

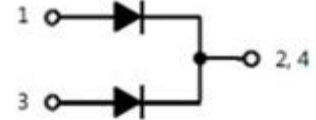
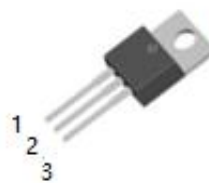
# MBRF30100CT/MBR30100CT

## Dual High Voltage Schottky Rectifier

### General Description and Features

- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- 30A total (15A per diode leg)
- 150°C operating junction temperature
- RoHS compliant
- Matte Tin(Sn) lead finish
- Pb-free package is available
- Terminal leads surface is corrosion resistant and can withstand to 260°C
- Wave soldering or per MIL-STD-750 method 2026

### SCHOTTKY BARRIER RECTIFIERS CURRENT 30A VOLTAGE100V



- 1 – Anode 1
- 2 – Cathode
- 3 – Anode 2
- 4 – Tab Cathode

### Absolute Maximum Rating (Ta=25° C unless otherwise specified)

Symbol	Parameter	Value	Unit
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	100	V
V <sub>R</sub>	Maximum DC Reverse Voltage		
I <sub>F(AV)</sub>	Average Rectified Forward Current, T <sub>c</sub> =115°C	15(Per Leg) 30 (Per Device)	A
I <sub>FSM</sub>	Peak Forward Surge Current, 8.3ms, Half Sine wave	350	A
T <sub>j</sub>	Operating Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature Range	-40 to +150	°C

