

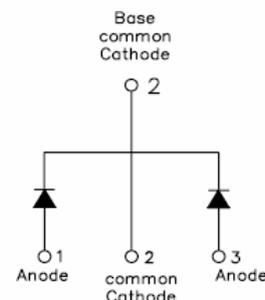
12CWQ04FN SCHOTTKY RECTIFIER

Applications:

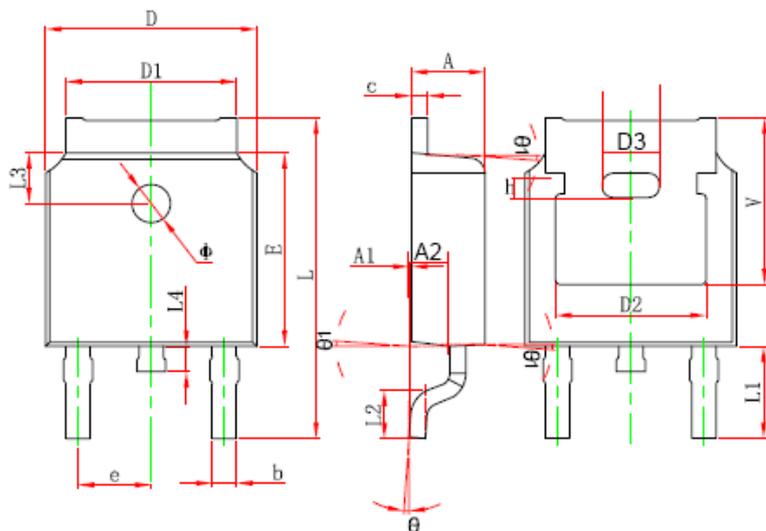
- Disk drives
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery charging

Features:

- Popular DPAK 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
- Green products in compliance with the ROHS directive
- 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 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	1.778 REF.		0.070 REF.	
h	0.762 REF.		0.030 REF.	
θ1	7°		7°	

DPAK

Technical Data
Data Sheet N0658, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

12 = Forward Current (12A)
 CW = Configuration
 Q = Device Type
 04 = Reverse Voltage (40V)
 FN = Package type
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

Ordering Information:

Device	Package	Shipping
12CWQ04FN	DPAK (Pb-Free)	2500 pcs / 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}	-	40	V
Max. Average Forward Current	$I_{F(AV)}$	50%dutycycle@Tc=100°C, rectangular wave form	6(per leg)	A
			12(per device)	
Max. Peak One Cycle Non-repetitive Surge Current(per leg)	I_{FSM}	8.3ms,half sine pulse	84	A

Electrical Characteristics:

