

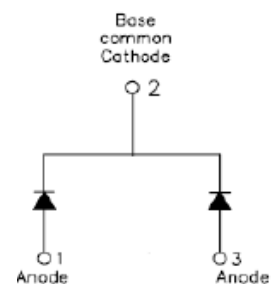
## MBRD10100CT SCHOTTKY RECTIFIER

### Applications:

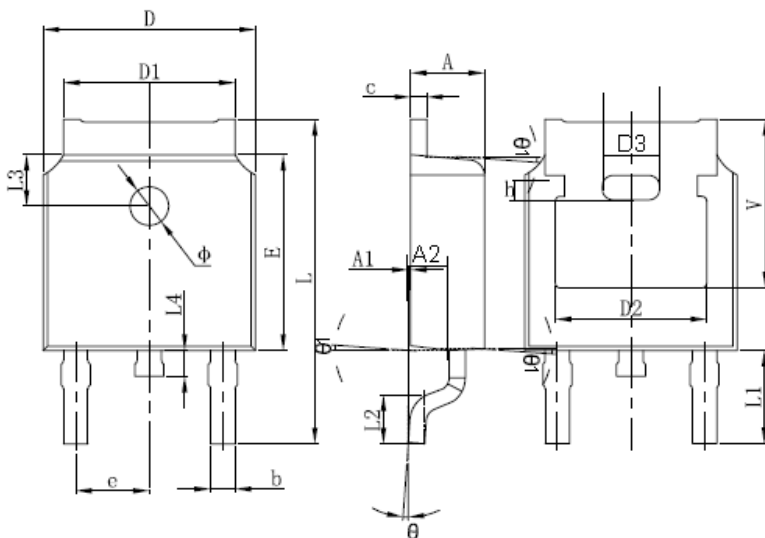
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Features:

- 150 °C T<sub>J</sub> operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Pure tin plated, solderable per MIL-STD-750, Method 2026
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



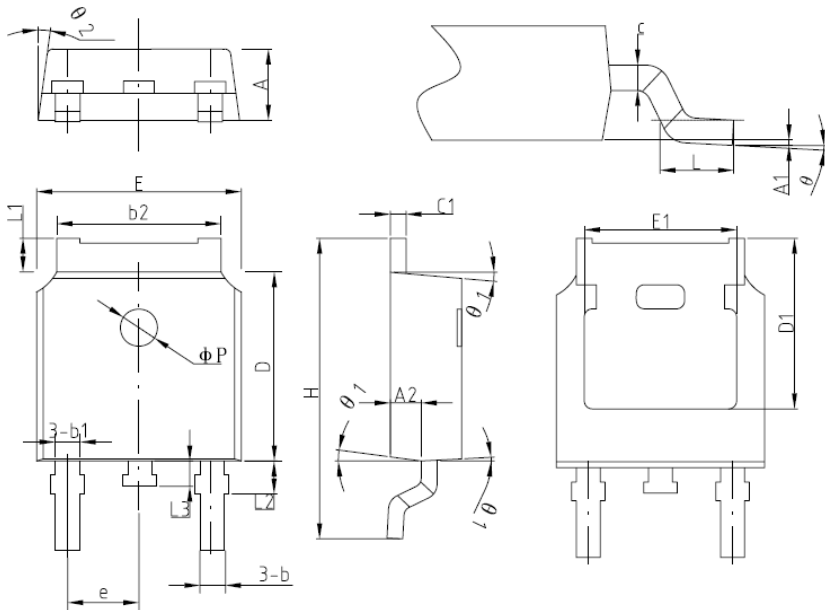
### Mechanical Dimensions: In mm/Inches



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A10.000	0.000	0.100	0.000	0.004
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
A2	0.910	1.110	0.036	0.044
V	5.350 REF.		0.211 REF.	
D3	1.778 REF.		0.070 REF.	
h	0.762 REF.		0.030 REF.	
θ1	7°		7°	

### OPTION 1(CJ)

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



SYMBOL	MIN.	TYP.	MAX.
<b>A</b>	2.20	2.30	2.38
<b>A1</b>	0	-	0.10
<b>A2</b>	0.90	1.01	1.10
<b>b</b>	0.71	0.76	0.86
<b>b1</b>		0.76	
<b>b2</b>	5.13	5.33	5.46
<b>c</b>	0.47	0.50	0.60
<b>c1</b>	0.47	0.50	0.60
<b>D</b>	6.0	6.10	6.20
<b>D1</b>	-	5.30	-
<b>E</b>	6.50	6.60	6.70
<b>E1</b>	-	4.80	-
<b>e</b>	2.286BSC		
<b>H</b>	9.70	10.10	10.40
<b>L</b>	1.40	1.50	1.70
<b>L1</b>	0.90	-	1.25
<b>L2</b>		1.05	
<b>L3</b>		0.8	
<b>ΦP</b>		1.2	
<b>Θ</b>	0°	-	8°
<b>Θ1</b>	5°	7°	9°
<b>Θ2</b>	5°	7°	9°

