



Micro Commercial Components

Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

# MBR30150FCT

## 30 Amp Schottky Barrier Rectifier 150 Volts

### Features

- Low Power Loss, High Efficiency
- Guardring for overvoltage protection
- Low forward voltage drop and High frequency operation
- For use in high frequency inverters, free wheeling and polarity protection applications
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Weight: 0.08 ounce, 2.24 grams

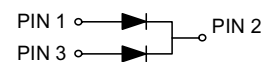
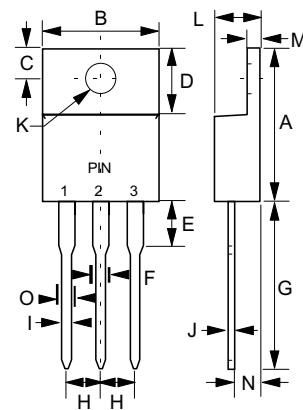
### Maximum Ratings and Electrical Characteristics

( $T_c = 25^\circ\text{C}$  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 5)	$V_F$	0.90	Volt
at $I_F=15\text{A}$ , $T_C=25^\circ\text{C}$		0.75	
at $I_F=15\text{A}$ , $T_C=125^\circ\text{C}$		0.99	
at $I_F=30\text{A}$ , $T_C=125^\circ\text{C}$		0.86	
Maximum reverse current per leg at working peak reverse voltage	$I_R$	5.0	$\mu\text{A}$
$T_J=25^\circ\text{C}$		1.0	mA
Typical thermal resistance per leg	$R_{\theta JC}$	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 2) 3500 (Note 3) 1500 (Note 4)	Volts
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

- Notes:**
1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.
  2. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
  3. Clip mounting (on case), where leads do overlap heatsink
  4. Screw mounting with 4-40 screw, where washer diameter is  $< 4.9$  mm (0.19")
  5. Pulse test: 300us pulse width, 1% duty cycle

### ITO-220AB



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.583	.642	14.80	16.30	
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 CHARACTERISTICS CURVES

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

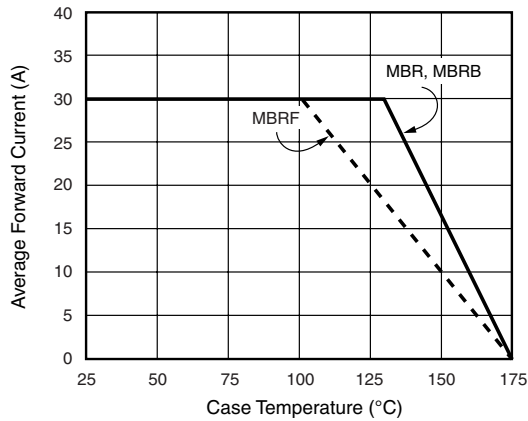


Figure 1. Forward Derating Curve (Total)

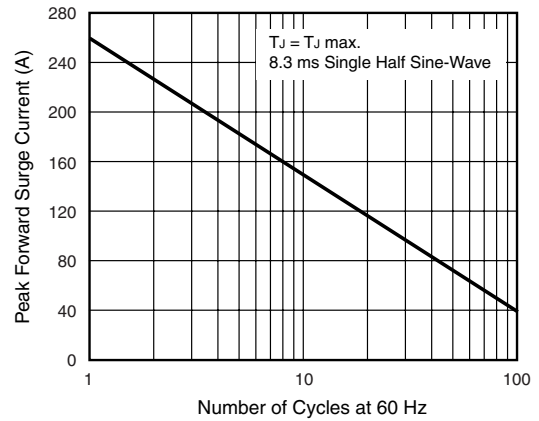


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

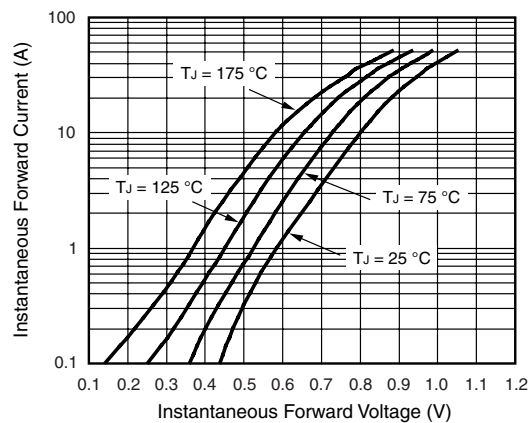


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

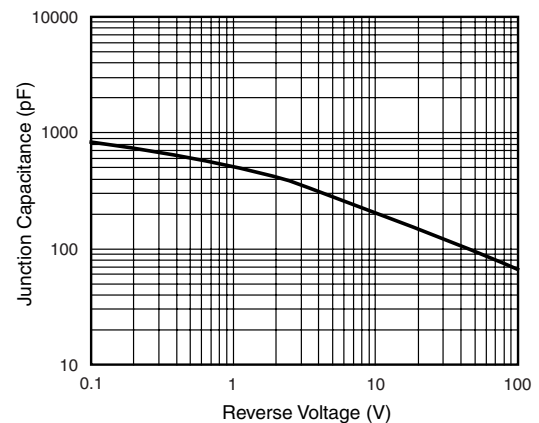


Figure 5. Typical Junction Capacitance Per Diode

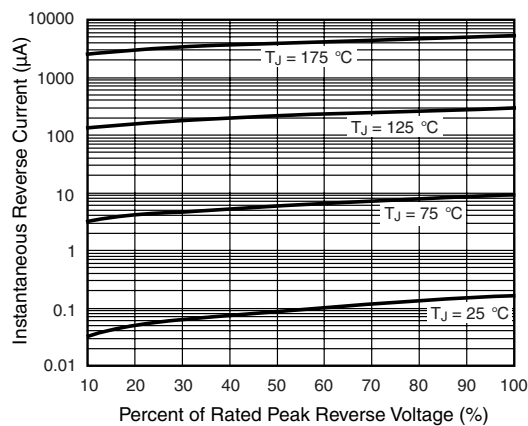


Figure 4. Typical Reverse Characteristics Per Diode

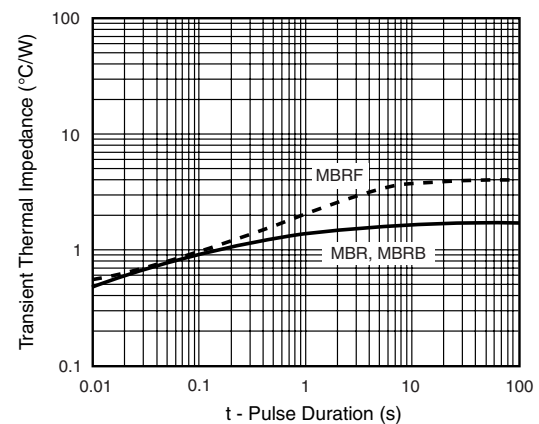


Figure 6. Typical Transient Thermal Impedance Per Diode



Micro Commercial Components

## Ordering Information

Device (Part Number)-BP	Packing Bulk;1Kpcs/Box
----------------------------	---------------------------

### \*\*\*IMPORTANT NOTICE\*\*\*

*Micro Commercial Components Corp.* reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

### \*\*\*APPLICATIONS DISCLAIMER\*\*\*

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

[www.mccsemi.com](http://www.mccsemi.com)