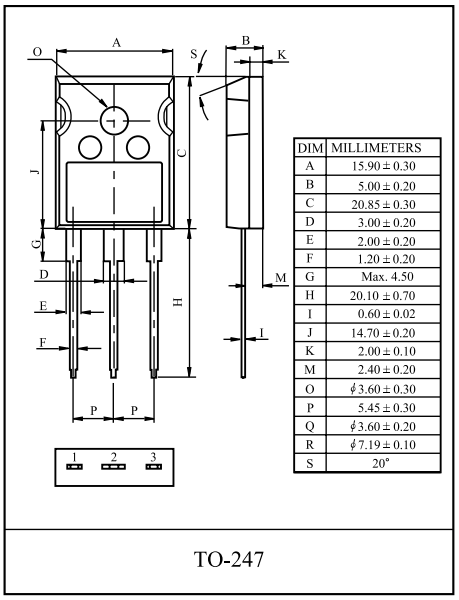
MBR30100PT SCHOTTKY BARRIER RECTIFIER



DIM	MILLIMETERS
A	15.90 ± 0.30
B	5.00 ± 0.20
C	20.85 ± 0.30
D	3.00 ± 0.20
E	2.00 ± 0.20
F	1.20 ± 0.20
G	Max. 4.50
H	20.10 ± 0.70
I	0.60 ± 0.02
J	14.70 ± 0.20
K	2.00 ± 0.10
M	2.40 ± 0.20
O	ϕ3.60 ± 0.30
P	5.45 ± 0.30
Q	ϕ3.60 ± 0.20
R	ϕ7.19 ± 0.10
S	20°

TO-247

FEATURES

- Schottky Barrier Chip
- Guardring for Overvoltage Protection
- Low Power Loss,High Efficiency
- High Surge Current Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters,Free Wheeling, and Polarity Protection Applications

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	100	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	70	V
I_O	Average rectified output current	30	A
I_{FSM}	Non- repetitive peak forward surge current 8.3ms half sine wave	200	A
P_D	Power dissipation	3.5	W
$R_{\Theta JA}$	Thermal resistance from junction to ambient	29	℃/W
T_j	Junction temperature	125	℃
T_{stg}	Storage temperature	- 55~ +150	℃

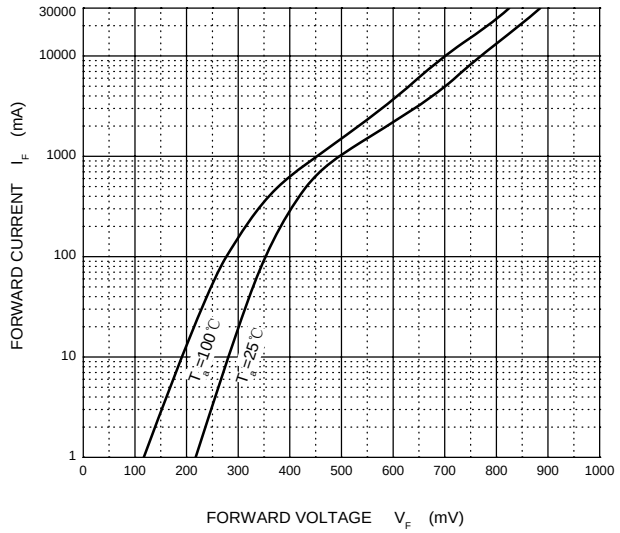
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=1mA	100			V
Reverse current	I_R	V_R=100V			0.1	mA
Forward voltage	V_{F1}	I_F=15A			1	V
	V_{F2}*	I_F=30A			1.05	V
Typical total capacitance	C_{tot}	V_R=4V,f=1MHz		300		pF

