Micro Commercial Components

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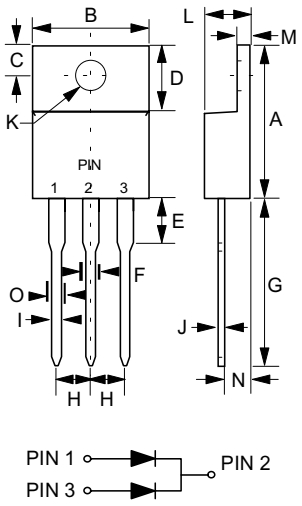
MBR30150FCT

30 Amp Schottky Barrier Rectifier 150 Volts

ITO-220AB



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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	Ø
L	.172	.188	4.36	4.77	
M	.100	.110	2.54	2.80	
N	.100	.110	2.54	2.80	

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

Maximum Ratings and Electrical Characteristics

(T_C = 25°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) Total device Per leg	$I_{F(AV)}$	30 15	Amps
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_p = 2.0us, 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) at I_F=15A, T_C=25°C at I_F=15A, T_C=125°C at I_F=30A, T_C=25°C at I_F=30A, T_C=125°C	V_F	 0.90 0.75 0.99 0.86	Volt
Maximum reverse current per leg at working peak reverse voltage T_J=25°C T_J=125°C	I_R	5.0 1.0	uA mA
Typical thermal resistance per leg	$R_{\theta JC}$	MBR 1.7 / MBRF 4.0	°C/W
RMS Isolation voltage (MBRF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 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	°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

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RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

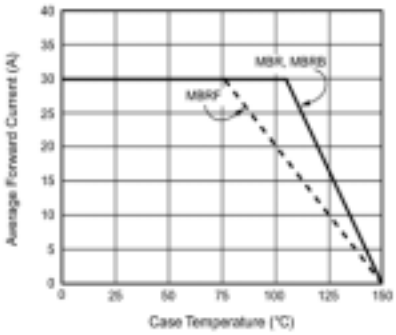

Figure 1. Forward Derating Curve (Total)

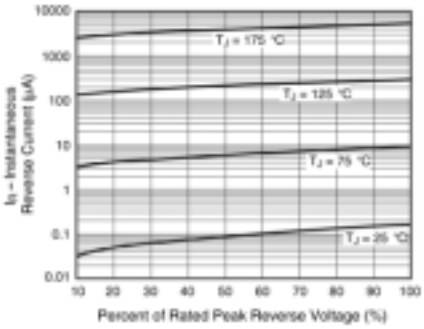

Figure 4. Typical Reverse Characteristics Per Leg

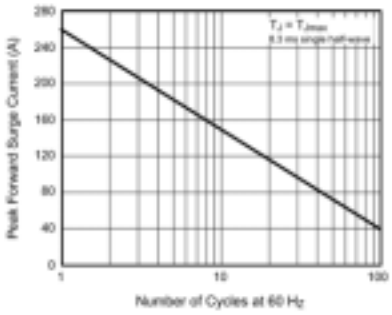

Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

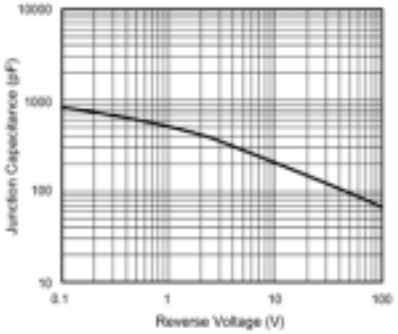

Figure 5. Typical Junction Capacitance Per Leg

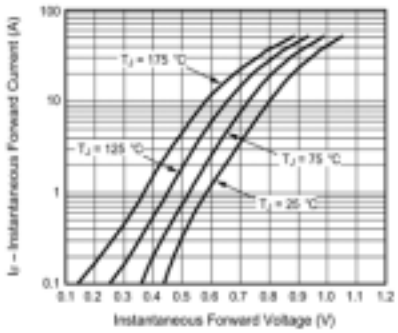

Figure 3. Typical Instantaneous Forward Characteristics Per Leg

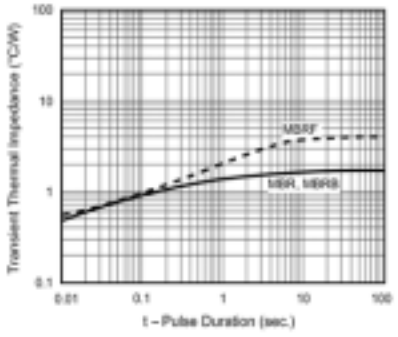

Figure 6. Typical Transient Thermal Impedance Per Leg

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