

Technical Data
Data Sheet 3066, Rev. -

MBRD630CT SCHOTTKY RECTIFIER

Applications:

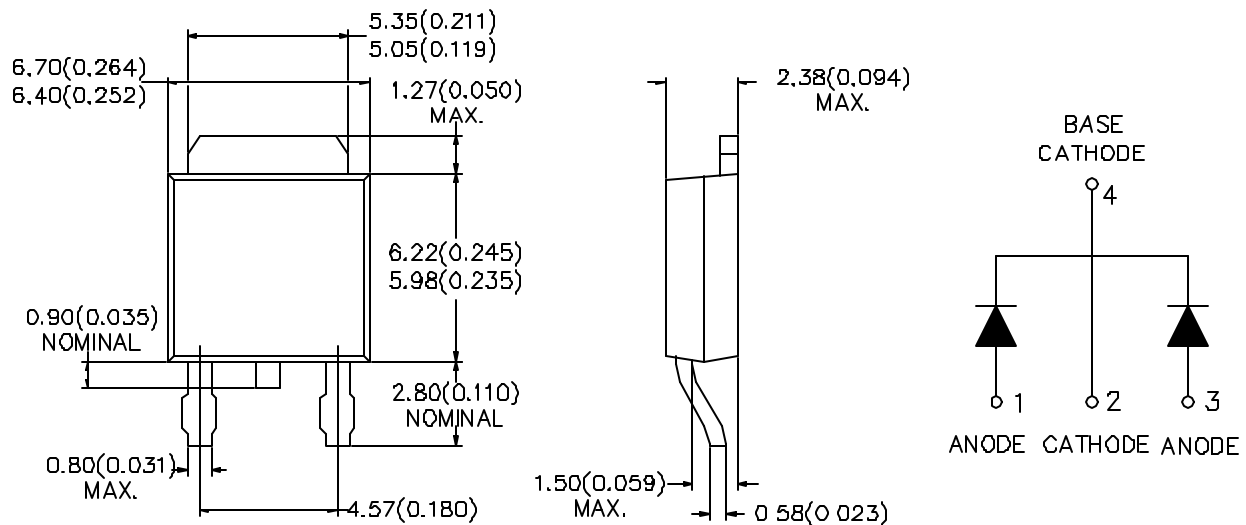
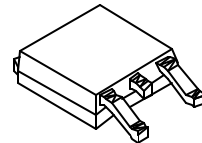
- Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection
- Battery charging

Features:

- Popular D-PAK outline
- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Mechanical Dimensions: In Inches / mm

D-PAK



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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	20	V
Max. Average Forward	$I_{F(AV)}$	Rated V_R , 50% duty cycle @ $T_C = 130\text{ }^\circ\text{C}$, rectangular wave form	3(per leg)	A
			6(per device)	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	75	A
Peak Repetitive Reverse Surge Current (per leg)	I_{RRM}	2.0 μ s, 1.0kHz	1.0	A

Electrical Characteristics:

