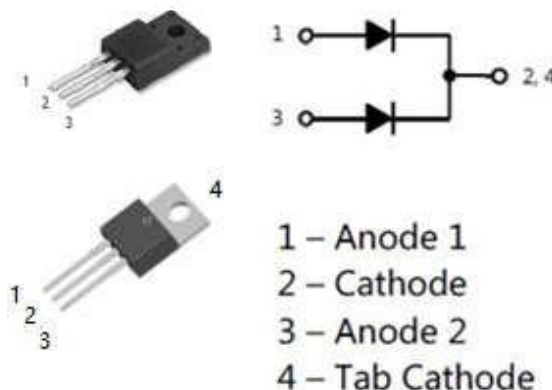


MBRF20100CT / MBR20100CT Dual High Voltage Schottky Rectifier

General Description and Features

- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- 20A total (10A 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



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

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
V_R	Maximum DC Reverse Voltage		
$I_{F(AV)}$	Average Rectified Forward Current, $T_C=115^\circ\text{C}$	10 (Per Leg) 20 (Per Device)	A
I_{FRM}	Peak Repetitive Forward Current per Leg (Square Wave, 20 kHz, $T_C = 150^\circ\text{C}$)	20	A
I_{FSM}	Peak Forward Surge Current, 8.3mS, Half Sine wave	125	A
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-40 to +150	°C

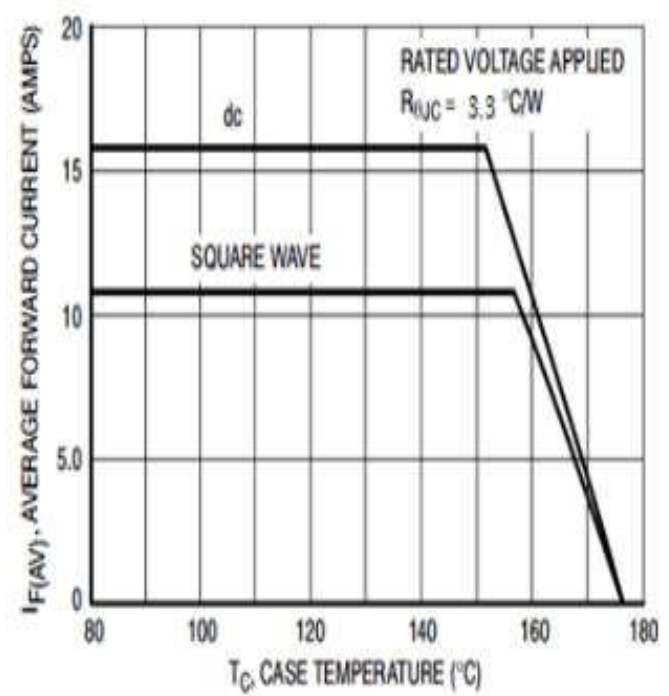
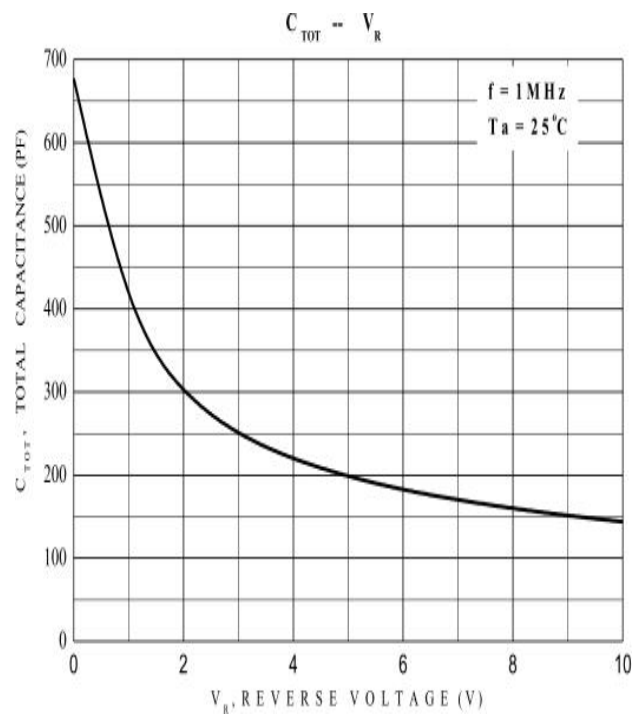
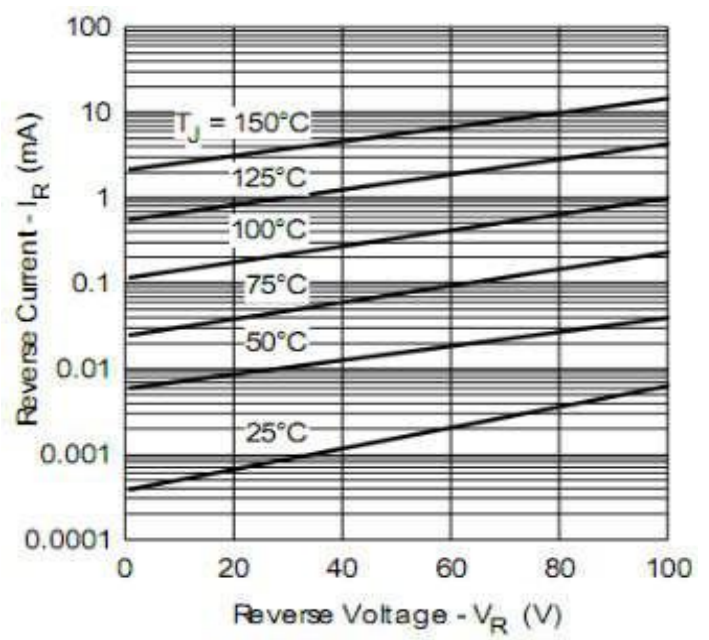
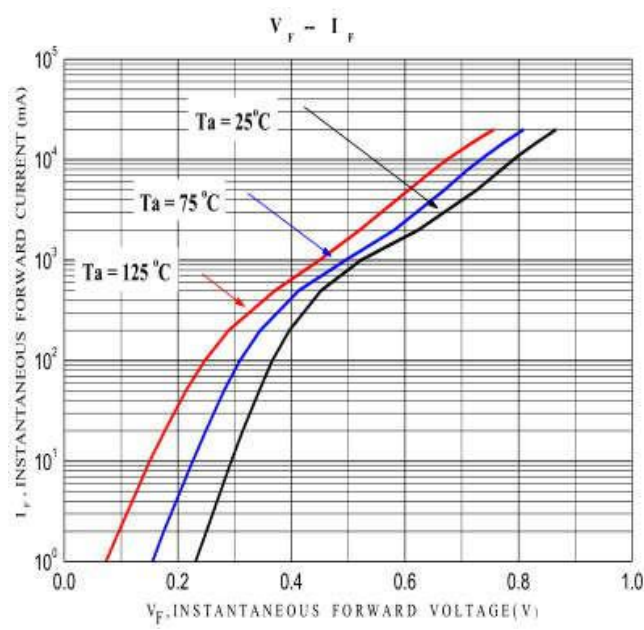
Thermal Characteristics (Ta = 25°C unless otherwise specified)

