

12CWQ150FN

SCHOTTKY RECTIFIER

12 Amp

Major Ratings and Characteristics

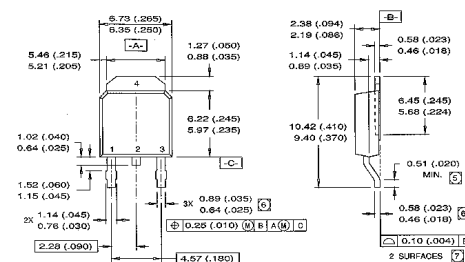
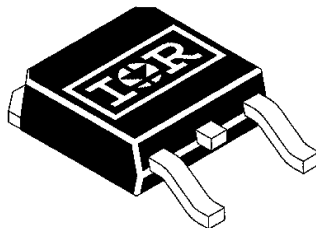
Characteristics	12CWQ10FN	Units
$I_{F(AV)}$ Rectangular waveform	12	A
V_{RRM}	150	V
I_{FSM} @ $t_p = 5\mu s$ sine	210	A
V_F @ 6.0Apk, $T_J = 125^\circ C$ (per leg)	0.75	V
T_J	-55 to 175	$^\circ C$

Description/Features

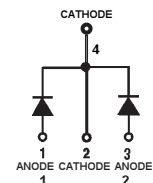
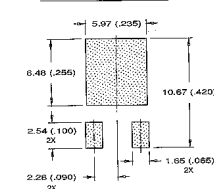
The 12CWQ150FN surface mount, center tap, Schottky rectifier has been designed for applications requiring low forward drop and small foot prints on PC board. Typical applications are in disk drives, switching power supplies, converters, free-wheeling diodes, battery charging, and reverse battery protection.

- Popular D-PAK outline
- Center tap configuration
- 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

12CWQ150FN

Preliminary Data Sheet PD-2.549 04/97

International
IOR Rectifier

Voltage Ratings

Part number	12CWQ150FN
V _R Max. DC Reverse Voltage (V)	150
V _{RWM} Max. Working Peak Reverse Voltage (V)	

Absolute Maximum Ratings

Parameters	12CWQ150FN	Units	Conditions
I _{F(AV)} Max. Average Forward Current	12	A	50% duty cycle @ T _C = 123°C, rectangular waveform
I _{FSM} Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	210	A	5μs Sine or 3μs Rect. pulse
	42		10ms Sine or 6ms Rect. pulse

Following any rated load condition and with rated V_{RRM} applied

Electrical Specifications

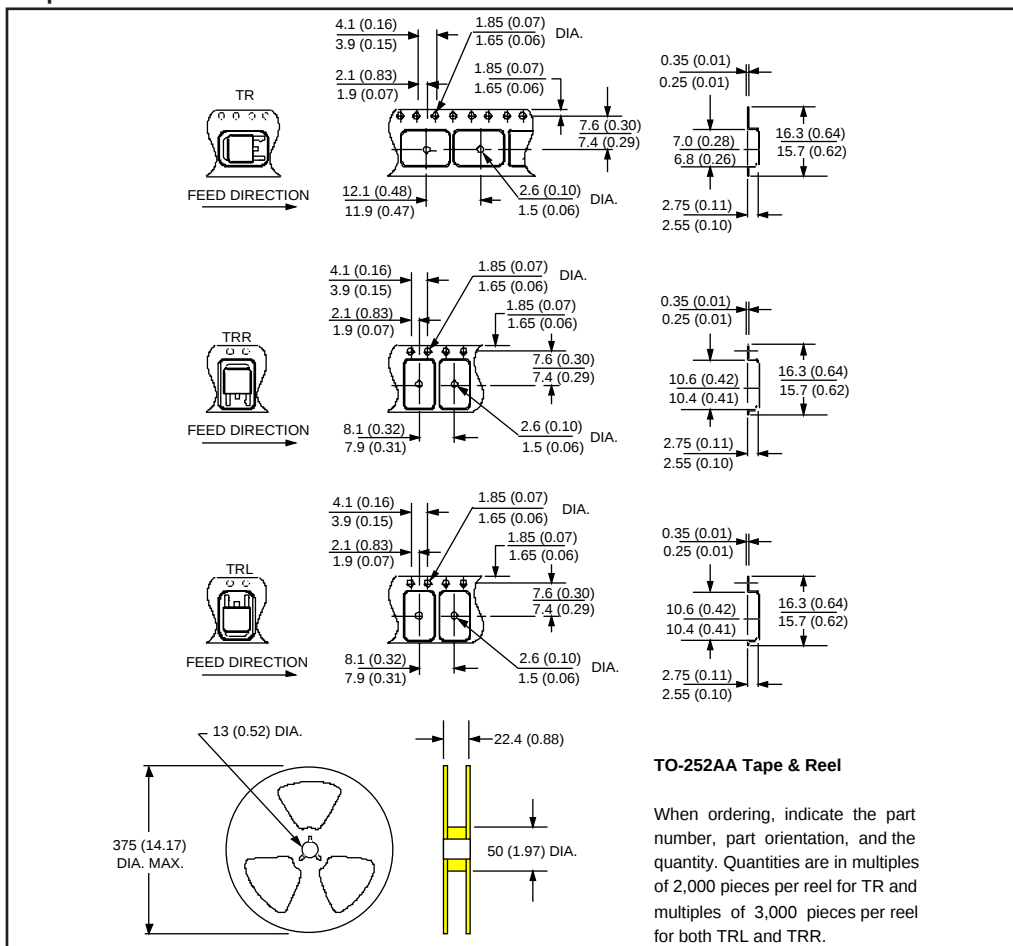
Parameters	12CWQ150FN	Units	Conditions
V _{FM} Max. Forward Voltage Drop (Per Leg) (1)	0.75	V	@ 6.0A T _J = 125°C
I _{RM} Max. Reverse Leakage Current (Per Leg) (1)	0.05	mA	T _J = 25°C
	7.0	mA	T _J = 125°C
C _T Max. Junction Capacitance (Per Leg)	100	pF	V _R = 5V _{DC} , (test signal range 100Khz to 1Mhz), °25 C
L _S Typical Series Inductance (Per Leg)	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 < 300μs, Duty Cycle < 2%

Thermal-Mechanical Specifications

Parameters	12CWQ150FN	Units	Conditions
T _J Max. Junction Temperature Range	-55 to 175	°C	
T _{STG} Max. Storage Temperature Range	-55 to 175	°C	
R _{thJC} Max. Thermal Resistance, Junction to case	3.0	°C/W	DC operation
R _{thJA} Max. Thermal Resistance, Junction to Ambient	110	°C/W	DC operation
	50		PC Board mounted print land = 20x20mm
wt Approximate Weight	0.3(0.01)	g (oz.)	
Case Style	D-PAK		Similar to TO-252AA

Tape & Reel Information



Part Marking Information

EXAMPLE: THIS IS AN 12CWQ150FN

