



# QCF3545T

Integrated bypass diode for Solar cell Module

## Features

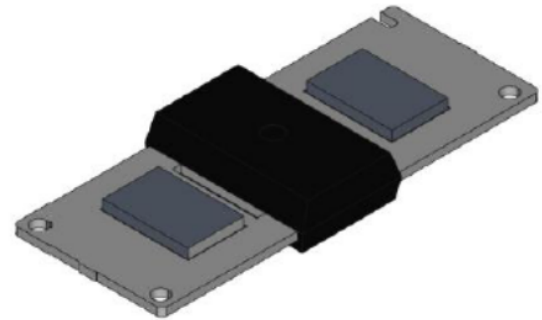
- Schottky Barrier high diode;
- Low thermal resistance;
- Lower forward voltage drop, low power loss;
- Isolate Package design, ideal for heat dispersion;
- High forward current capability;
- Excellent anti-humidity;
- Low profile package;
- High forward surge capability;



RoHS  
COMPLIANT

## Mechanical Data

- Case: QC3Q;
- Terminals: Copper;
- High temperature soldering guaranteed;  
Heated-tool welding 260°C, 10seconds
- Marking: As marked on product;



QC3Q

## Order Information

Package	QC3Q
PVC tube	32pcs/ tube
Inner Box	320pcs/ Inner box
Carton	1600pcs/ Carton

## Typical Applications

For the protection of solar cell bypass box.  
Using DC forward current without reverse bias.

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

For capacitive load, derate current by 20%.

Case: QC3Q

Dimensions in millimeters

Parameter	Symbol	QCF3545T		Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	45		Volt
Maximum working peak reverse voltage	$V_{RWM}$	45		Volt
Average rectified output current @ 60Hz sine wave, $T_a=25^\circ\text{C}$	$I_O$	35		Amps
Non-Repetitive Peak forward surge current @ 60Hz, single sine-wave load	$I_{FSM}$	450		Amps
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	840		$\text{A}^2\text{sec}$
Instantaneous forward voltage drop	$V_F$	@IF=10A	0.39Typ. 0.44 max.	Volt
		@IF=20A	0.43 Typ. 0.48max.	
		@IF=30A	0.47 Typ. 0.52 max.	
		@IF=35A	0.48Typ. 0.53max.	
Reverse Current at Rated DC reverse Voltage	@Tj=25°C	$I_R$	31Typ. 100max.	$\mu\text{A}$
	@Tj=125°C	$I_R$	80.00Typ. 100.00 max.	mA
Typical capacitance (1.0 MHz and Applied reverse Voltage of 5.0V D.C)	$C_j$	4000		pF
Typical thermal resistance	$R_{\theta J-c}$	1.5		°C/W
Storage Temperature	$T_{STG}$	-55 to +150		°C
Junction Temperature IN DC Forward Mode, without reverse bias, $t \leq 1\text{ h}$	$T_J$	-55 to +150		°C



