

Vision Detector PCB Panel Assembly Functional Test

Test Date: 2021-02-23 14:47:02

Supplier: Jabil Technician: User1 Customer: Siemens

Test Station: OSP\_PCB\_FT\_01
Test Software Revision: 04

Test Parameters Match Initialization File: FALSE

Year of Manufacture: 2020

Siemens PCBA Part Number: 10752680

Siemens PCBA Revision: 03

Panel Serial Number: RBL03W15449 - Fail
PCB D Serial Number: RBL03W15449D - Fail

PCB C Serial Number: RBL03W15449C - Pass \*\*Not all Test Performed. No Data Written to EEPROM!\*\* PCB B Serial Number: RBL03W15449B - Pass \*\*Not all Test Performed. No Data Written to EEPROM!\*\*

PCB A Serial Number: RBL03W15449A - Fail

Test Description: Test 1 - RF Amp & ASIC Trigger Test, ASIC 0 PCB Serial Number: RBL03W15449D **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: **Pass** Test Description: Test 2 - RF Amp & ASIC Trigger Test, ASIC 1 PCB Serial Number: RBL03W15449D Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: **Pass** Test Description: Test 3 - RF Amp & ASIC Trigger Test, ASIC 2 PCB Serial Number: RBL03W15449D Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) Test Measurement:

Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments

Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: **Pass** Test Description: Test 4 - RF Amp & ASIC Trigger Test, ASIC 3 PCB Serial Number: RBL03W15449D Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: Pass Test Description: Test 5 - RF Amp & ASIC Trigger Test, ASIC 4 PCB Serial Number: RBL03W15449D Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: Pass

Test Description:

Test 6 - RF Amp & ASIC Trigger Test, ASIC 5 PCB Serial Number: RBL03W15449D **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) Test Measurement: Fail Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: Fail Notes: 0 Pulse(s), Pulse Width (ns): 0 Test Description: Test 7 - RF Amp & ASIC Trigger Test, ASIC 6 PCB Serial Number: RBL03W15449D **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: **Pass** Test Description: Test 8 - RF Amp & ASIC Trigger Test, ASIC 7 PCB Serial Number: RBL03W15449D Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV)

Test Measurement: Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.562, IC2: 27.562; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.812, IC2: 28.562; Temp OK - Pass Test Result: **Pass** Test Description: Test 9 - RF Amp & ASIC Trigger Test, ASIC 0 PCB Serial Number: RBL03W15449C **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: **Pass** Test Description: Test 10 - RF Amp & ASIC Trigger Test, ASIC 1 PCB Serial Number: RBL03W15449C Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass

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Pass

Test Result:

**Test Description:** Test 11 - RF Amp & ASIC Trigger Test, ASIC 2 PCB Serial Number: RBL03W15449C **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: Pass Test Description: Test 12 - RF Amp & ASIC Trigger Test, ASIC 3 PCB Serial Number: RBL03W15449C **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: **Pass** Test Description: Test 13 - RF Amp & ASIC Trigger Test, ASIC 4 PCB Serial Number: RBL03W15449C Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV)

Test Measurement:

Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: **Pass Test Description:** Test 14 - RF Amp & ASIC Trigger Test, ASIC 5 PCB Serial Number: RBL03W15449C Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: Pass **Test Description:** Test 15 - RF Amp & ASIC Trigger Test, ASIC 6 PCB Serial Number: RBL03W15449C **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: **Pass** 

Test Description: Test 16 - RF Amp & ASIC Trigger Test, ASIC 7 PCB Serial Number: RBL03W15449C **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 27.125, IC2: 26.937; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.625, IC2: 28.250; Temp OK - Pass Test Result: **Pass Test Description:** Test 17 - RF Amp & ASIC Trigger Test, ASIC 0 PCB Serial Number: RBL03W15449B Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: **Pass** Test Description: Test 18 - RF Amp & ASIC Trigger Test, ASIC 1 PCB Serial Number: RBL03W15449B Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: **Pass** Test Description: Test 19 - RF Amp & ASIC Trigger Test, ASIC 2 PCB Serial Number: RBL03W15449B Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: Pass Test Description: Test 20 - RF Amp & ASIC Trigger Test, ASIC 3 PCB Serial Number: RBL03W15449B Test Lower Limit: N/A **Test Upper Limit:** 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: Pass

