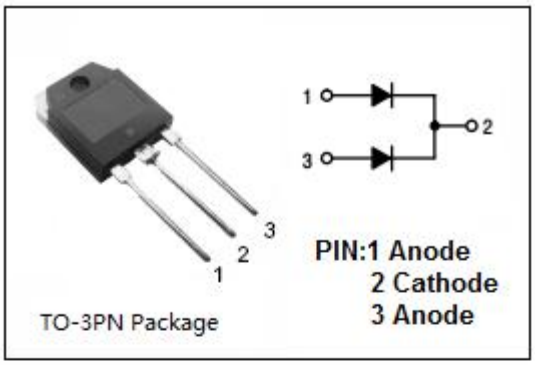
Schottky Barrier Rectifier — MBR4045PT

FEATURES

- Plastic material used carriers Unerwriter Laboratory
- Metal silicon rectifier, majonty carrier conduction
- Low Power Loss,High Efficiency
- Guard ring for transient protection
- High Surge Capability,High Current Capability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

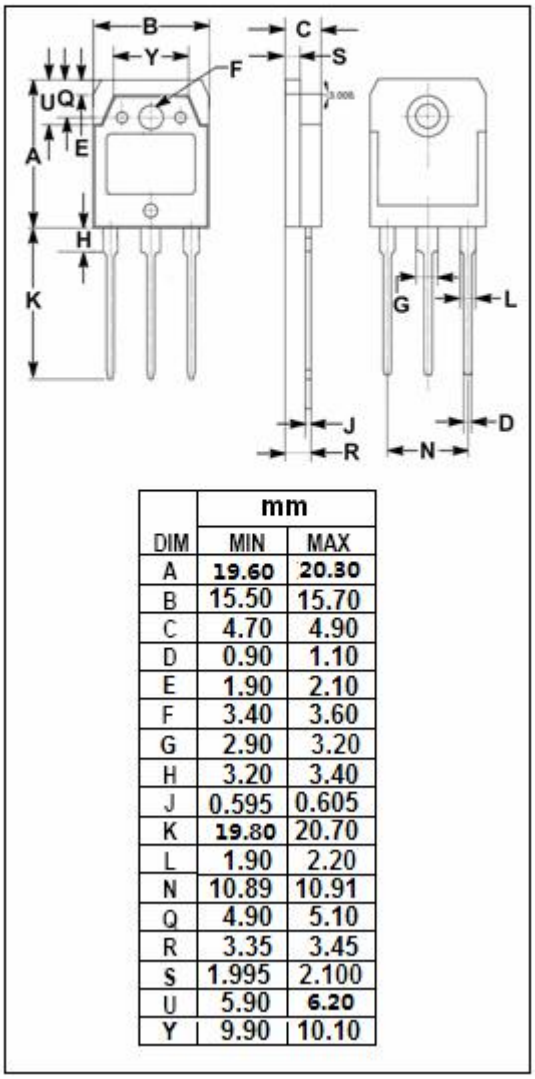


APPLICATIONS

- For use in low voltage ,high frequency inverters,free wheeling and polarity protection applications.

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
$V_{R(RMS)}$	RMS Reverse Voltag	31	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
I_{RRM}	Peak Repetitive Reverse Surge Current (20 μ s, 1.0kHz)	2.0	A
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~175	℃
dv/dt	Voltage Rate of Change (Rated V_R)	10,000	V/ μ s



DIM	mm MIN	mm MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.2	℃/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℃	0.75	V
		I_F= 20A ; Tc= 125℃	0.65	
		I_F= 40A ; Tc= 25℃	0.80	
		I_F= 40A ; Tc= 125℃	0.75	
I_R	Maximum Instantaneous Reverse Current	V_R= $V_{RWM;}$Tc= 25℃	0.5	mA
		V_R= $V_{RWM;}$Tc= 125℃	10	