



SENSITRON

SEMICONDUCTOR

6CWQ20FN

TECHNICAL DATA
DATA SHEET

6CWQ20FN SCHOTTKY RECTIFIER

Applications:

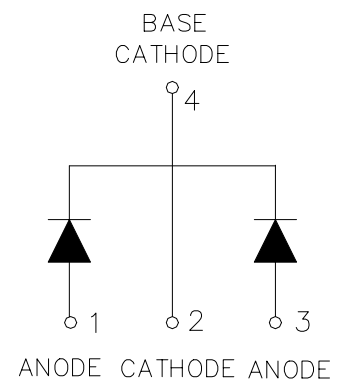
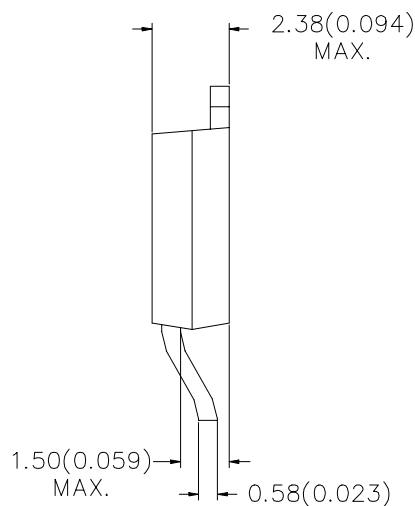
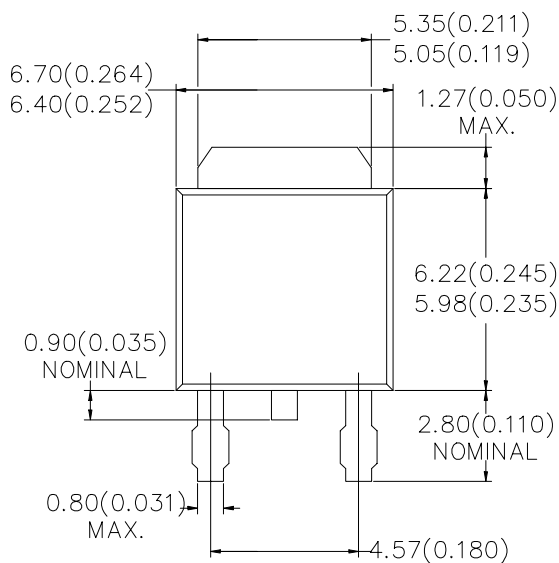
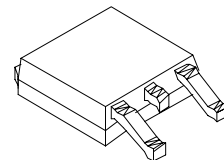
- Switching power supply • Converters • Free-Wheeling Diodes • Reverse battery protection
- Battery Charging

Features:

- Popular D-PAK outline
- Center tap configuration
- 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



**Maximum Ratings:**

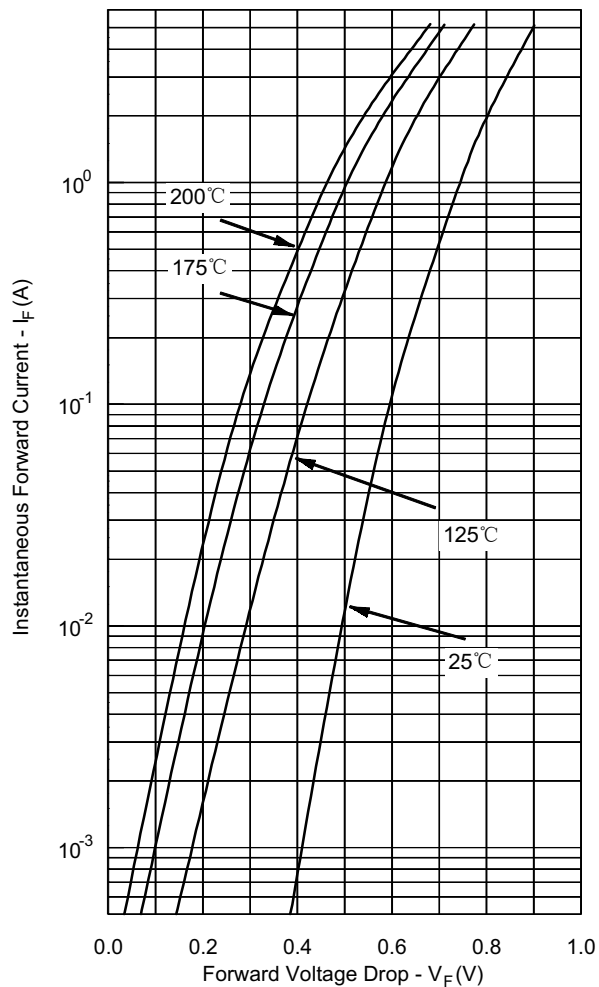
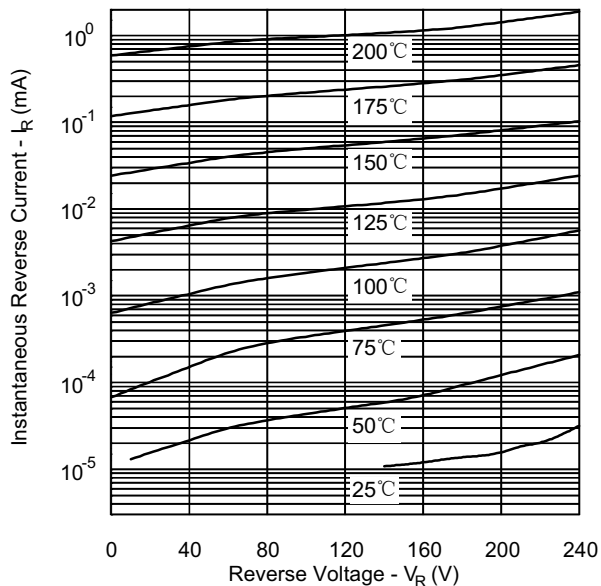
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 131^\circ\text{C}$, rectangular wave form	3.5(per leg) 7.0 (Per Device)	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	84	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 3 A, Pulse, $T_J = 25^\circ\text{C}$	0.89	V
	V_{F2}	@ 3 A, Pulse, $T_J = 125^\circ\text{C}$	0.71	V
Max. Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125^\circ\text{C}$	5	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	60	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.0	nH
Max. Voltage Rate of Change	dv/dt		10,000	V/ μs

* Pulse Width < 300 μs , Duty Cycle < 2%**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-40 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-40 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	4.70(per leg) 2.35 (Per Device)	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.3	g
Case Style	D – PAK(Similar to TO-252AA)			

**Typical Forward Characteristics****Typical Reverse Characteristics****Typical Junction Capacitance**