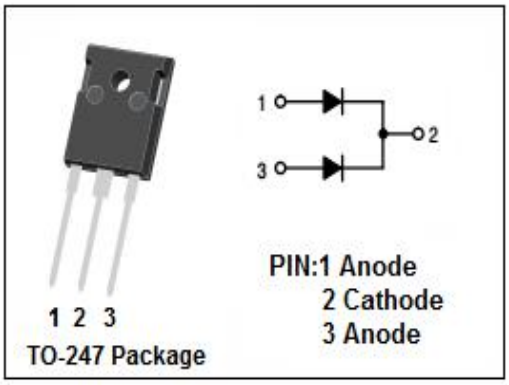
Schottky Barrier Rectifier — MBR3040PT

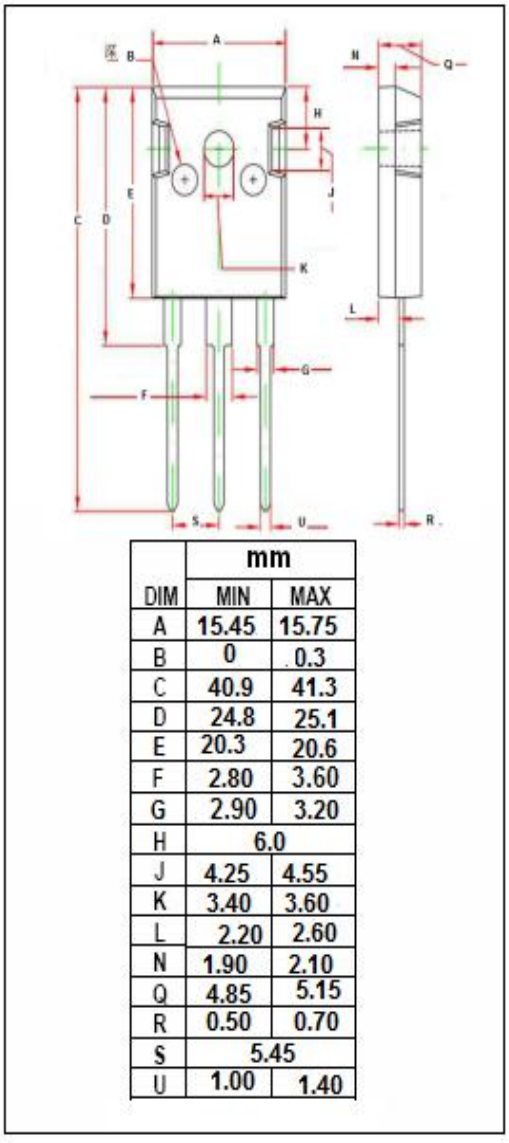
FEATURES

- With TO-247(TO-3) packaging
- Metal silicon junction, majority carrier conduction
- Low leakage current, low power loss, high efficiency
- High current capability and low forward voltage drop
- Guardring for overvoltage protection
- High surge capability
- Low stored charge majority carrier conduction
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Switching power supply
- High frequency inverters
- Freewheeling diodes
- Reverse battery protection
- Polarity protection applications



DIM	mm MIN	MAX
A	15.45	15.75
B	0	0.3
C	40.9	41.3
D	24.8	25.1
E	20.3	20.6
F	2.80	3.60
G	2.90	3.20
H	6.0	
J	4.25	4.55
K	3.40	3.60
L	2.20	2.60
N	1.90	2.10
Q	4.85	5.15
R	0.50	0.70
S	5.45	
U	1.00	1.40

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RMS} V_R	Peak Repetitive Reverse Voltage RMS Voltage DC Blocking Voltage	40	V
$I_{F(AV)}$	Average Rectified Forward Current @Tc=125℃	30	A
I_{FSM}	Nonrepetitive Peak Surge Current (8.3ms single half sine-wave superimposed on rated load conditions)	200	A
I_{RRM}	Peak Repetitive Reverse Current	1.0	mA
T_J	Junction Temperature	-65~150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.4	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 20A ;Tc= 25℃ I_F= 20A ;Tc= 125℃	0.65 0.60	V
I_R	Maximum Instantaneous Reverse Current	V_R= rated V_{RRM}; Tc= 25℃ V_R= rated V_{RRM}; Tc= 125℃	1.0 60	mA