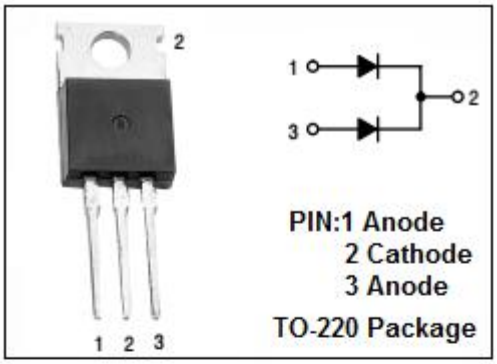
Schottky Barrier Rectifier — MBR1045CT



FEATURES

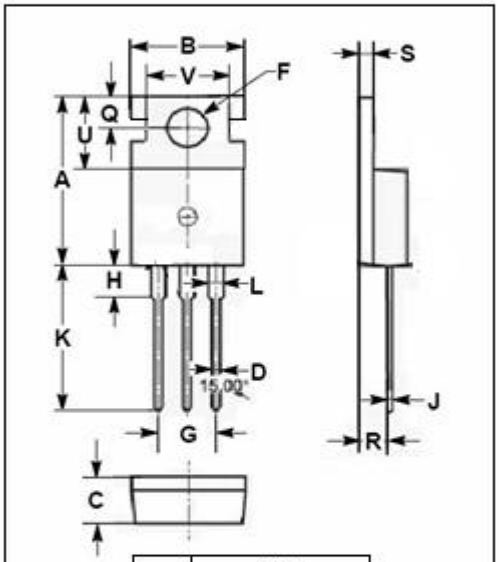
- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss/High Efficiency
- High Surge Capability
- High Current Capability，Low Forward Voltage Drop
- Plastic Material：UL Flammability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low-voltage,high frequency inverters,free wheeling and polarrity 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	31.5	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated V_R) T_C= 125℃	10	A
I_{FSM}	Nonrepetitive Peak Surge Current (Surge applied at rated load conditions half-wave, single phase, 60Hz)	150	A
T_J	Junction Temperature	-65~150	℃
T_{stg}	Storage Temperature Range	-65~150	℃
dv/dt	Voltage Rate of Change (Rated V_R)	1000	V/μs



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.5	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_F	Maximum Instantaneous Forward Voltage	I_F= 10A ; T_C= 25℃ I_F= 10A ; T_C= 125℃	0.84 0.57	V
I_R	Maximum Instantaneous Reverse Current	Rated DC Voltage, T_C= 25℃ Rated DC Voltage, T_C= 125℃	0.1 15	mA