



**THE DATASHEET OF
MBRD1045CTTR**



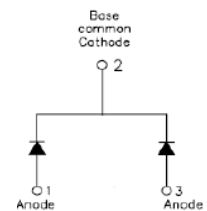
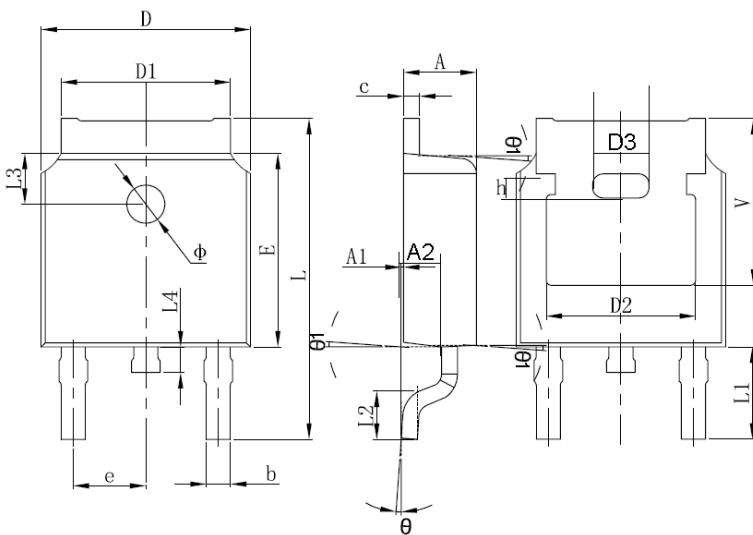
MBRD1045CT SCHOTTKY RECTIFIER

Applications:

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

Features:

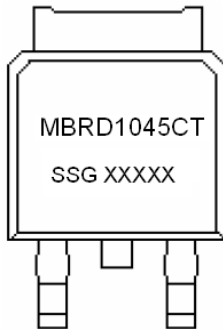
- 150°C T_J operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request


Mechanical Dimensions: In Inches / mm


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	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
phi	1.100	1.300	0.043	0.051
theta	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.	
theta1	7°		7°	

DPAK(CJ)

Marking Diagram:



Where XXXXX is YYWWL

- MBR = Device Type
- D = Package type
- 10 = Forward Current (10A)
- 45 = Reverse Voltage (45V)
- CT = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBRD1045CT	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 Inverse Voltage	V_{RWM}	-	45	V
Average Rectified Output Current(Per device)	I_o	50% duty cycle @ $T_C=105^{\circ}C$, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	125	A



Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V _{F1}	@ 5A, Pulse, T _J = 25 °C	0.70	V
	V _{F2}	@ 5A, Pulse, T _J = 125 °C	0.57	V
Reverse Current (per leg) *	I _{R1}	@V _R = rated V _R T _J = 25 °C	1.0	mA
	I _{R2}	@V _R = rated V _R T _J = 125°C	15	mA
Junction Capacitance (per leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	300	pF
Voltage Rate of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature Range	T _J	-	-55 to +150	°C
Storage Temperature Range	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case	R _{θJC}	DC operation	2.0	°C/W
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

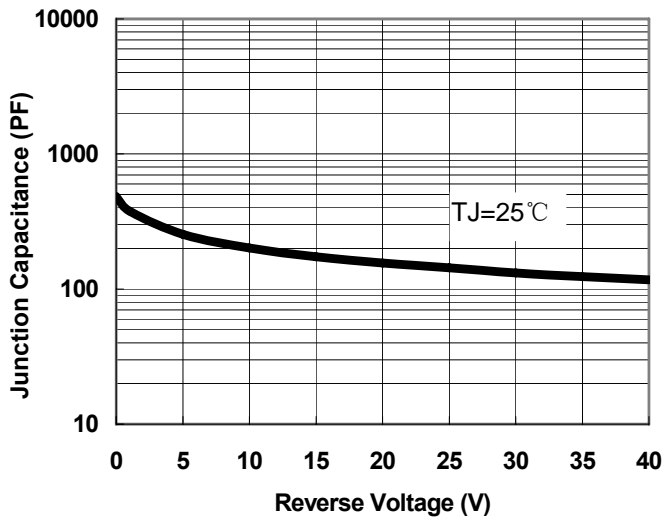


Fig.1-Typical Junction Capacitance

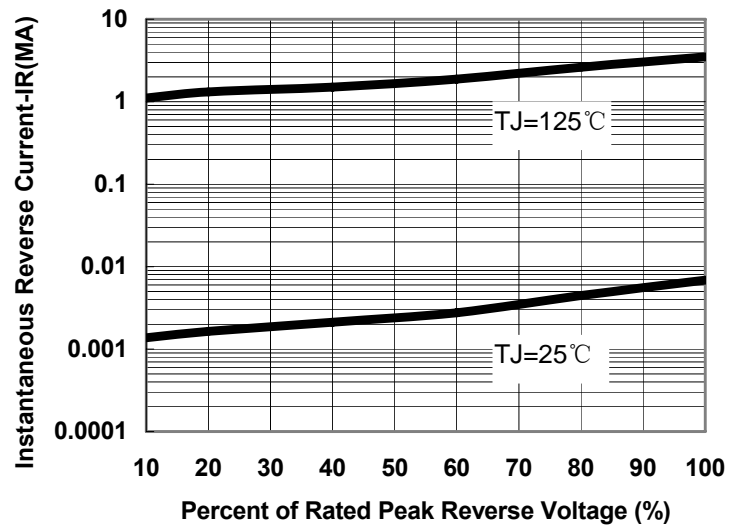


Fig.2-Typical Reverse Characteristics

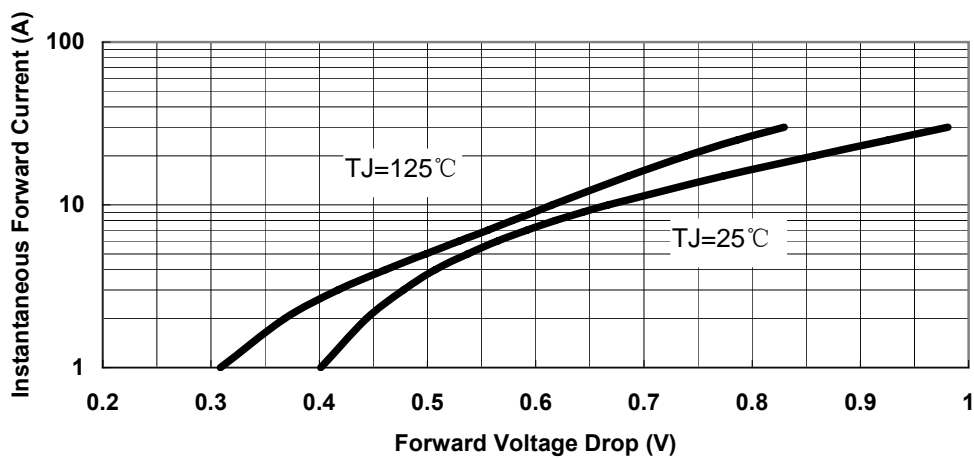


Fig.3-Typical Instantaneous Forward Voltage Characteristics



MBRD1045CT

Technical Data
Data Sheet N0849, Rev. A

Green Products

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