### Thermal Characteristics (Ta = 25°C unless otherwise specified)

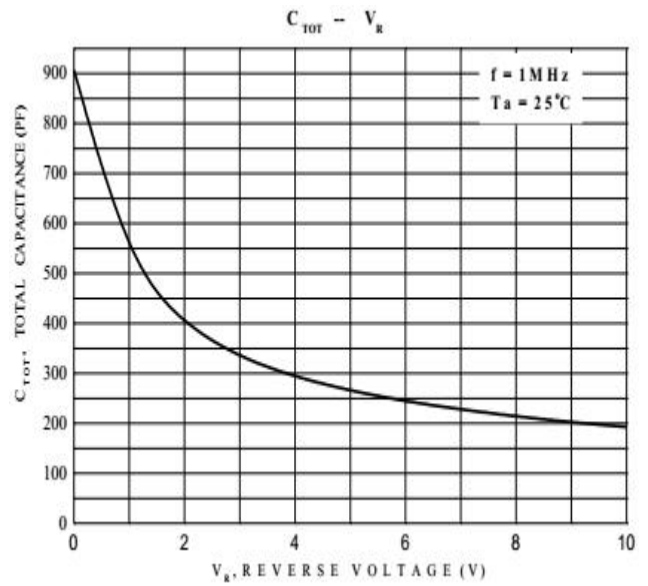
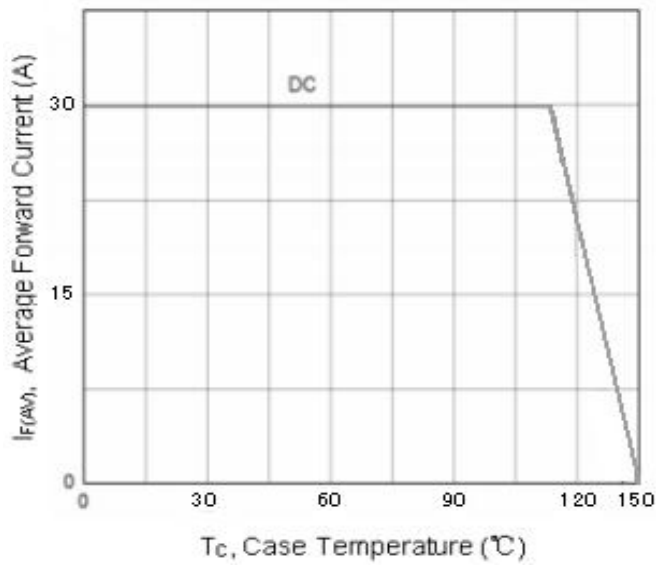
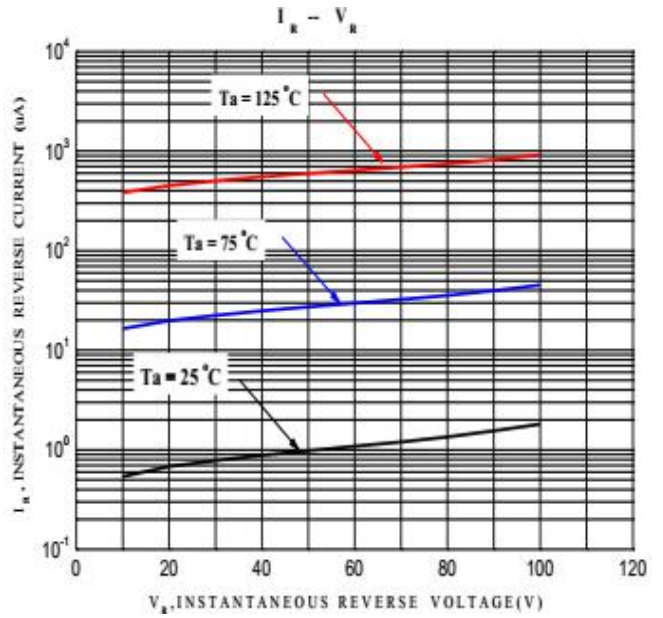
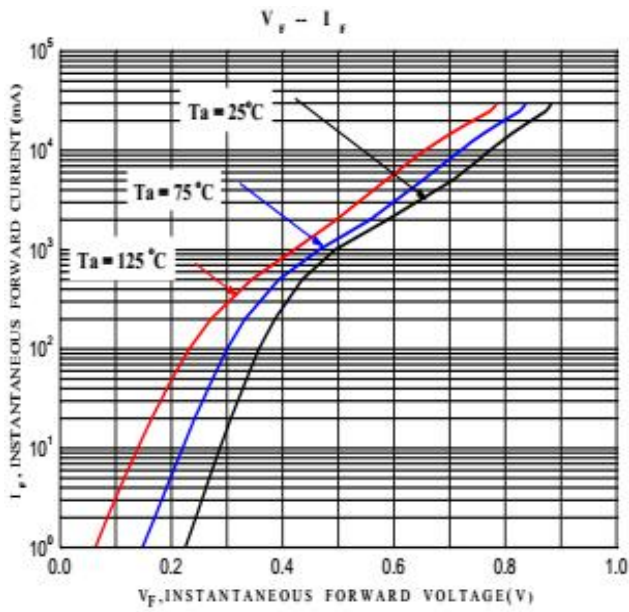
Symbol	Parameter	Maximum	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case per Leg	TO-220	2.2
		TO-220F	3.0

### Electrical Characteristics (Per Diode Leg)

Symbol	Parameter	Test Condition	Minimum	Typical	Maximum	Unit
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = 100V, T <sub>c</sub> = 25°C	-	1.5	10	uA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 10A, T <sub>c</sub> = 25°C	-	0.77	0.85	V
		I <sub>F</sub> = 15A, T <sub>c</sub> = 25°C	-	0.81	0.88	V

