous Forward Voltage	I _F = 40A ;Tj=25 °C I _F = 40A ;Tj=125 °C	0.97 0.86	V
I _{R*}	Maximum Instantaneous Reverse Current	V _R = V _{RWM;} Tj=25°C V _R = V _{RWM;} Tj=125°C	0.03 30	mA
t _{rr}	Maximum Reverse Recovery Time	I _F = 1.0A;di/dt = 50A/μs	35	ns



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