Symbol	Parameter	Maximum	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg	3.3	°C/W

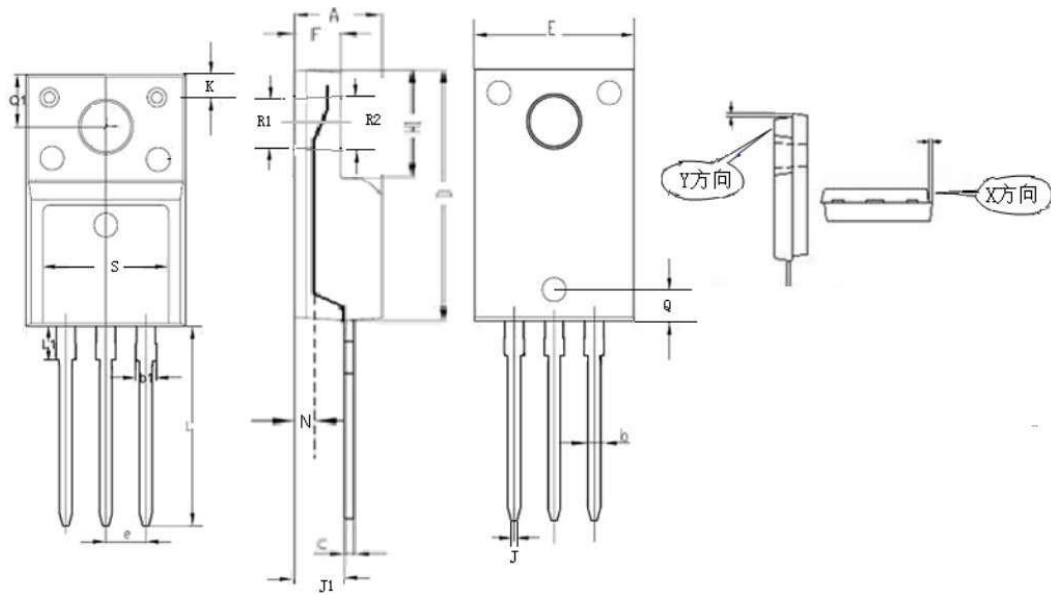
Electrical Characteristics (Per Diode Leg)

Symbol	Parameter	Test Condition	Minimum	Typical	Maximum	Unit
I_R	Reverse Current	$V_R = 100\text{V}$, $T_C = 25^\circ\text{C}$			10	uA
V_F	Forward Voltage	$I_F = 10\text{A}$, $T_C = 25^\circ\text{C}$		0.82	0.85	V

Characteristics Curves

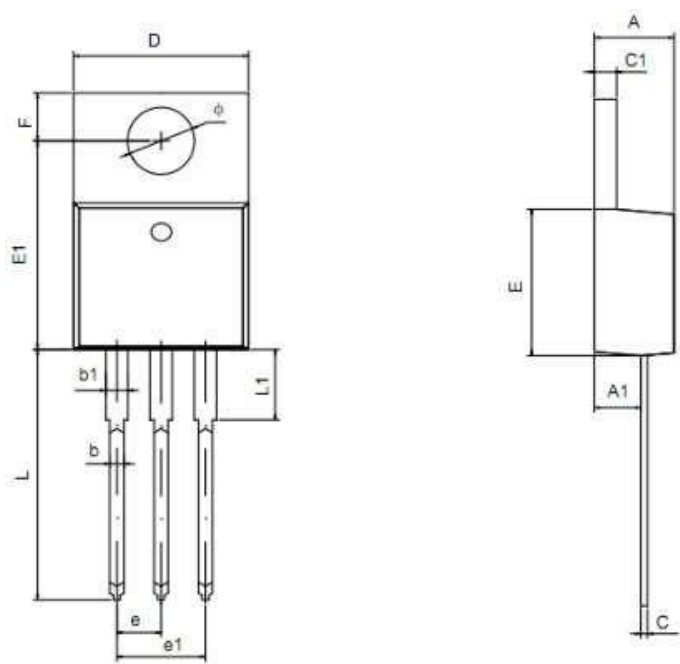


TO-220F POD



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

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