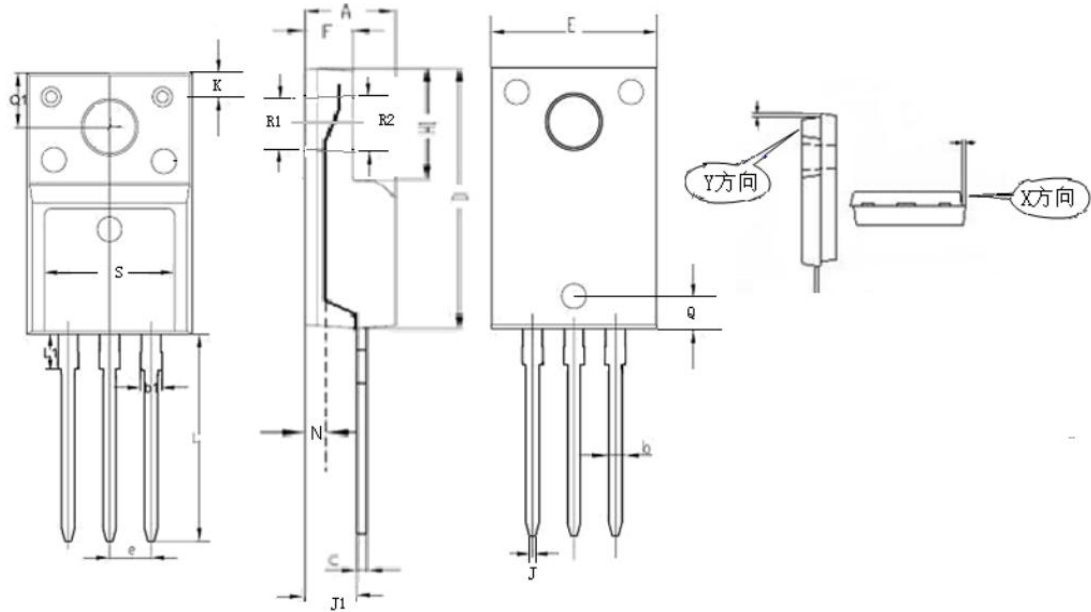


### Characteristics Curves





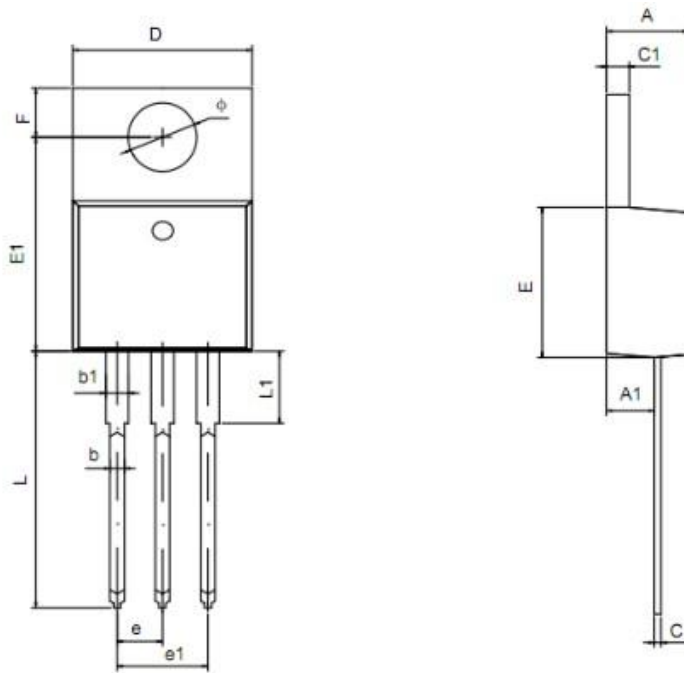
**TO-220F POD**



SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	0.178	0.194	4.53	4.93	
b	0.028	0.036	0.71	0.91	
C	0.018	0.024	0.45	0.6	
D	0.617	0.633	15.67	16.07	
E	0.392	0.408	9.96	10.36	
e	0.100 TYP.		2.54TYP.		
H1	0.256	0.272	6.5	6.9	
J1	0.101	0.117	2.56	2.96	
L	0.503	0.519	12.78	13.18	
φQ	0.117	0.133	2.98	3.38	
b1	0.045	0.055	1.15	1.39	
L1	0.114	0.13	2.9	3.3	
Q1	0.122	0.138	3.1	3.5	
N	0.016	0.024	0.4	0.6	
F	0.092	0.108	2.34	2.74	
J	0.013	0.017	0.32	0.43	
K	0.047	0.071	1.20	1.80	
R1	0.121	0.129	3.08	3.28	
R2	0.126	0.136	3.20	3.45	
Q	0.075	0.083	1.90	2.10	
S	0.311	0.319	7.90	8.10	
X	0	0.005	0	0.127	



TO-220 POD



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.420	4.720	1.174	0.186
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.360	0.460	0.014	0.018
c1	1.170	1.370	0.046	0.054
D	9.950	10.250	0.392	0.404
E	8.990	9.290	0.354	0.366
E1	12.550	12.850	0.494	0.506
e	2.540TYP		0.100TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
L	13.080	13.480	0.515	0.531
L1	2.470	2.870	0.097	0.113
φ	3.790	3.890	0.149	0.153