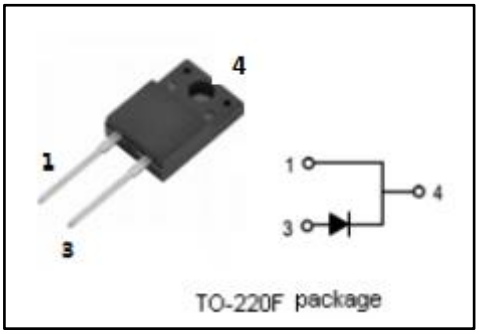
Schottky Barrier Rectifier — MBRF10100

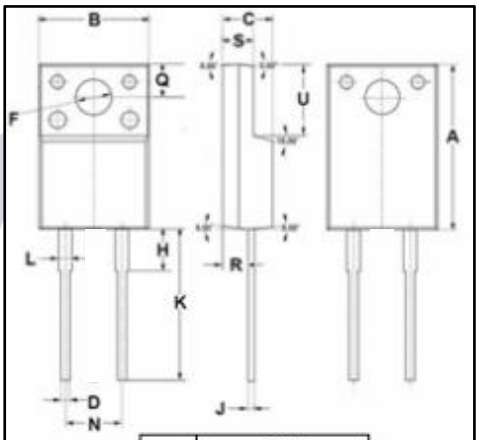
FEATURES

- Low Forward Voltage
- High Operating Junction Temperature
- Extremely low reverse leakage
- Optimized VF vs. IR trade off for high efficiency
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- High frequency switching
- High efficiency SMPS
- Automotive



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{RRM}	Peak Repetitive Reverse Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated V_R) T_C= 135℃	10	A
I_{FSM}	Non-repetitive Peak Surge Current (8.3ms single half-wave)	150	A
T_J	Junction Temperature	-65~175	℃
T_{stg}	Storage Temperature Range	-65~175	℃
dv/dt	Voltage Rate of Change (Rated V_R)	10000	V/μs

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.5	℃/W

ELECTRICAL CHARACTERISTICS (Pulse Test: Pulse Width=300us,Duty Cycle≤2%)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 10A ; T_C= 25℃ I_F= 10A ; T_C= 125℃ I_F= 20A ; T_C= 25℃ I_F= 20A ; T_C= 125℃	0.8 0.65 0.95 0.75	V
I_R	Maximum Instantaneous Reverse Current	V_R=100V, T_C= 25℃ V_R=100V, T_C= 100℃	0.1 6	mA