Technical Data Data Sheet 3066, Rev. -

#### MBRD630CT SCHOTTKY RECTIFIER

### **Applications:**

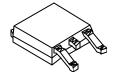
- · Switching power supply · Converters · Free-Wheeling diodes · Reverse battery protection
- · Battery charging

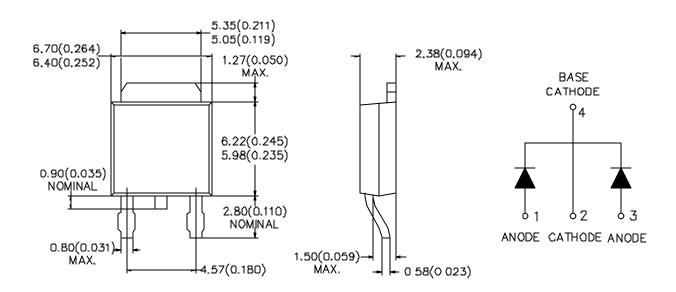
#### Features:

- 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





<sup>• 221</sup> West Industry Court 

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# SENSITRON SEMICONDUCTOR

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### **Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units	
Peak Inverse Voltage	$V_{RWM}$	-	20	V	
		Rated V <sub>R</sub> ,	3(per leg)		
Max. Average Forward	I <sub>F(AV)</sub>	50% duty cycle @T <sub>C</sub> = 130 °C, rectangular wave form	6(per device)	Α	
Max. Peak One Cycle Non- Repetitive Surge Current (per leg)	I <sub>FSM</sub>	8.3 ms, half Sine pulse	75	А	
Peak Repetitive Reverse Surge Current (per leg)	I <sub>RRM</sub>	2.0 μ s, 1.0kHz	1.0	А	

### **Electrical Characteristics:**

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

<sup>\*</sup> Pulse Width < 300µs, Duty Cycle <2%

## **Thermal-Mechanical Specifications:**

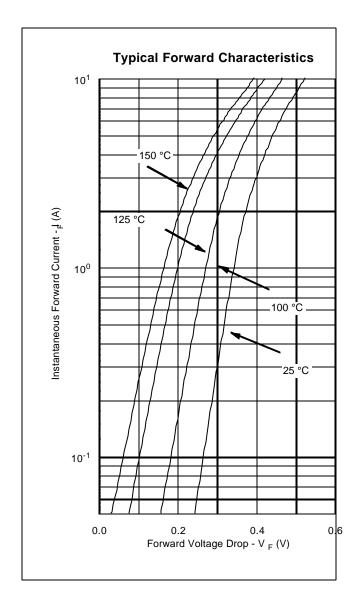
Characteristics	Symbol	Condition	Specification	Units	
Max. Junction Temperature	$T_J$	-	-65 to +150	°C	
Max. Storage Temperature	T <sub>stg</sub>	-	-65 to +175	°C	
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	6	°C/W	
Maximum Thermal Resistance Junction to Ambient	$R_{ heta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

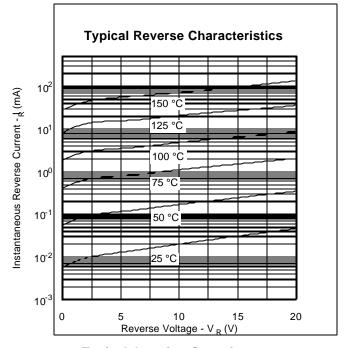
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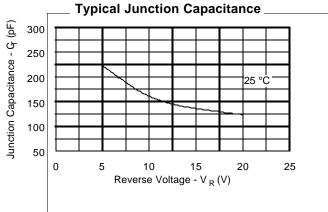
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