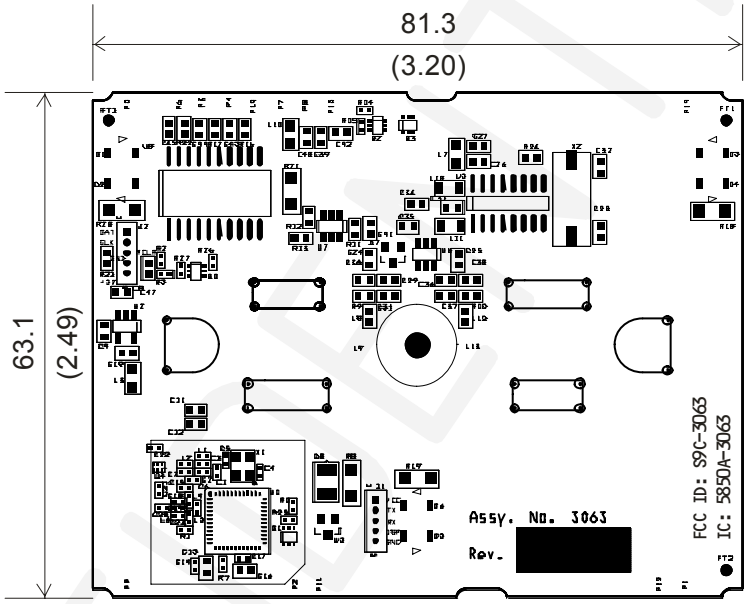
Introduction

This document is a user guide for the 3063 outlet control board assembly.

Description

The 3063 circuit board assembly is a general purpose main control board for smart outlets manufactured by OFI, Inc. Assembly no. 3063 incorporates an 802.15.4 transceiver and ISO14443B RFID reader.

Dimensions & Markings



Tuning

The 3063 has no tunable components and no tuning requirements.

Connections

Pad	Signal
P1	Relay 2 Drive Out (open collector drive)
P2	Relay 2 Drive Out (open collector drive)
P3	Current Sense 2 Analog Input (0-5V)
P4	Current Sense 1 Analog Input (0-5V)
P5	No connection
P6	Voltage Sense 1 Analog Input (0-5V)
P7	Regulated 5Vdc input

Pad	Signal
P8	DC common
P9	No connection
P10	Analog Test Signal Output (5V TTL)
P11	Relay 12V Out
P12	Relay 12V Out
P13	12Vdc input
P14	No connection

Agency Certifications

FCC 15.225, FCC 15.247, FCC 15b, Canada RSS-210 Limited Modular Approval (pending)

FCC ID: S9C-3063
IC: 5850A-3063

This equipment has been tested and found to comply with the limits for a Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications not expressly approved by OFI, Inc. could void the user's authority to operate the equipment

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device has been designed to operate only with the integral antennas. External antennas and modification to the included integral antenna are strictly prohibited for use with this device.

Application Limitations

The 3063 Control Board (module) shall be sold only as a component of products designed by or for OFI, Inc.:

- with the antennas integral to the 3063 module,
- that provide the 3063 module with a regulated 5V power supply compliant with the Recommended Operating Conditions,
- such that, under normal use, the radiating structure(s) of the device is/are not within 20 centimeters of the body of the user,
- subject to further FCC part 15b and ICES-003 unintentional radiator testing
- subject to any other applicable FCC or Industry Canada testing

Products incorporating the 3063 Control Board shall bear the marking:

Contains FCC ID: S9C-3063, IC: 5850A-3063

Products incorporating the 3063 Control Board shall be evaluated for compliance with any applicable RF exposure requirements.

Ratings

Absolute Maximum Ratings

Description	Min	Typ	Max	Units
Logic Supply	-0.3		6.5	Vdc
Relay Drive Supply	-0.3		16	Vdc
Temperature	-40		125	ºC
802.15.4 RF Input Level			10	dBm

Exceeding the maximum ratings may result in permanent damage.

Recommended Operating Conditions

Description	Min	Typ	Max	Units
Logic Supply	4.75	5	5.25	Vdc
Relay Drive Supply	11	12	13	Vdc
Temperature	-40		80	ºC
Logic Supply Current			100	mA
Relay Drive Current			70	mA

802.15.4 RF CHARACTERISTICS (@ 25°C, VCC = 5.0V)

Description	Min	Typ	Max	Units
Frequency Band (16 – 5MHz wide channels)	2.405		2.480	GHz
RX Sensitivity for 1% PER DCD		-95	-90	dBm
RX Sensitivity for 1% PER NCD		-99		dBm
TX Output Power	5	6.5	8.5	dBm

ISO14443B Reader (@ 25°C, VCC = 5.0V)

Description	Min	Typ	Max	Units
Read Range	8		16	mm

Read range specified for RightPlug compliant encoded plugs