



**Micro Commercial Components**

Micro Commercial Components  
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# MBR30150FCT

## Features

- Low Power Loss, High Efficiency
- Guardring for overvoltage protection
- Low forward voltage drop
- High frequency operation
- For use in high frequency inverters, free wheeling and polarity protection applications
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Weight: 0.08 ounce, 2.24 grams

## 30 Amp Schottky Barrier Rectifier 150 Volts

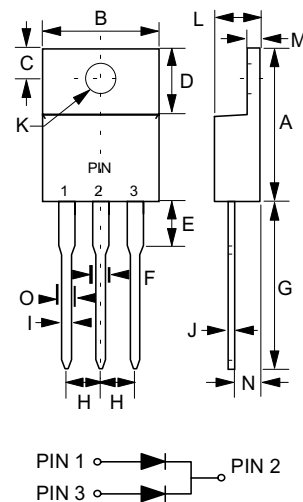
## Maximum Ratings and Electrical Characteristics

( $T_c = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	MBR30150CT	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	150	Volts
Working peak reverse voltage	$V_{RWM}$	150	Volts
Maximum DC blocking voltage	$V_{DC}$	150	Volts
Maximum average forward rectified current (See Fig. 1)	$I_{F(AV)}$	30 15	Amps Per leg
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) per leg	$I_{FSM}$	260	Amps
Peak repetitive reverse current per leg at $t_r = 2.0\mu\text{s}$ , 1KHz	$I_{RRM}$	1.0	Amp
Voltage rate of change (rated $V_R$ )	dv/dt	10,000	V/us
Maximum instantaneous forward voltage per leg (Note 4)	$V_F$	0.90 0.75 0.99 0.86	Volt
Maximum reverse current per leg at working peak reverse voltage	$I_R$	5.0 1.0	$\mu\text{A}$ mA
Typical thermal resistance per leg	$R_{\theta JC}$	MBR 1.7 / MBRF 4.0	$^\circ\text{C/W}$
RMS isolation voltage (MBRF type only) from terminals to heatsink with $t = 1.0$ second, $RH \leq 30\%$	$V_{ISOL}$	4500 (Note 1) 3500 (Note 2) 1500 (Note 3)	Volts
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

- Notes:**
1. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
  2. Clip mounting (on case), where leads do overlap heatsink
  3. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
  4. Pulse test: 300us pulse width, 1% duty cycle

## ITO-220AB



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.580	.600	14.50	15.50	
B	.383	.405	9.72	10.27	
C	.105	.115	2.45	3.15	
D	.248	.272	6.30	6.90	
E	.171	.191	4.35	4.85	
F	---	.060	---	1.52	
G	.530	.560	13.46	14.22	
H	.095	.105	2.41	2.67	
I	.027	.037	0.69	0.94	
J	.014	.022	0.36	0.55	
K	.122	.131	3.08	3.39	∅
L	.172	.188	4.36	4.77	
M	.100	.110	2.54	2.80	
N	.100	.110	2.54	2.80	

# MBR30150FCT

## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

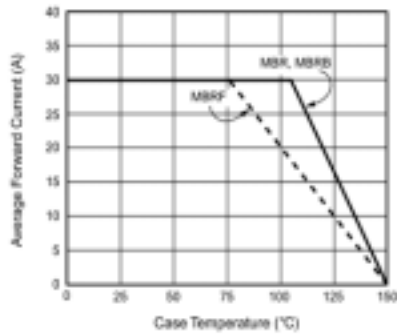


Figure 1. Forward Derating Curve (Total)

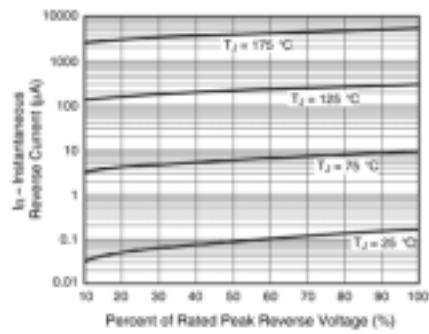


Figure 4. Typical Reverse Characteristics Per Leg

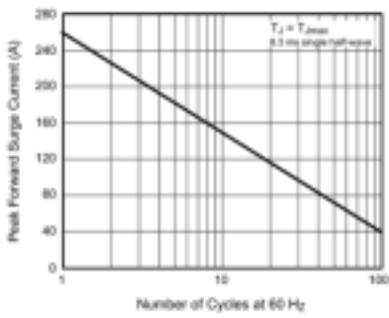


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

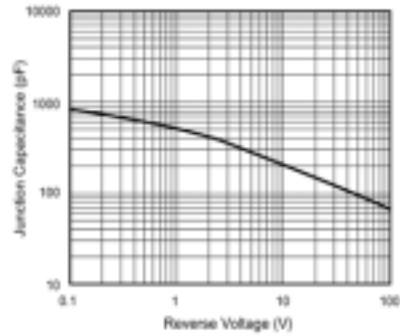


Figure 5. Typical Junction Capacitance Per Leg

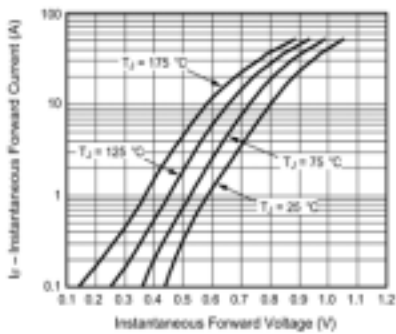


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

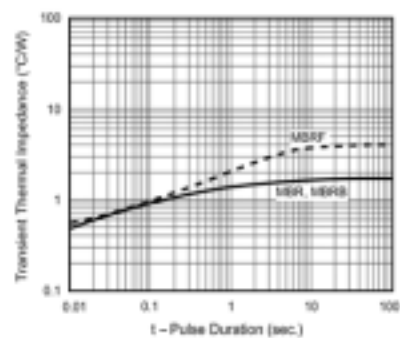


Figure 6. Typical Transient Thermal Impedance Per Leg



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