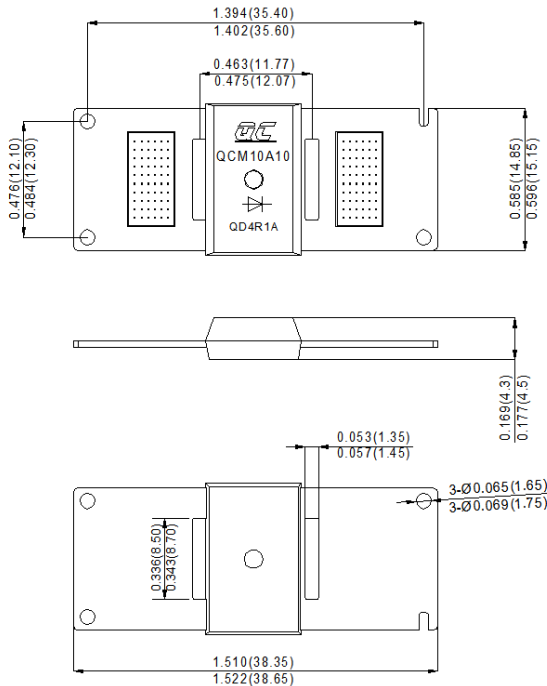


QC3Q



Dimensions in inch(mm)

Reverse Voltage 1000V
Forward Current 10Amp

Features

- Metal of silicon rectifier, majority carrier conduction
- Guardring for overvoltage protection
- Low power loss, high efficiency
- High surge current capability
- High temperature reverse characteristic is excellent
- Trench Schottky Technology

Mechanical Data

Case: QC3Q, Molded plastic body
Molding compound meets UL 94V-0 flammability rating
Terminal: Matte tin plated leads, solderable per JESD22-B102
Polarity: As marked on body
Weight: 4.9grams (approximately)

Typical Applications

- Photovoltaic solar cell protection
- Switching power supplies, converters, freewheeling diodes, and reverse battery protection

Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)(Note1)

Symbol	Parameter&Test Conditions	Value	Units
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	1000	V
V_{DC}	Maximum DC Blocking Voltage	1000	V
$I_F(AV)$	Maximum Average Forward Rectified Current @25°C	10	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	300	A
$R_{\theta JC}$	Maximum Thermal Resistance, Junction To Case	1.5	$^\circ\text{C}/\text{W}$
T_j	Operating Junction Temperature(Note2)	-55 to +200	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 to +150	$^\circ\text{C}$

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

Symbol	Test Conditions	Value	Units
V_{FM}	Maximum Instantaneous Forward Voltage(Note3) $I_F=10A$, $T_j=25^\circ\text{C}$	1.1	V
I_R	Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$, $T_A = 100^\circ\text{C}$	2.5	mA
		100	mA

Note 1: Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Note 2: Junction Temperature In DC forward current without reverse bias, $t \leq 1$ h (Fig.1). Meets the Requirements of IEC 61215 Ed. 2 bypass diode thermal test.

Note 3: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle.