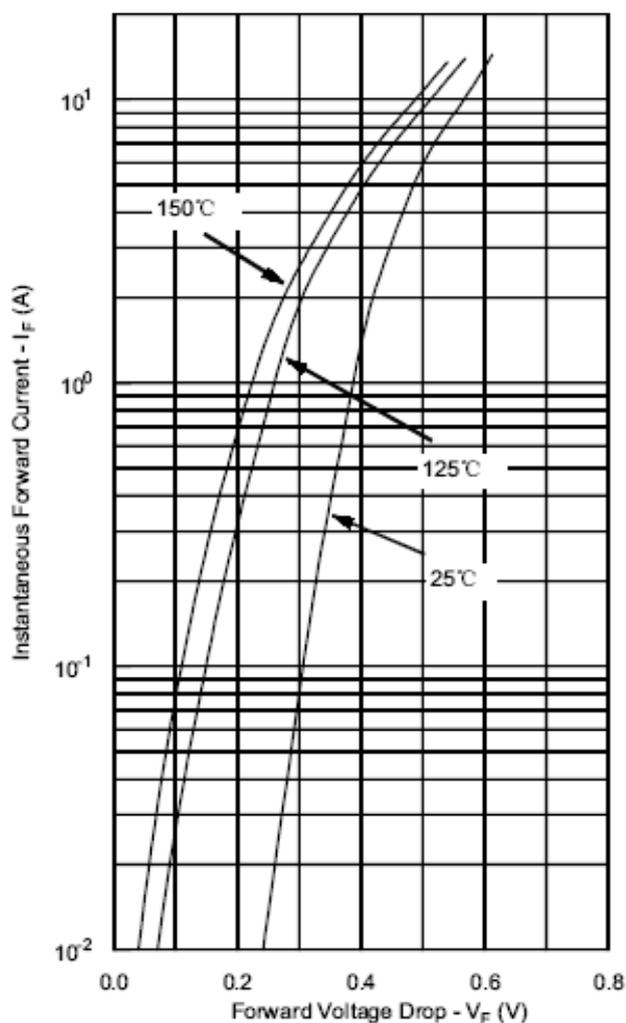
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V _{F1}	@ 6A, Pulse, T _J = 25 °C	0.53	V
	V _{F2}	@ 6 A, Pulse, T _J = 125 °C	0.48	V
Max. Reverse Current (per leg)*	I _{R1}	@ V _R = Rated V _R , Pulse, T _J = 25 °C	1.0	mA
	I _{R2}	@ V _R = Rated V _R , Pulse, T _J = 125 °C	40	mA
Max. Junction Capacitance (per leg)	C _T	@ V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	405	pF
Typical Series Inductance (per leg)	L _S	Measured lead to lead 5 mm from package body	5.0	nH

*Pulse Width < 300µs, Duty Cycle <2%

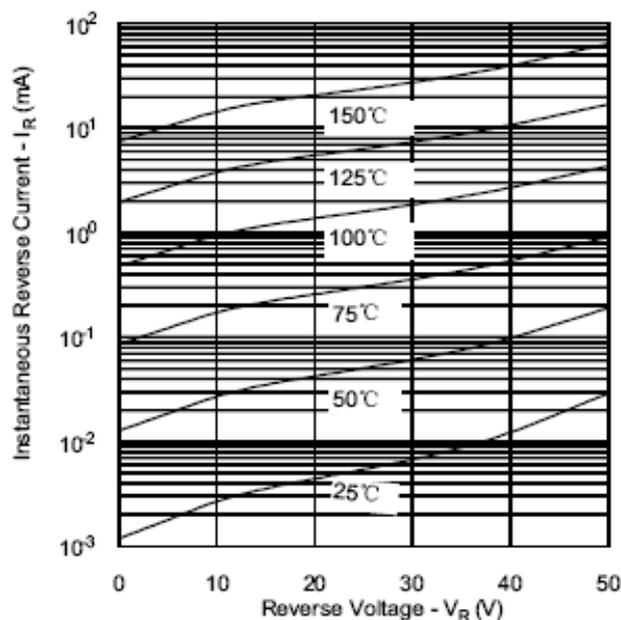
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +125	°C
Max. Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resisance Juntion To Case	R _{θJC}	DC operation	3.0(per leg)	°C/W
			1.5(per device)	
Approximate Weight	wt	-	0.39	g
Case Style	DPAK			

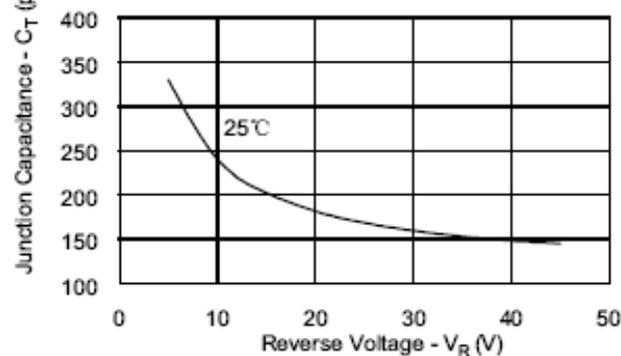
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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