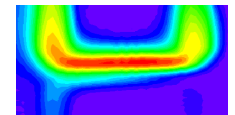


# RFD88A Solar Engine Module Testing Instructions and Results

Contact: Tom Budka  
RF Diagnostics, LLC  
518-810-6560 (mobile)

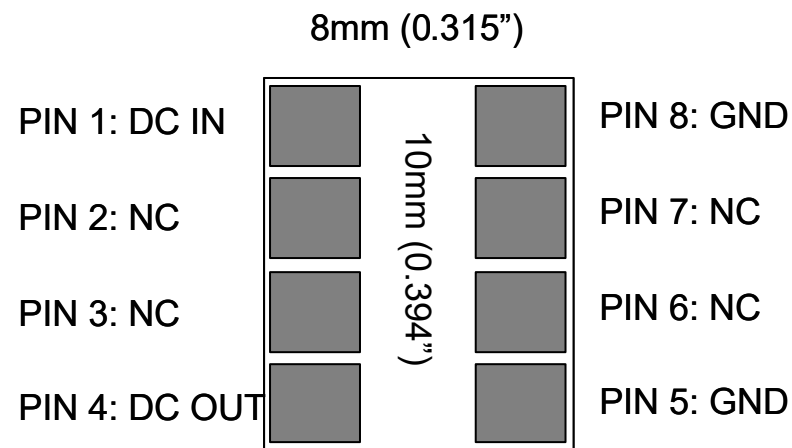
20-JAN-2016



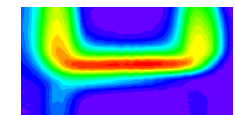
RF Diagnostics, LLC

# Overview & Testing Instructions

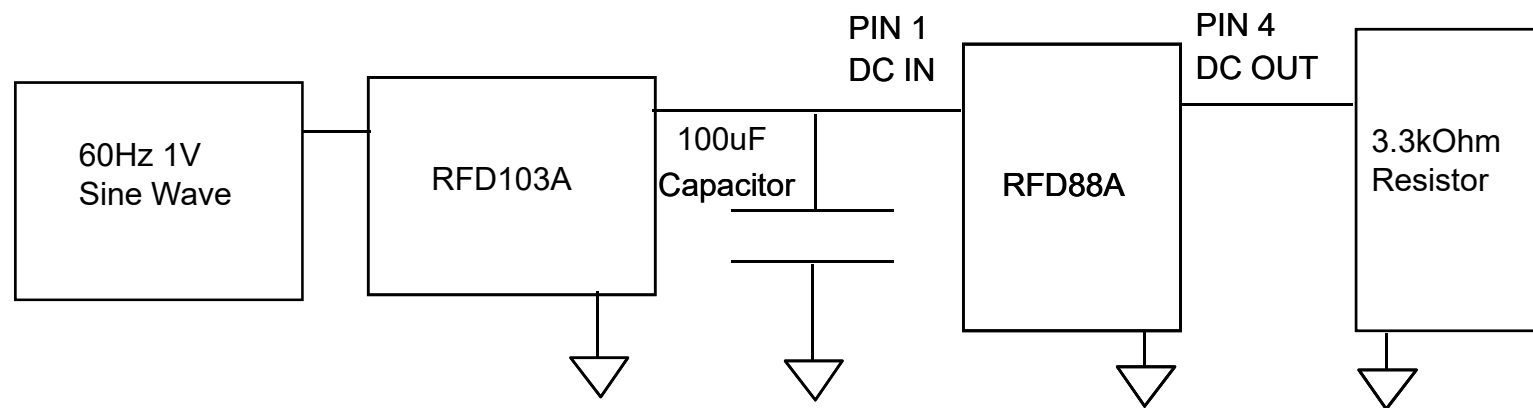
- The RFD88A is an energy harvesting power management module in a Land Grid Array (LGA) package. This module manages the charging and discharging of a super capacitor in an energy harvesting system so that higher currents can be delivered than are available during harvesting.
- In the baseline configuration, in this order
  - Connect pin 8 or pin 5 to ground
  - Connect pin 4 to the power pin on the application circuit
  - Connect pin 1 to the energy harvesting voltage output
- A large value capacitor should first be grounded to prevent discharge and then be connected to pin 1 & ground.
- When the capacitor reaches approximately 5.3V the module will internally connect Pin 1 to Pin 4 and discharge the capacitor into the application circuit until 1.0V is reached. The internal switch will open up while the capacitor recharges and the cycle will start again.



