**Note 1: General remarks**

- The chosen SMA connector is designed for a PCB thickness of 1.6mm
- Most components can be substituted by cheaper parts if same size and functionality

**Note 2: Suitable antennas**

- Requirements: SMA connector, 868Mhz, 50 ohm
- Examples:
  - Compressed stubby antenna
    - Farnell code: 2096218
    - LPRS ANT-SS900 ANTENNA, STUB STRAIGHT, 868-915MHZ
    - Farnell code: 2096219
    - LPRS ANT-900MS ANTENNA, STUB R/ANGLED, 868-915MHZ
  - Flexible whip antenna:
    - Farnell code: 1338625
    - LPRS ANT-900MS ANTENNA, WHIP, 800-900MHZ
    - Farnell code: 1338627
    - LPRS ANT-900MR ANTENNA, WHIP, R/A, 800-900MHZ

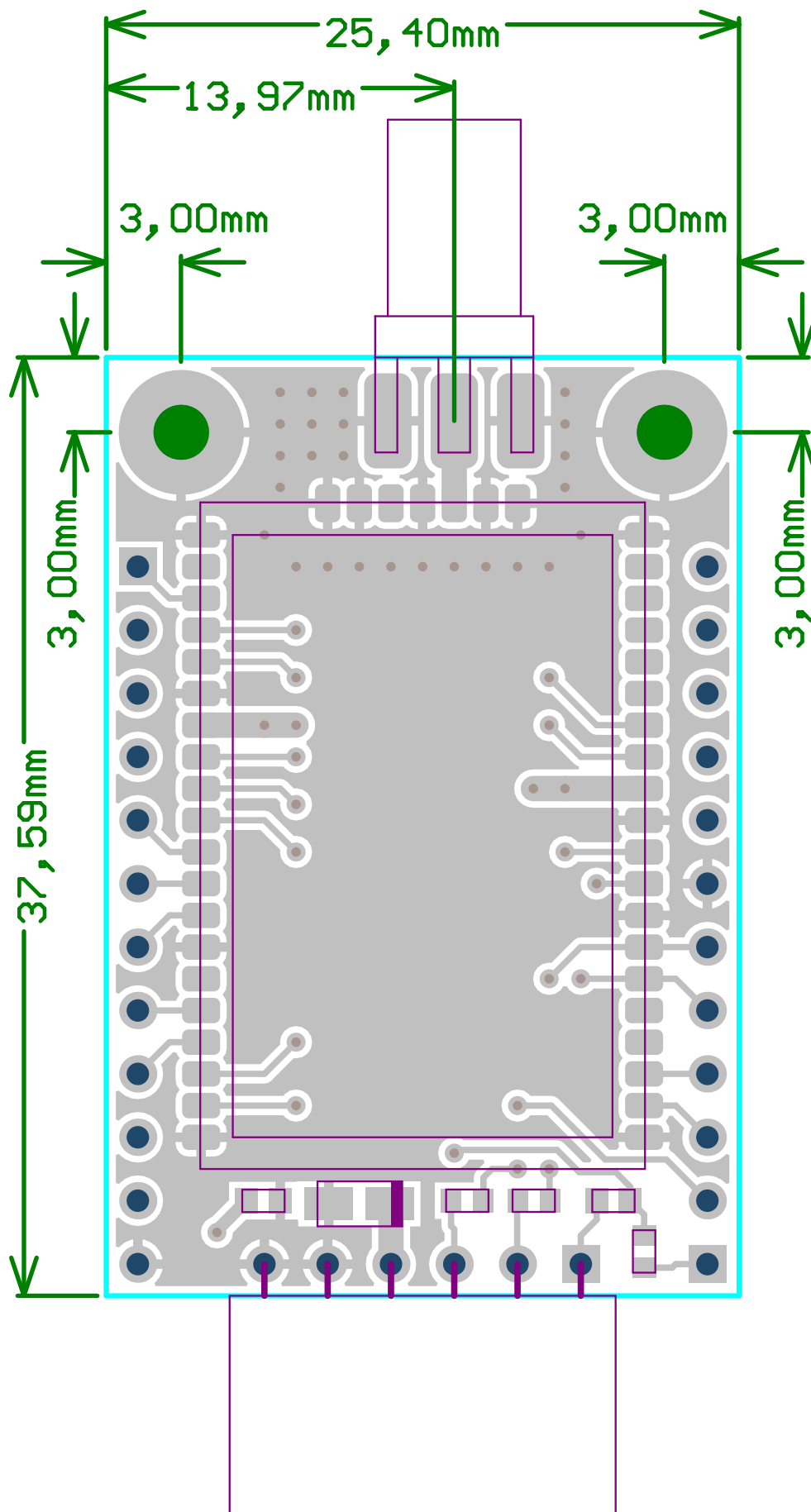
**Revision History**

- V1.0
  - Initial release
- V1.1
  - Change FTDI connector to 1x6 female left angle header
  - Add 3D parts to all components and renders to documentation PDF
  - Include 3D PDF in electronic project documentation
- V1.2
  - Fix swapped RX & TX lines and silkscreen text