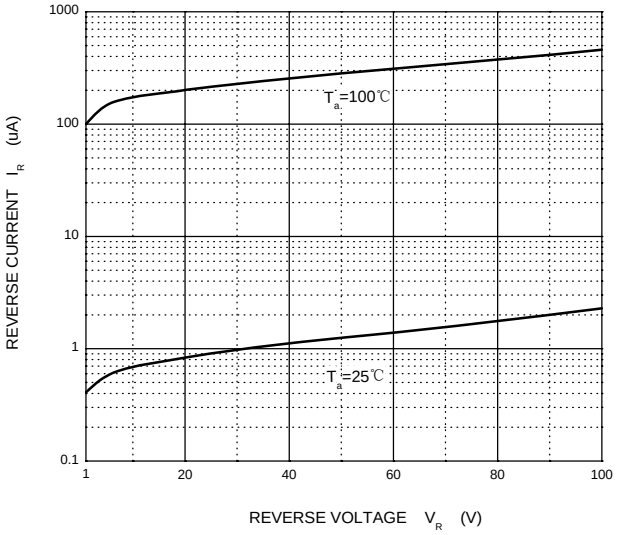
*Pulse Test : Pulse width≤300μs, duty cycle ≤2%.

Typical Characteristics

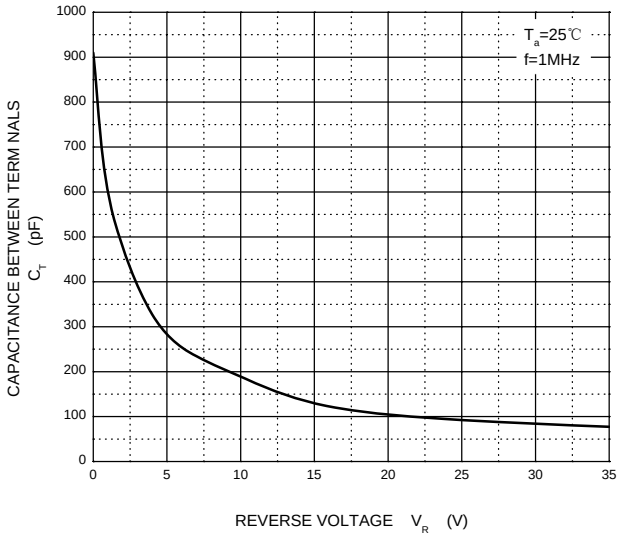
Forward Characteristics



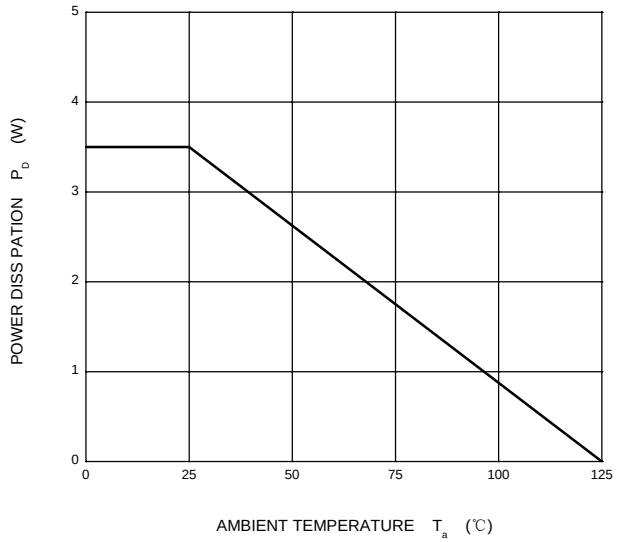
Reverse Characteristics



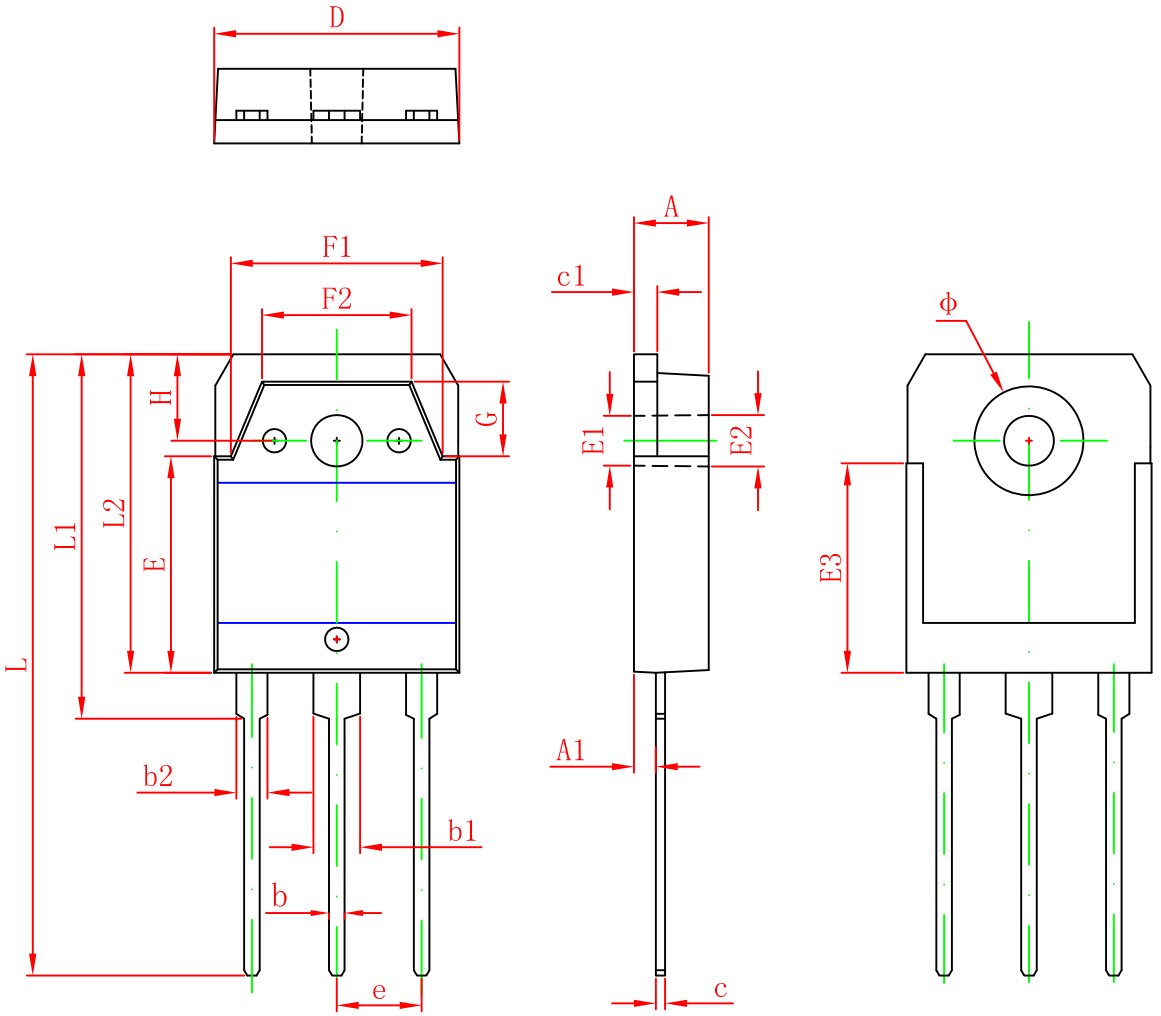
Capacitance Characteristics



Power Derating Curve



TO-3P Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.600	5.000	0.181	0.197
A1	1.200	1.600	0.047	0.063
b	0.800	1.200	0.031	0.047
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.450	1.650	0.057	0.065
D	15.450	15.850	0.608	0.624
E	13.700	14.100	0.539	0.555
E1	3.200 REF		0.126 REF	
E2	3.300 REF		0.130 REF	
E3	13.450 REF		0.530 REF	
F1	13.400	13.800	0.528	0.543
F2	9.400	9.800	0.370	0.386
L	39.900	40.300	1.571	1.587
L1	23.200	23.600	0.913	0.929
L2	20.300	20.600	0.799	0.811
Φ	6.900	7.100	0.272	0.280
G	5.150	5.550	0.203	0.219
e	5.450 TYP		0.215 TYP	
H	5.000 REF		0.197 REF	
h	0.000	0.300	0.000	0.012