Typical Performance Characteristics

图1: 正向电流降额曲线
FIG1: IF (AV) --Tc Derating

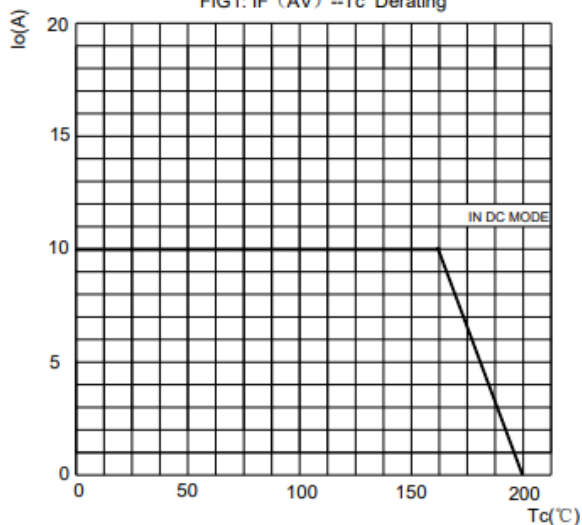


图2: 耐正向浪涌电流曲线
FIG2: Surge Forward Current Capability

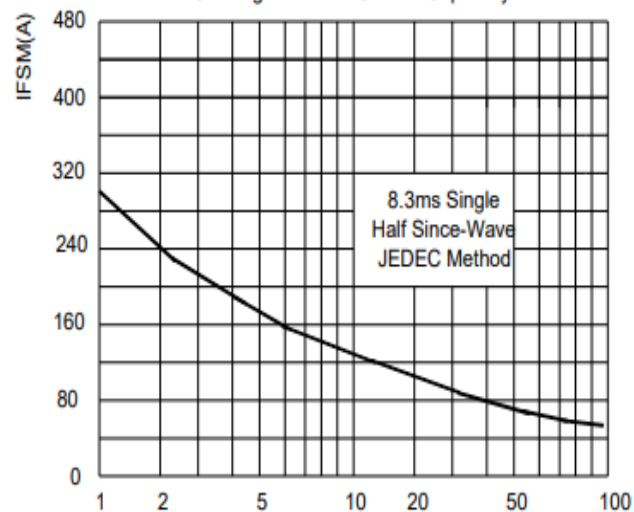


图3: 正向电压曲线
FIG3: Instantaneous Forward Voltage

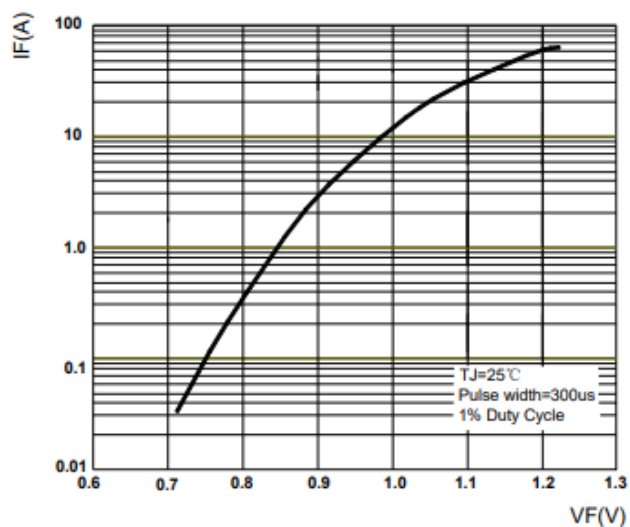
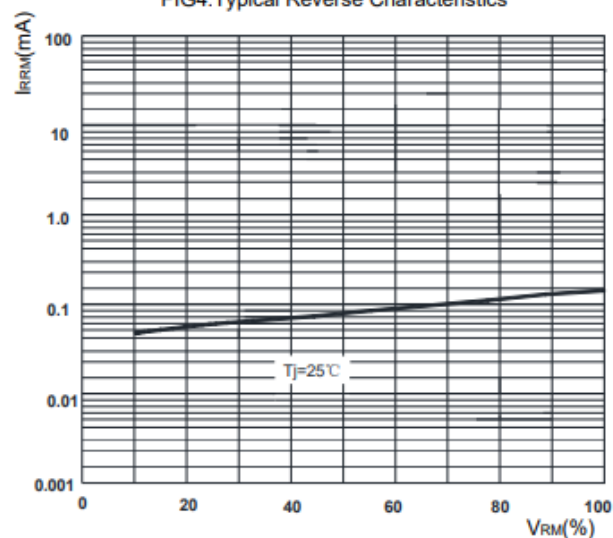


图4: 反向电流曲线
FIG4: Typical Reverse Characteristics



Note: This document is subject to change without notice. The right of interpretation belongs to QC Solar (Suzhou) Corporation.