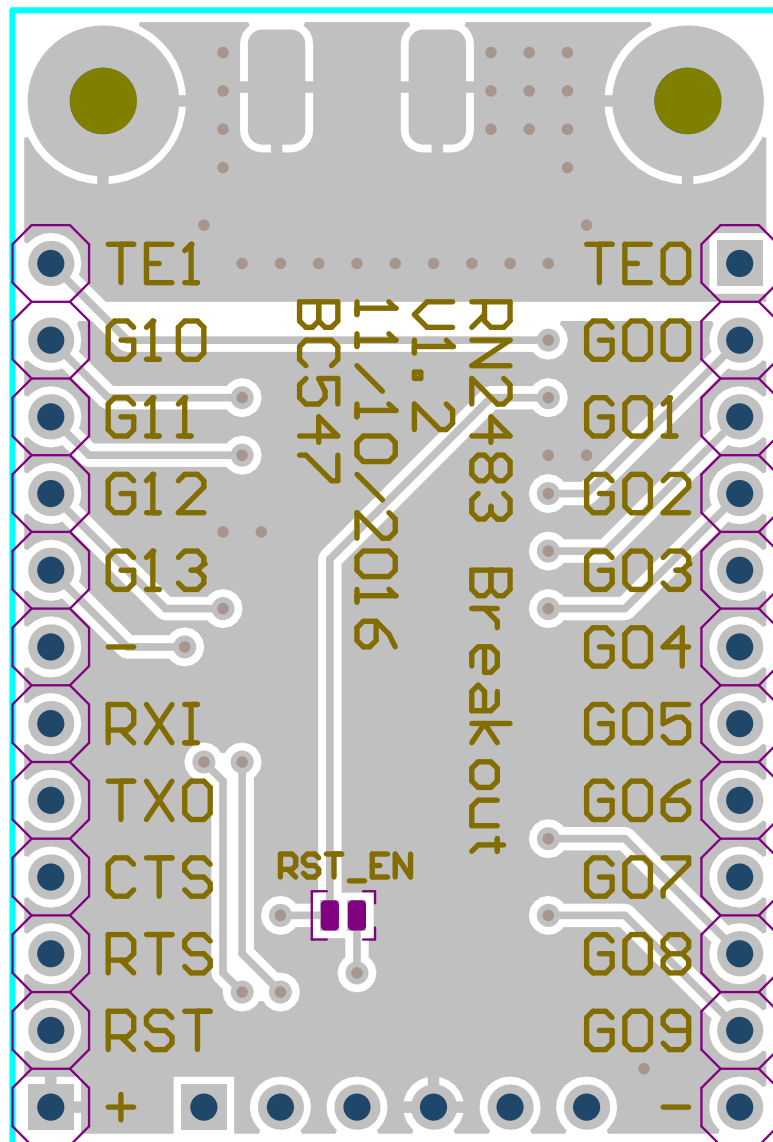
Title: **RN2483 Breakout**Author: **BC547**Revision: **V1.2**Date: **11/10/2016**Size: **A4**File: **rn2483\_breakout.SchDoc**Sheet: **1 of 1**

Comment	Designator	Description	Footprint	LibRef	Quantity
100nF	C2, C3	Farnell code: 1759016 - MULTICOMP MC0603B104K160CT SMD Multilayer Ceramic Capacitor, MC Series, 0.1 µF, ± 10%, X7R, 16 V, 0603 [1608 Metric]	CAPC1608X05N	Capacitor	2
330	R2, R3	Farnell code: 2447339 - MULTICOMP MCWR06X3300FTL Surface Mount Chip Resistor, Thick Film, MCWR Series, 330 ohm, 100 mW, ± 1%, 50 V	RESC1608X05N	Resistor	2
Header 1x12	P3, P4	Farnell code: 1593418 - MULTICOMP MC34733 Board-To-Board Connector, Vertical, MC34 Series, Through Hole, Header, 12 Contacts, 2.54 mm	HDR1X12-2.54	Header 1x12	2
10K	R1	Farnell code: 2447230 - MULTICOMP MCWR06X1002FTL Surface Mount Chip Resistor, Thick Film, MCWR Series, 10 kohm, 100 mW, ± 1%, 50 V	RESC1608X05N	Resistor	1
33uF	C1	Farnell code: 2283861 - AVX TPSA336K006R0600 Surface Mount Tantalum Capacitor, TPS Series, 33 µF, ± 10%, 6.3 V, 1206 [3216 Metric], A	CAPMP3216X18N	Capacitor Polarized	1
FTDI	P2	Farnell code: 1668357 - SAMTEC SSW-106-02-G-S-RA Board-To-Board Connector, Right Angle, SSW Series, 6 Contacts, Receptacle, 2.54 mm, Through Hole	HDR1X6 - LA - FEMALE	Header 1x6	1
RN2483-I/RM095	U1	Farnell code: 2491391 - MICROCHIP RN2483-I/RM095 LORA TRANSCEIVER MOD, 433/868MHZ, 14DBM	RN2483_SMD	RN2483	1
SMA Antenna 868Mhz (See Note 2)	A1	Farnell code: 2096219 - LPRS ANTSR900 ANTENNA, STUB R/ANGLED, 868-915MHZ (See Note 2)		Antenna	1
SMA End L	P1	Farnell code: 1342652 - RF / Coaxial Connector, SMA Coaxial, Straight Jack, Solder, 50 ohm	SMA_END_LAUI	SMA RF	1