### Ratings and Characteristics Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

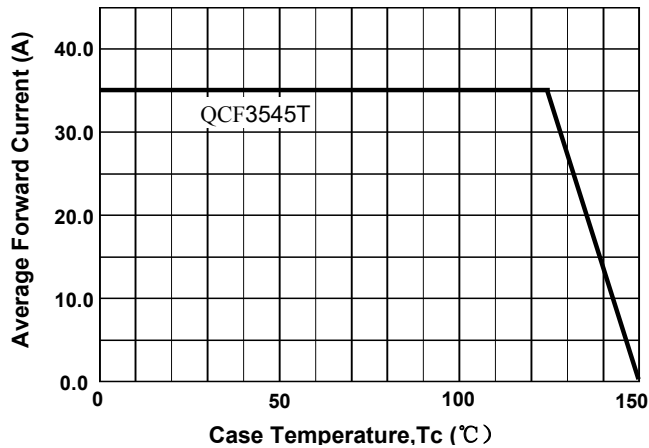


FIG.2 Typical Forward Characteristics per Diode

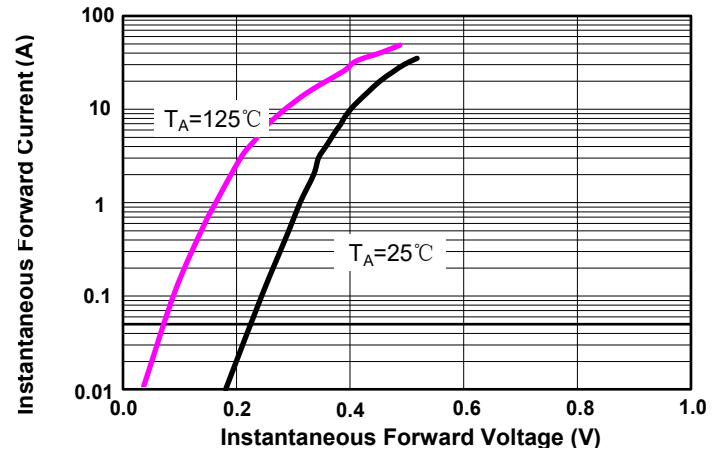


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

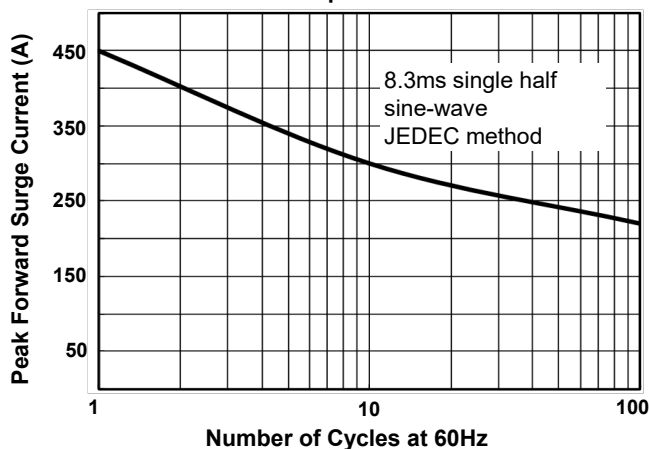


FIG.4 Typical Reverse Characteristics per Diode

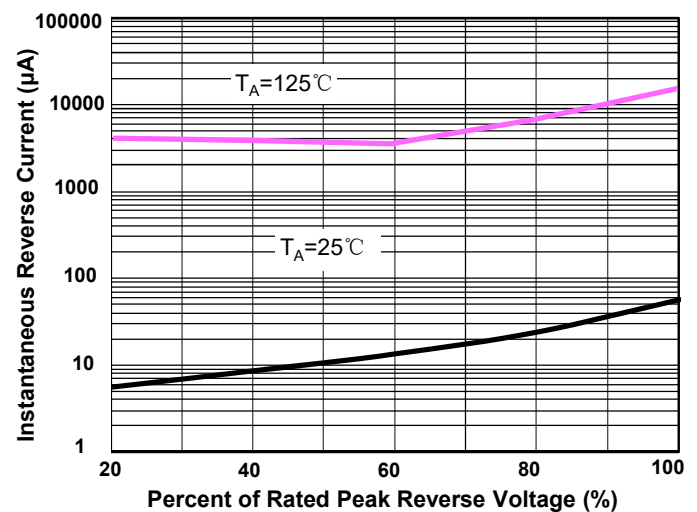
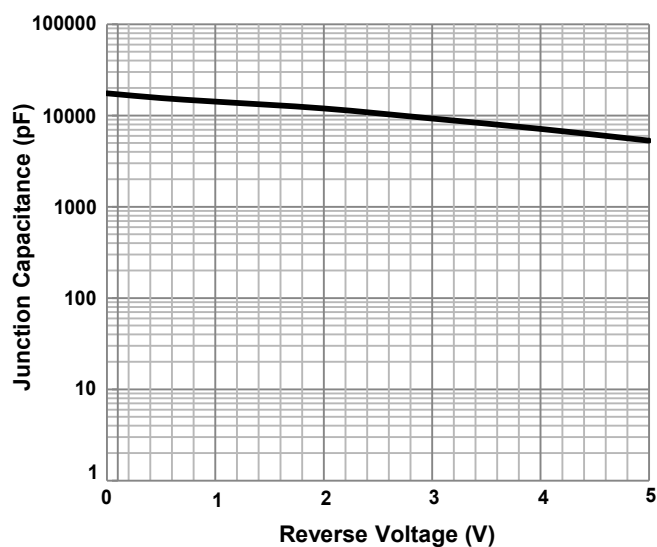
