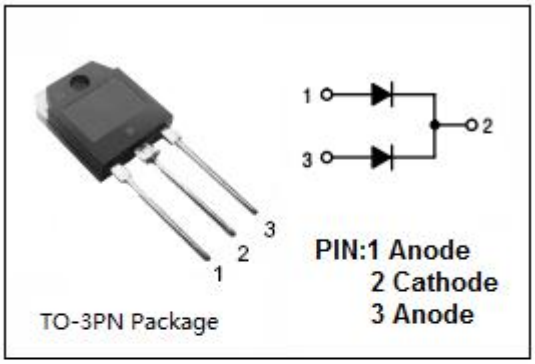
Schottky Barrier Rectifier

MBR4045WT

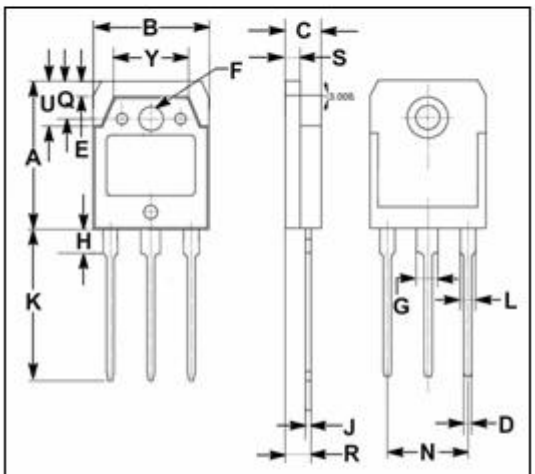
FEATURES

- Low forward voltage
- Low Power Loss,High Efficiency
- High Surge Capability
- 175℃ operating junction temperature
- Pb-Free Package is Available
- 100% avalanche tested
- 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℃ Max. for 10 Seconds



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM} V_{RWM} V_R	Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	45	V
$I_{F(AV)}$	Average Rectified Forward Current (Per Leg) (Total)	20 40	A
I_{FSM}	Peak Forward Surge Current, 8.3 ms single halfsine-wave superimposed on rated load (JEDEC method)	400	A
I_{RRM}	Peak Repetitive Reverse Surge Current (2.0 μ s, 1.0kHz)	2.0	A
T_J	Junction Temperature	-65~175	℃
T_{stg}	Storage Temperature Range	-65~175	℃
dv/dt	Voltage Rate of Change (Rated V_R)	10,000	V/μ s

Schottky Barrier Rectifier MBR4045WT

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.4	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	50.1	℃/W

ELECTRICAL CHARACTERISTICS(Pulse Test: Pulse Width≤300μs,Duty Cycle≤2.0%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 20A, T_C= 25℃ I_F= 20A, T_C=125℃ I_F= 40A, T_C= 25℃ I_F= 40A, T_C= 125℃	0.70 0.60 0.80 0.75	V
I_R	Maximum Instantaneous Reverse Current	Rated DC Voltage, T_C= 25℃ Rated DC Voltage, T_C= 125℃	0.1 5.0	mA