

SCHOTTKY RECTIFIER

3.3 Amp

Major Ratings and Characteristics

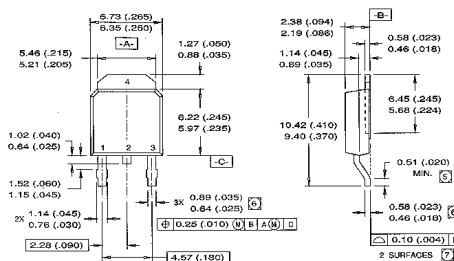
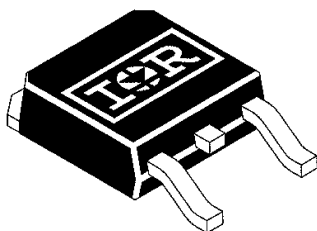
Characteristics	30WQ04FN	Units
$I_{F(AV)}$ Rectangular waveform	3.3	A
V_{RRM}	40	V
I_{FSM} @ $t_p = 5\mu s$ sine	470	A
V_F @ 3.0Apk, $T_J = 25^\circ C$	0.62	V
T_J	-55 to 150	$^\circ C$

Description/Features

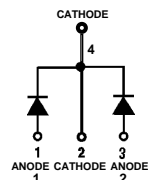
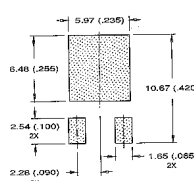
The 30WQ04FN surface mount Schottky rectifier has been designed for applications requiring low forward drop and small foot prints on PC board. Typical applications are in disk drives, switching power supplies, converters, free-wheeling diodes, battery charging, and reverse battery protection.

- 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

CASE STYLE



MINIMUM RECOMMENDED FOOTPRINT



D - PAK Outline (Similar to TO-252AA)
Dimensions in millimeters and inches

Voltage Ratings

Part number	30WQ04FN
V_R Max. DC Reverse Voltage (V)	40
V_{RWM} Max. Working Peak Reverse Voltage (V)	

Absolute Maximum Ratings

Parameters		30WQ04FN	Units	Conditions	
I _{F(AV)}	Max. Average Forward Current	3.3	A	50% duty cycle @ T _C = 105°C, rectangular waveform	
I _{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current	470	A	5µs Sine or 3µs Rect. pulse	Following any rated load condition and with rated V _{RRM} applied
		40		10ms Sine Or 6ms Rect. pulse	

Electrical Specifications

Parameters		30WQ04FN	Units	Conditions	
V _{FM}	Max. Forward Voltage Drop (1)	0.62	V	@3.0A	T _J = 25°C
		0.88	V	@6.0A	
		0.56	V	@ 3.0A	T _J = 125°C
		0.69	V	@6.0A	
I _{RM}	Max. Reverse Leakage Current (1)	2	mA	T _J = 25°C	V _R = rated V _R
		12	mA	T _J = 125°C	
C _T	Max. Junction Capacitance	110	pF	V _R = 5V _{DC} , (test signal range 100Khz to 1Mhz), 25 C	
L _S	Typical Series Inductance	5.0	nH	Measured lead to lead 5mm from package body	
dv/dt	Max. Voltage Rate of Change (Rated V _R)	10,000	V/ μs		

(1) Pulse Width < 300 μs , Duty Cycle < 2%**Thermal-Mechanical Specifications**

Parameters	30WQ04FN	Units	Conditions
T_J Max.Junction Temperature Range	-55 to 150	$^\circ\text{C}$	DC operation
T_{STG} Max. Storage Temperature Range	-55 to 150	$^\circ\text{C}$	
R_{thJC} Max. Thermal Resistance, Junction to case	6.0	$^\circ\text{C/W}$	
wt Approximate Weight	0.3(0.01)	g (oz.)	
Case Style	D-PAK		Similar to TO-252AA