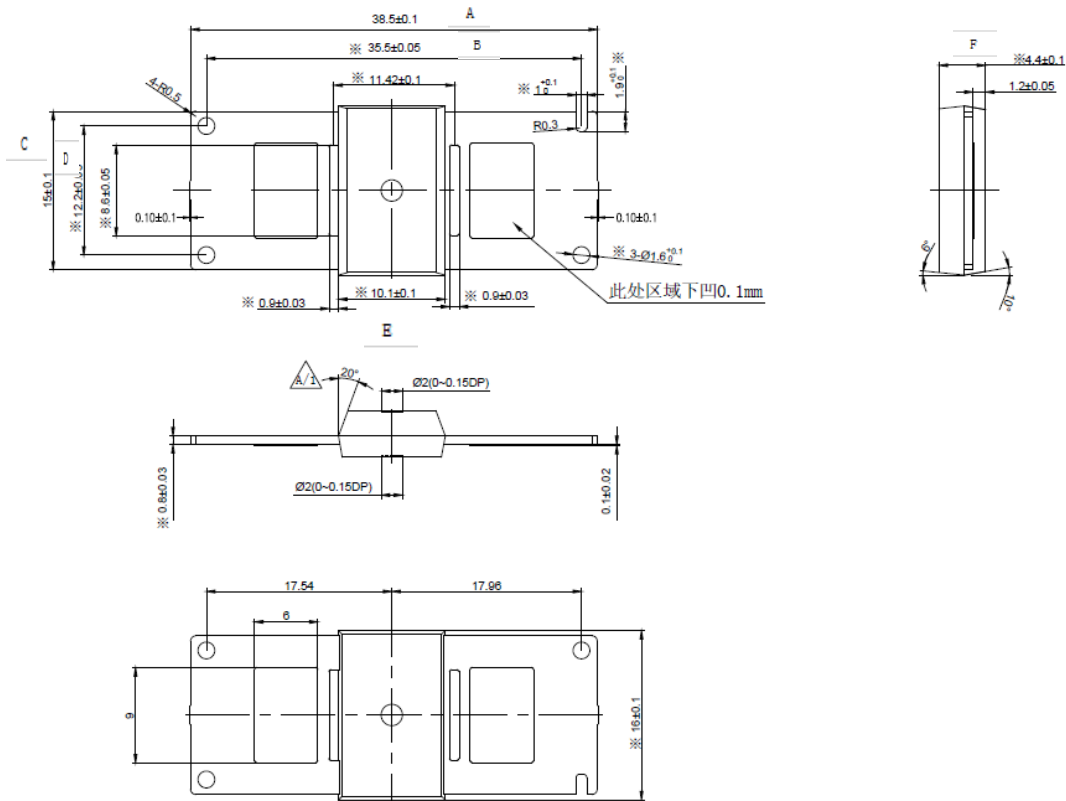


FIG.5 Typical Junction Capacitance per Diode



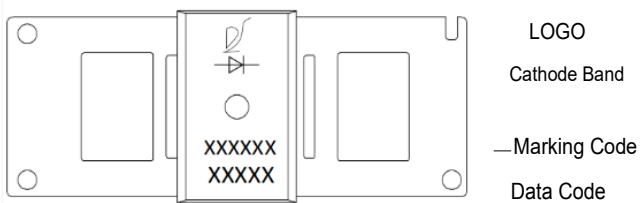


### 6. Dimensions



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	1.512	1.520	38.40	38.60
B	1.396	1.400	35.45	35.55
C	0.587	0.595	14.90	15.10
D	0.476	0.484	12.10	12.30
E	0.394	0.402	10.00	10.20
F	0.169	0.177	4.30	4.50

### 7. Part Marking System





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