Technical Data
Data Sheet N1068, Rev. -

Green Products

MBRD630CT SCHOTTKY RECTIFIER

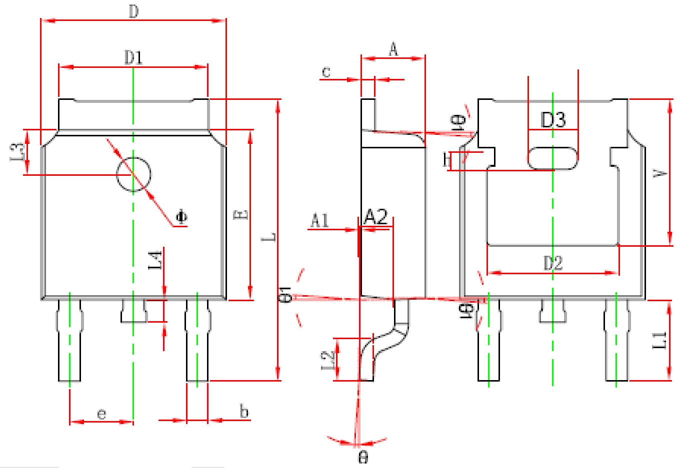
Applications:

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

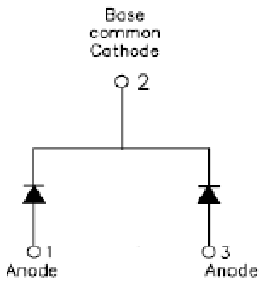
Features:

- Popular DPAK outline
- Small foot print, surface moutable
- Low forward voltage drop
- 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
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	1.778REF.		0.070REF.	
h	0.762REF.		0.030REF.	
θ1	7°		7°	



DPAK

Marking Diagram:

Where XXXXX is YYWWL

MBR = Device Type
D = Package type
6 = Forward Current (6A)
30 = Reverse Voltage (30V)
CT = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBRD630CT	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}	-	30	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =105°C, rectangular wave form	6	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	75	A

Electrical Characteristics:

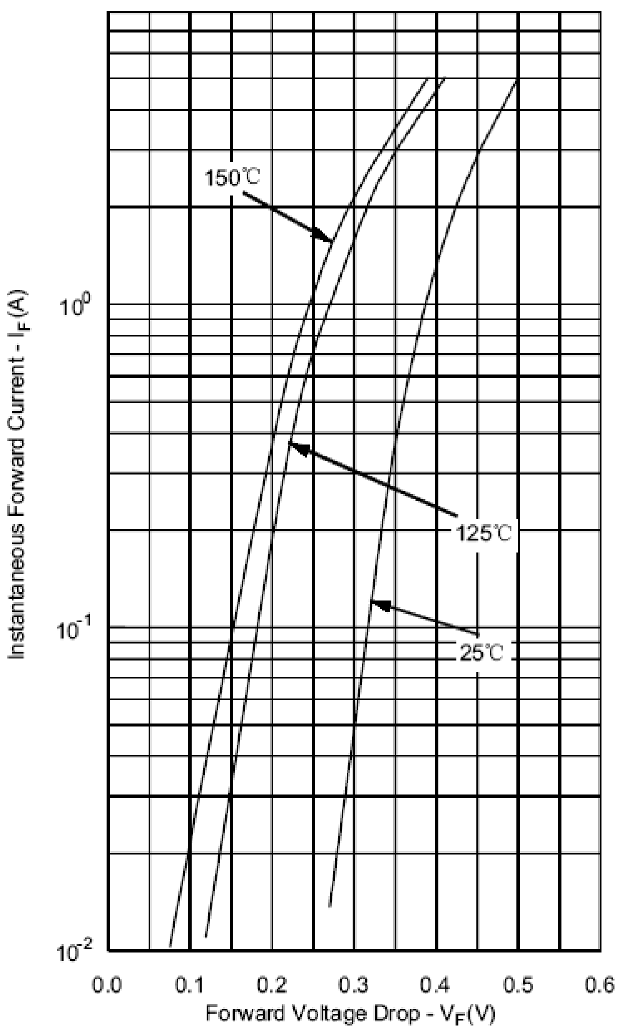
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 3 A, Pulse, T_J = 25 °C @ 6 A, Pulse, T_J = 25 °C	0.70 0.90	V
	V_{F2}	@ 3 A, Pulse, T_J = 125 °C @ 6 A, Pulse, T_J = 125 °C	0.65 0.85	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_C = 25 °C	0.1	mA
	I_{R2}	@V_R = rated V_R T_C = 125 °C	15	mA
Max. Voltage Rate of Change	dv/dt	-	10,000	V/µs

* Pulse Width < 300µs, Duty Cycle <2%

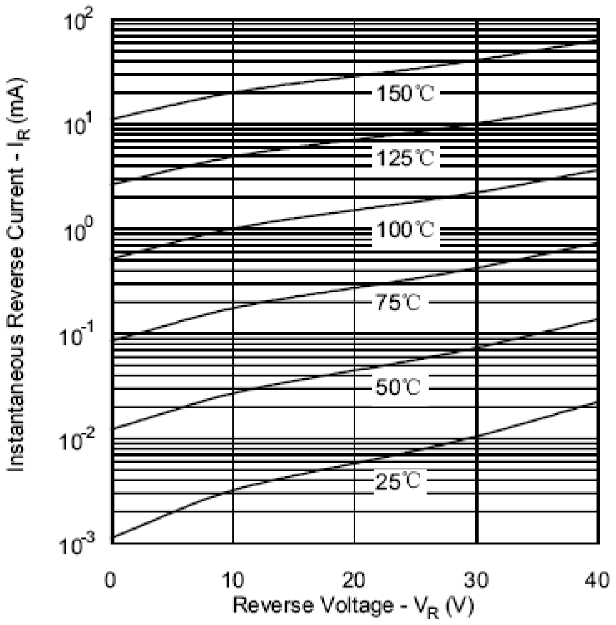
Thermal-Mechanical Specifications:

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	$R_{\theta JC}$	DC operation	6	°C/W
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	80	°C/W
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

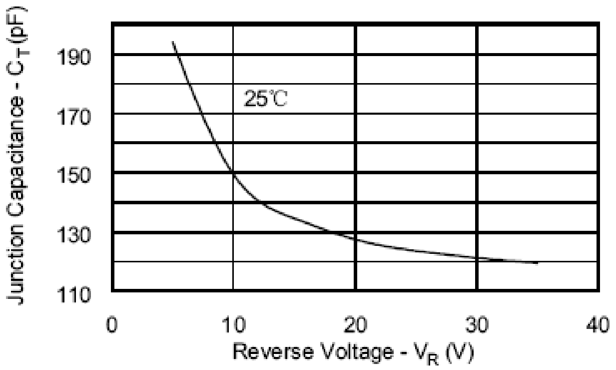
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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