Top View



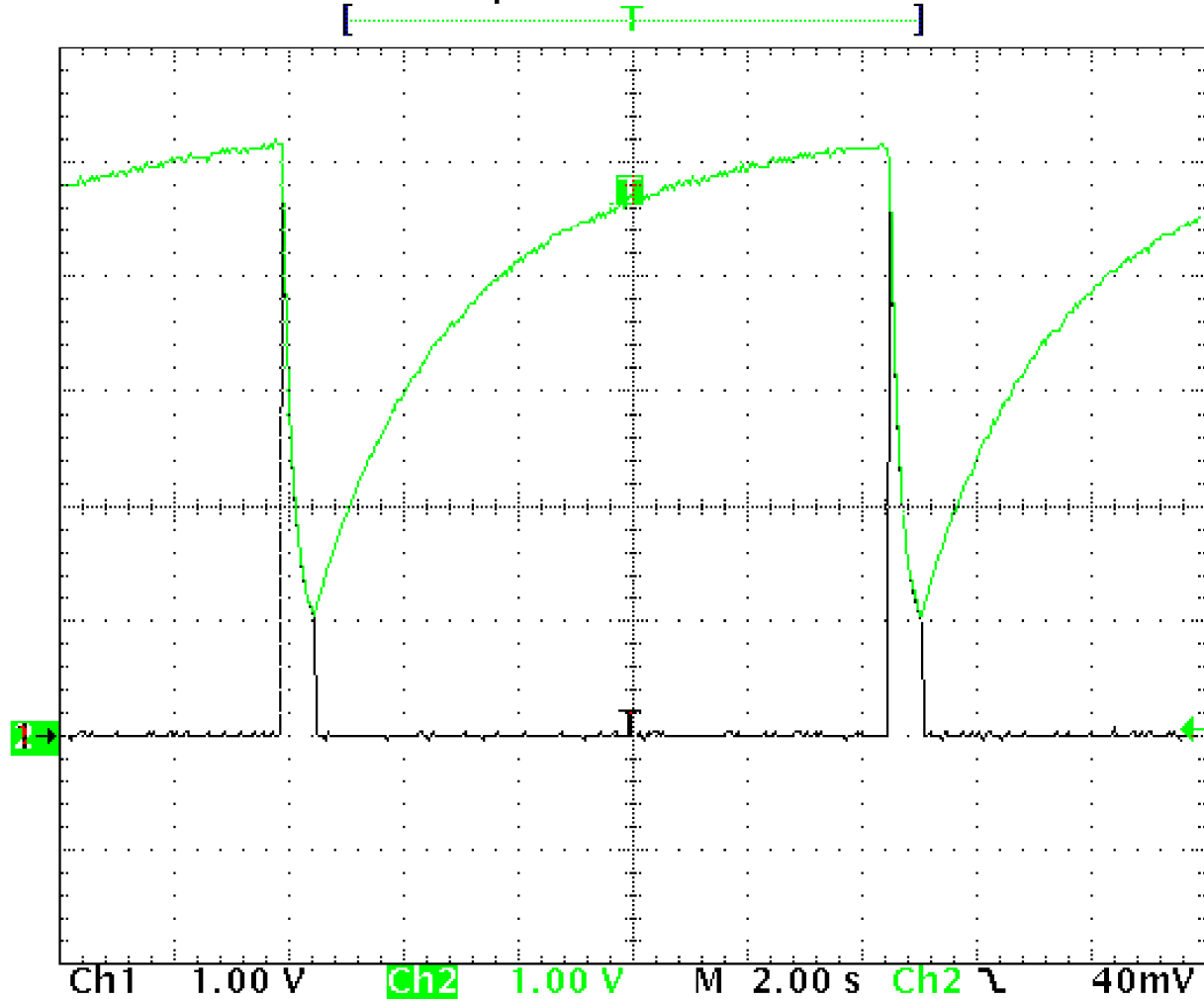
# Test Setup for These Results



# Default Mode

- Pin 2 & Pin 3 Left Open, VHIGH=5.3V

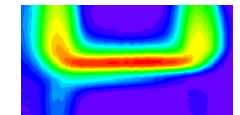
Tek Run: 25.0 S/s Sample



C2 Min  
1.04 V

C2 Max  
5.20 V

11 Dec 2015  
14:42:48



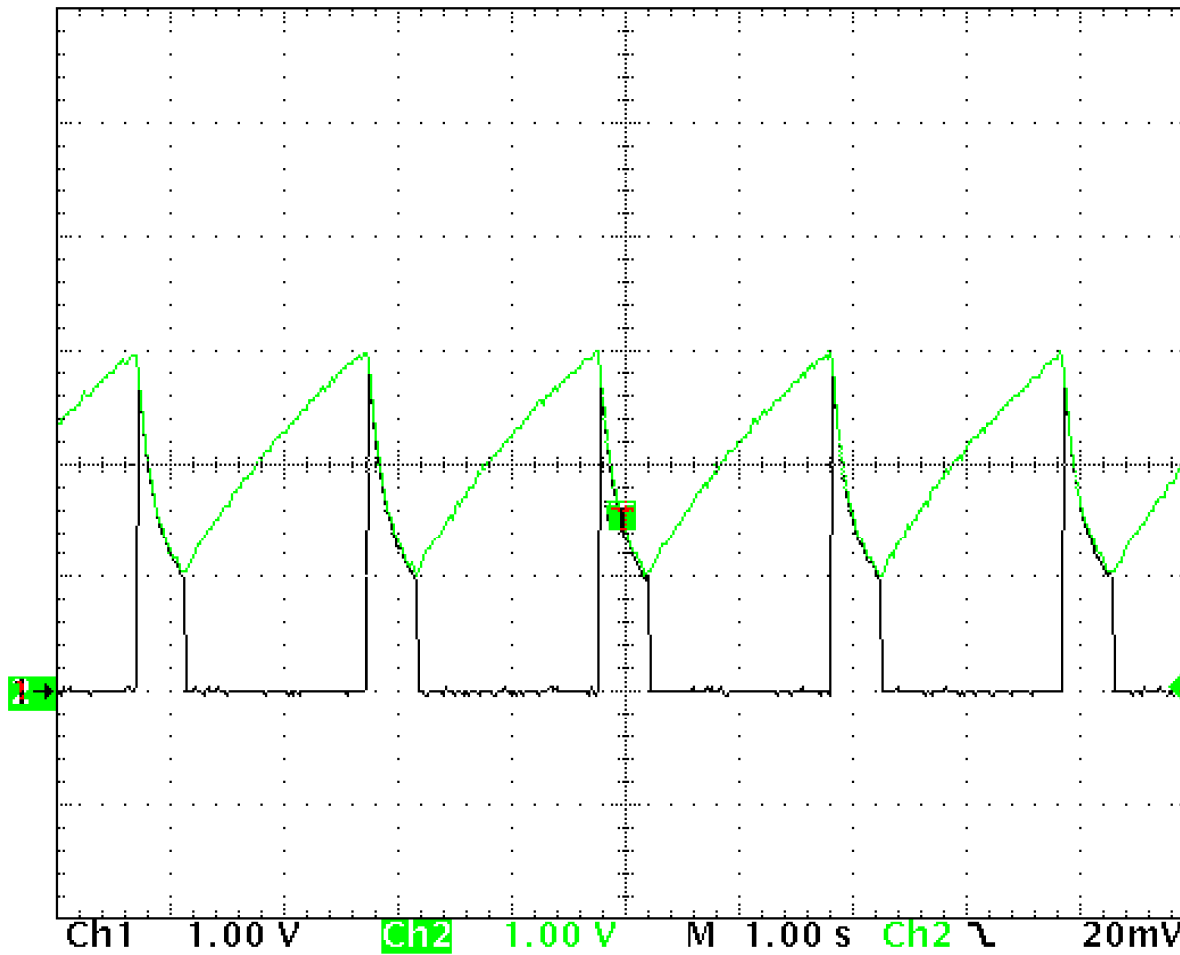
RF Diagnostics, LLC

# Pin 3 Grounded – Medium VHIGH

- Pin 2 Open, Pin 3 Grounded, VHIGH=3.0V

Tek Run: 50.0 S/s

Sample



C2 Min  
1.00 V

C2 Max  
3.00 V

Ch1 1.00 V

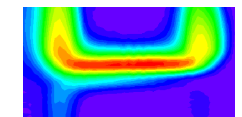
Ch2 1.00 V

M 1.00 s

Ch2 20mV

11 Dec 2015

15:21:23



# Pin 3 Grounded – Lowest VHIGH

- Pin 2 Grounded Pin 3 Grounded, VHIGH=2.5V