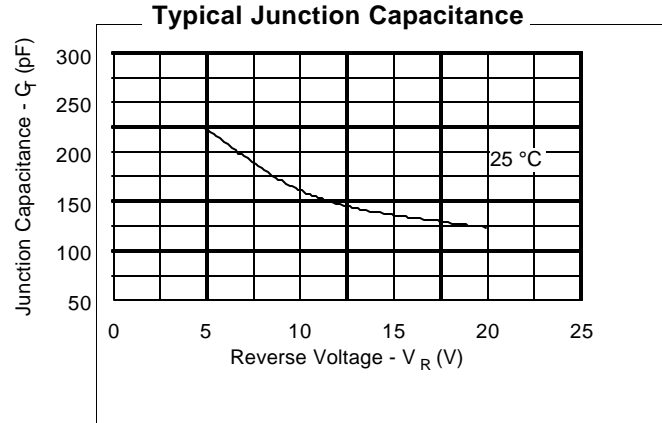
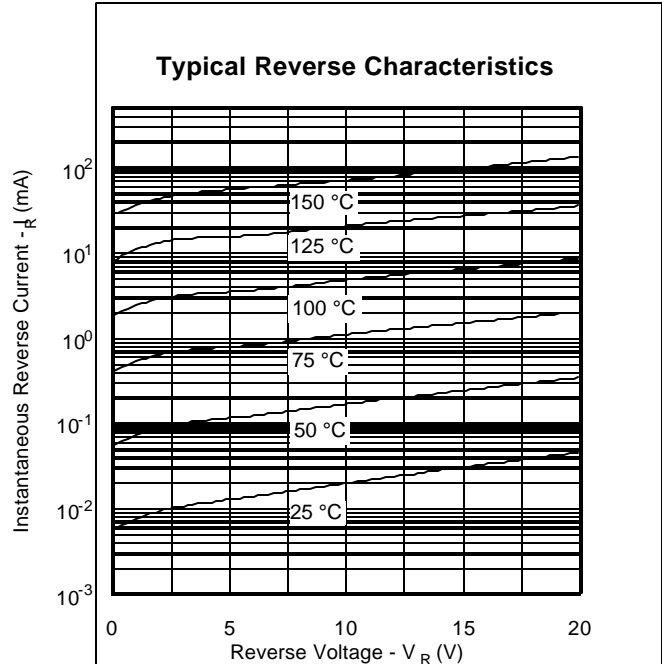
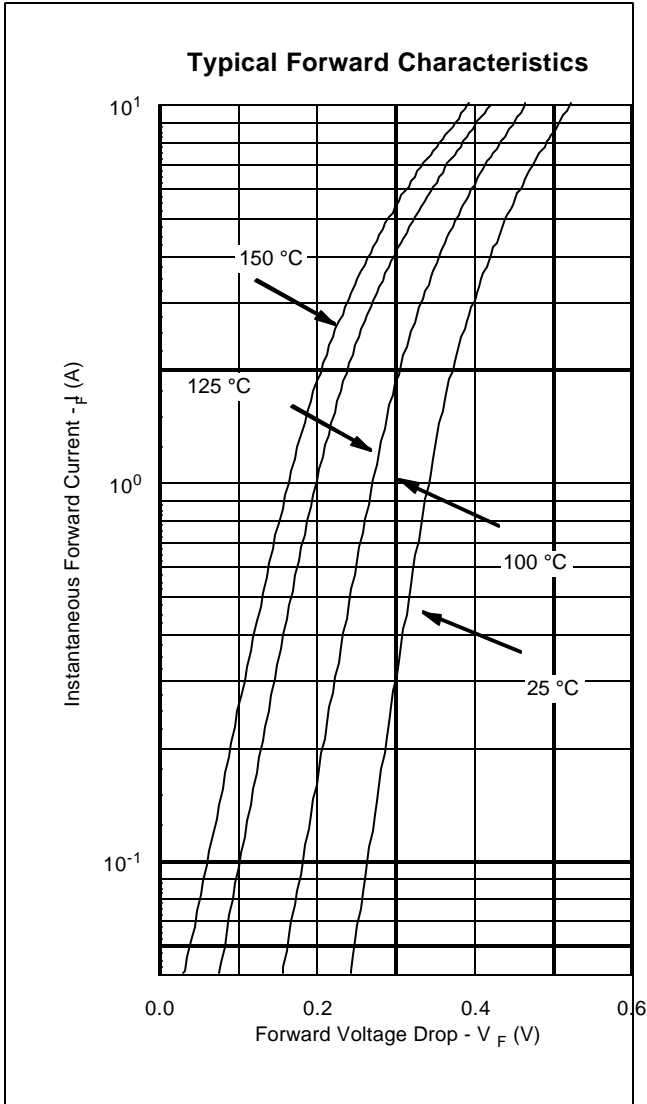
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 3 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.70	V
		@ 6 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.90	
	V_{F2}	@ 3 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.65	V
		@ 6 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$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

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-65 to +150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	6	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	80	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.3	g
Case Style	D-PAK(Similar to TO-250AA)			

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