Test Description:

Test 21 - RF Amp & ASIC Trigger Test, ASIC 4 PCB Serial Number: RBL03W15449B **Test Lower Limit:** N/A **Test Upper Limit:** 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: Pass Test Description: Test 22 - RF Amp & ASIC Trigger Test, ASIC 5 PCB Serial Number: RBL03W15449B **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: **Pass Test Description:** Test 23 - RF Amp & ASIC Trigger Test, ASIC 6 PCB Serial Number: RBL03W15449B Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV) Test Measurement: Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units:

**mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: Pass **Test Description:** Test 24 - RF Amp & ASIC Trigger Test, ASIC 7 PCB Serial Number: RBL03W15449B **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.812, IC2: 26.812; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.562, IC2: 28.375; Temp OK - Pass Test Result: **Pass Test Description:** Test 25 - RF Amp & ASIC Trigger Test, ASIC 0 PCB Serial Number: RBL03W15449A **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.500, IC2: 26.375; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.000, IC2: 27.687; Temp OK - Pass Test Result: **Pass** 

**Test Description:** 

Test 26 - RF Amp & ASIC Trigger Test, ASIC 1

# Vision Detector PCB Assembly Test Report RBL03W15449\_20210223144702.pdf

PCB Serial Number:
RBL03W15449A
Test Lower Limit:
N/A
Test Upper Limit:
• •
100.000000 (mV)
Test Measurement:
Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments
Units:
mVDC
Starting Temperature (Max 50.00 C):
IC1: 26.500, IC2: 26.375; Temp OK - Pass
·
Ending Temperature (Max 50.00 C):
IC1: 28.000, IC2: 27.687; Temp OK - Pass
Test Result:
Pass
Test Description:
Test 27 - RF Amp & ASIC Trigger Test, ASIC 2
PCB Serial Number:
RBL03W15449A
Test Lower Limit:
N/A
Test Upper Limit:
100.000000 (mV)
Test Measurement:
Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments
Units:
mVDC
Starting Temperature (Max 50.00 C):
IC1: 26.500, IC2: 26.375; Temp OK - Pass
Ending Temperature (Max 50.00 C):
IC1: 28.000, IC2: 27.687; Temp OK - Pass
Test Result:
Pass
Test Description:
Test 28 - RF Amp & ASIC Trigger Test, ASIC 3
,
PCB Serial Number:
RBL03W15449A
Test Lower Limit:
N/A
Test Upper Limit:
100.000000 (mV)
Test Measurement:
Fail
Units:
mVDC

Starting Temperature (Max 50.00 C): IC1: 26.500, IC2: 26.375; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.000, IC2: 27.687; Temp OK - Pass Test Result: Fail Notes: 0 Pulse(s), Pulse Width (ns): 0 **Test Description:** Test 29 - RF Amp & ASIC Trigger Test, ASIC 4 PCB Serial Number: RBL03W15449A Test Lower Limit: N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: mVDC Starting Temperature (Max 50.00 C): IC1: 26.500, IC2: 26.375; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.000, IC2: 27.687; Temp OK - Pass Test Result: Pass Test Description: Test 30 - RF Amp & ASIC Trigger Test, ASIC 5 PCB Serial Number: RBL03W15449A **Test Lower Limit:** N/A Test Upper Limit: 100.000000 (mV) **Test Measurement:** Pass - Successfully triggered from 100.000000 to 10.000000 (mV) in 10.000000 (mV) Increments Units: **mVDC** Starting Temperature (Max 50.00 C): IC1: 26.500, IC2: 26.375; Temp OK - Pass Ending Temperature (Max 50.00 C): IC1: 28.000, IC2: 27.687; Temp OK - Pass Test Result: **Pass** 

