

Technical Data
Data Sheet 3074, Rev. -

12CWQ15FN SCHOTTKY RECTIFIER

Applications:

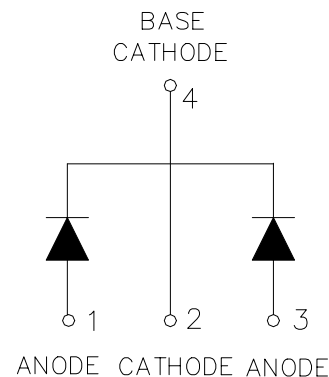
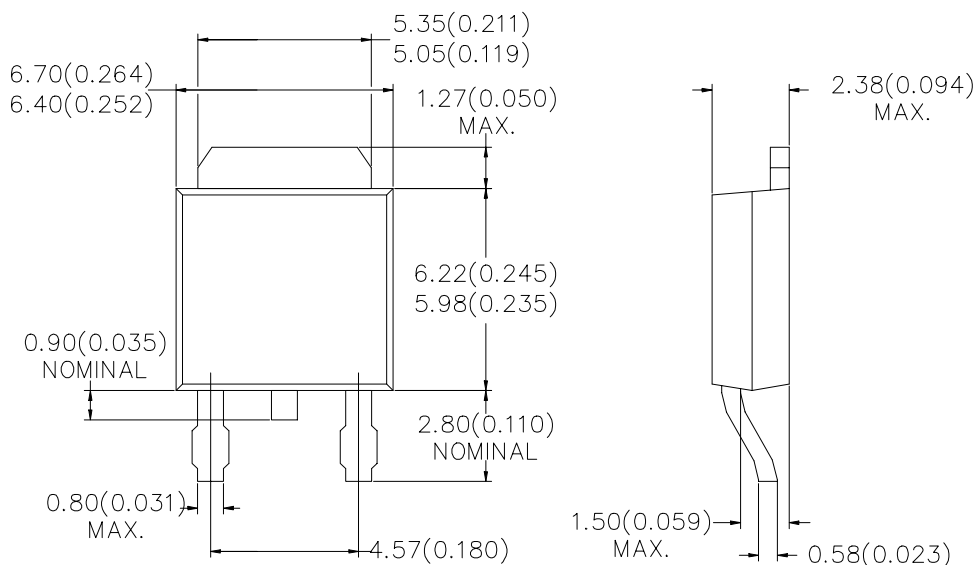
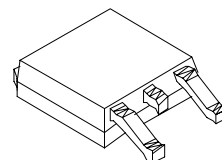
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery charging

Features:

- Popular D-PAK outline
- Center tap configuration
- Small foot print, surface moutable
- 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}	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 135\text{ }^\circ\text{C}$, rectangular wave form	6(per leg)	A
			12 (per device)	
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}		132	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@6 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.85	V
	V_{F2}	@ 6 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.67	V
Max. Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	4.0	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	183	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.0	nH

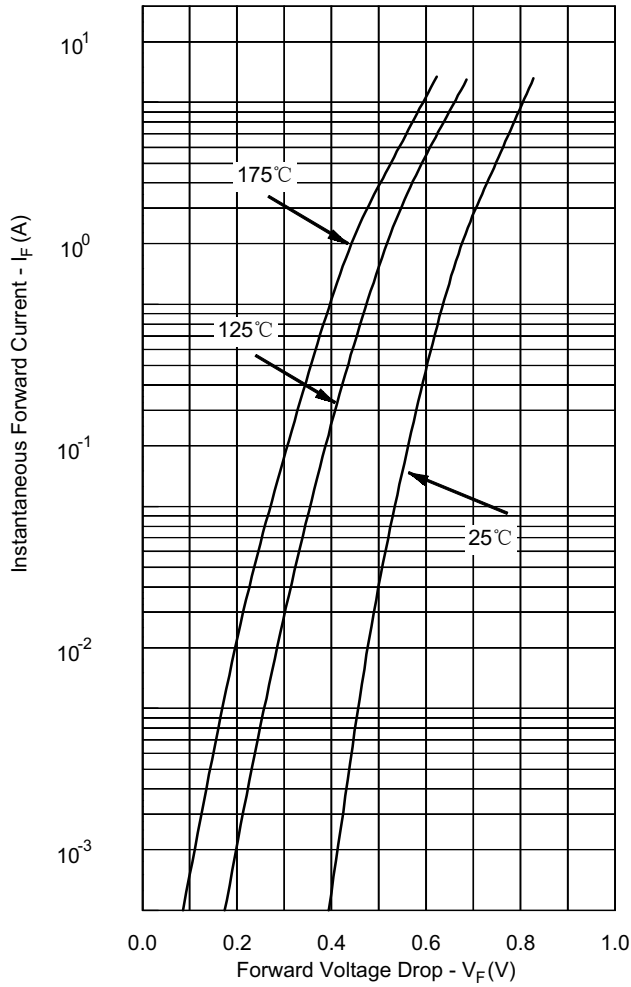
* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications:

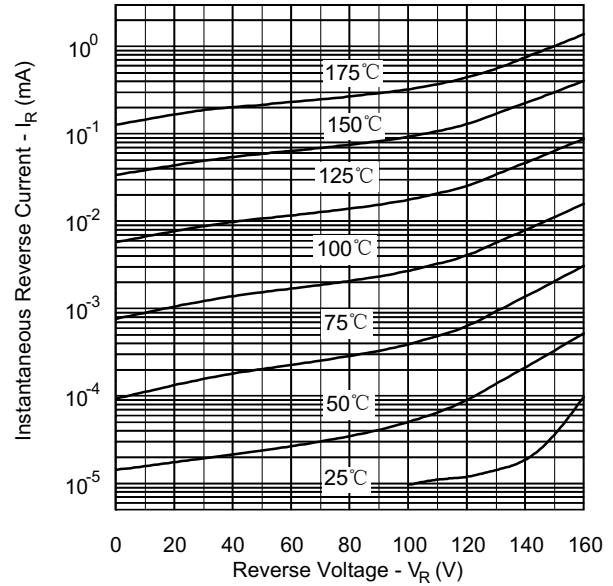
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	3.0(per leg)	$^\circ\text{C/W}$
			1.5(per device)	
Approximate Weight	wt	-	0.3	g
Case Style	D-PAK (Similar to TO-252AA)			

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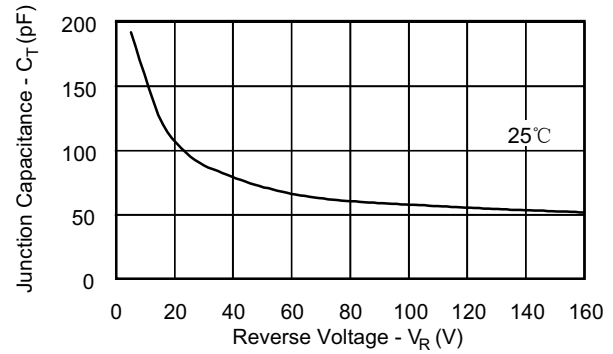
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



TECHNICAL DATA

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