**OPTION 2(HD)**
**DPAK**

**Marking Diagram:**


Where XXXXX is YYWWL

MBR	= Device Type
D	= Package type
10	= Forward Current (10A)
100	= Reverse Voltage (100V)
CT	= Configuration
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

**Cautions:** Molding resin  
 Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
MBRD10100CT	DPAK (Pb-Free)	2500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	100	V
Average Rectified Forward Current (per device)	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	120	A

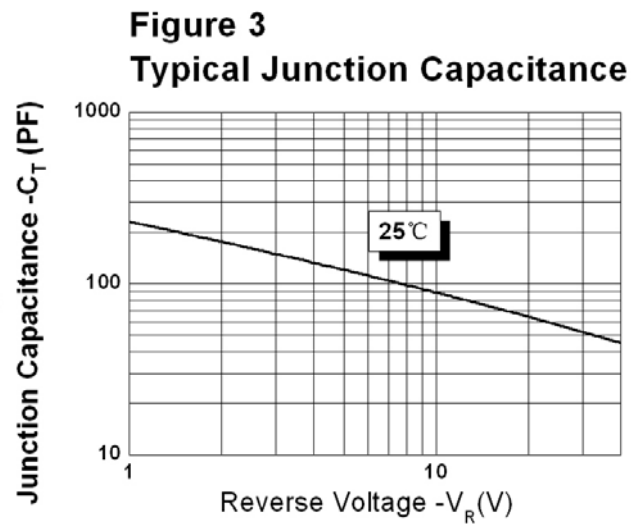
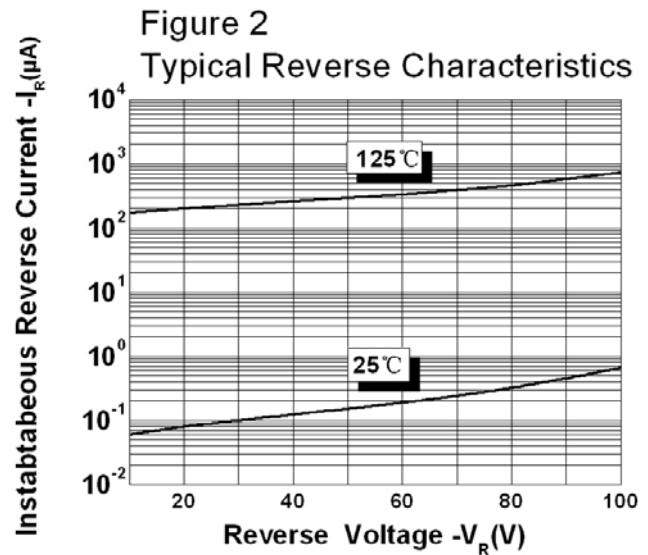
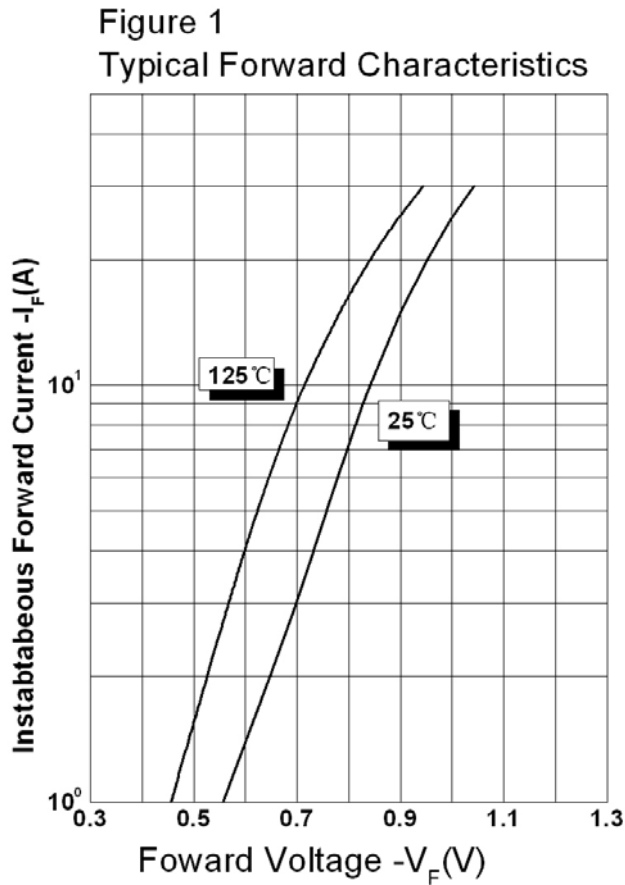
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg) *	$V_{F1}$	@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.83	0.85	V
	$V_{F2}$	@ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.71	0.75	V
Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.0006	1.00	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	0.80	15	mA
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	120	300	pF
Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	8.0	8.0	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/ $\mu\text{s}$

\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	6.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			





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