Test Description:
Test 31 - RF Amp & ASIC Trigger Test, ASIC 6
PCB Serial Number:
RBL03W15449A
Test Lower Limit:
N/A
Test Upper Limit:
100.000000 (mV)
Test Measurement:
Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments
Units:
mVDC
Starting Temperature (Max 50.00 C):
IC1: 26.500, IC2: 26.375; Temp OK - Pass
Ending Temperature (Max 50.00 C):
IC1: 28.000, IC2: 27.687; Temp OK - Pass
Test Result:
Pass
Test Description:
Test 32 - RF Amp & ASIC Trigger Test, ASIC 7
PCB Serial Number:
RBL03W15449A
Test Lower Limit:
N/A
Test Upper Limit:
100.000000 (mV)
Test Measurement:
Pass - Successfully triggered from 100.000000 to 0.000000 (mV) in 10.000000 (mV) Increments
Units:
mVDC
Starting Temperature (Max 50.00 C):
IC1: 26.500, IC2: 26.375; Temp OK - Pass
Ending Temperature (Max 50.00 C):
IC1: 28.000, IC2: 27.687; Temp OK - Pass
Test Result:
Pass

#### Test Parameters:

Test Station="OSP\_PCB\_FT\_01"

## [PCB Current]

Set DC Voltage (V)="5.000"

Set DC Current Limit (A)="4.000"

Upper Voltage Limit="5.100"

Lower Voltage Limit="4.900"

Power Off Upper Current Limit="2.300"

Power Off Lower Current Limit="2.100"

Power On Upper Current Limit="2.650"

Power On Lower Current Limit="2.450"

ASIC Loaded Upper Current Limit="3.000"

ASIC Loaded Lower Current Limit="2.700"

#### [DAC Calibration]

DAC Calibration Tolerance="0.015"

Low Voltage Value="1.000"

Mid Voltage Value="2.000"

High Voltage Value="2.600"

Overtemp Threshold="50.000"

Detector Power On Delay="0.100"

### [TLE In/Out]

ASIC Off High Limit="0.100"

ASIC Off Low Limit="-0.100"

ASIC On High Limit="0.700"

ASIC On Low Limit="0.480"

ASIC Bias High Limit="2.800"

ASIC Bias Low Limit="2.500"

## [RF Amp & ASIC Test & LED Reset]

Starting Pulse Amplitude (mV)="100.000"

Decreasing Trigger Delta (mV)="10.000"

Pulse Width (ns)="10.000"

Trigger Width Lower Limit (ns)="40.000"

Trigger Width Upper Limit (ns)="60.000"

Number of Acceptable Pulses="1.000"

### [File Locations]

Test Report Folder Location="C:\Test Reports"

.tar File Folder Location="C:\Tars"

# [Tests to Perform]

PCB Current Test="FALSE"

EEPROM Test="FALSE"

TLE In Test="FALSE" TLE Out Test="TRUE" RF Amps & ASICs Test="TRUE" Reset Test="FALSE" Calibrate DACs Test="FALSE"

[PCBs to Test]

Test PCB1="TRUE"

Test PCB2="TRUE"

Test PCB3="TRUE"

Test PCB4="TRUE"

[Part Number]

O="10748016"

R="10752680"

[Manufacturer]

A="IES"

B="Jabil"

C="Epic"

D="CV"

Z="Prototype"

[Year]

A="2009"

B="2010"

C="2011"

D="2012"

E="2013"

F="2014"

G="2015"

H="2016"

I="2017"

J="2018"

K="2019"

L="2020"

M="2021"

N="2022" O="2023"

P="2024"

Q="2025"

[Dogbone]

10748016="standard"

10752680="dogbone"