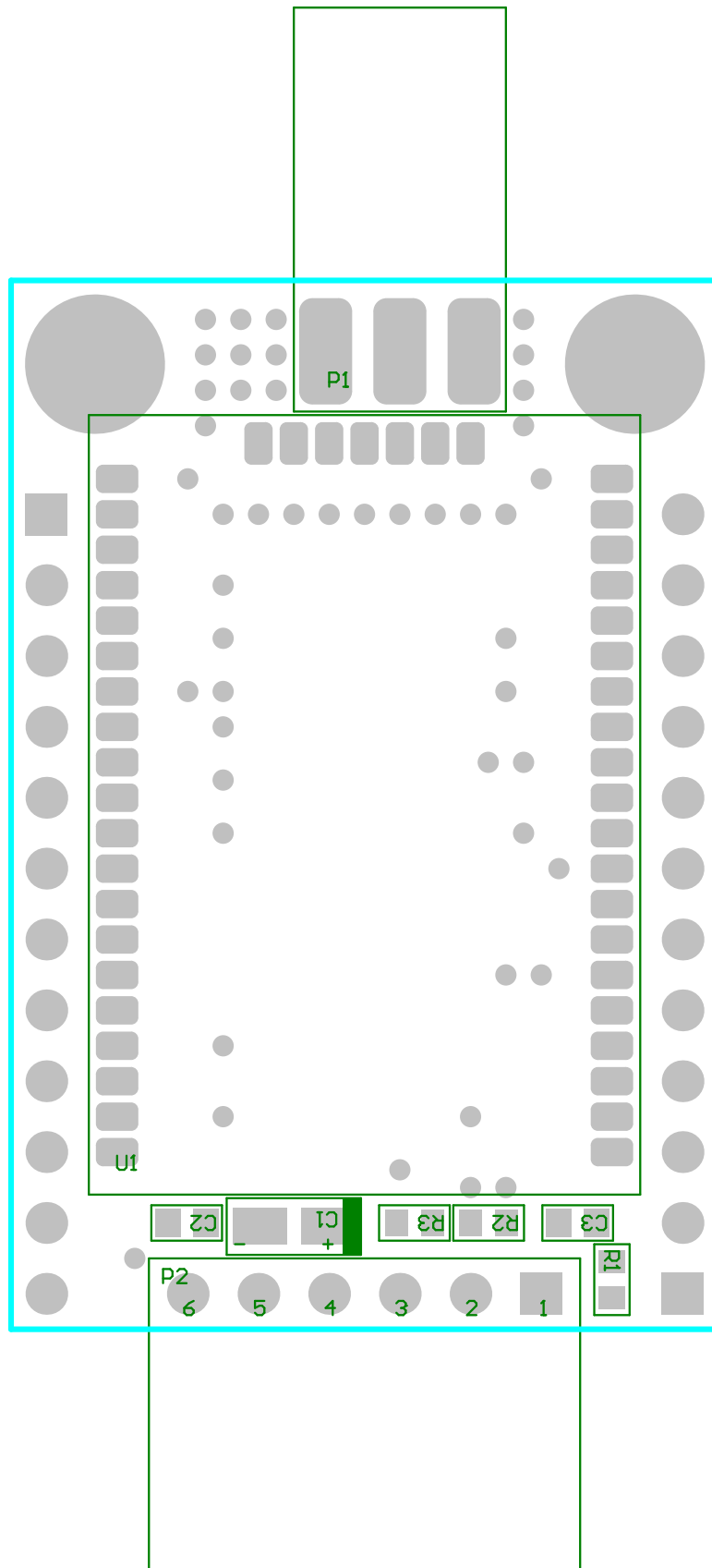
Mounting Hole diameter:  
2.20mm (M2 size)



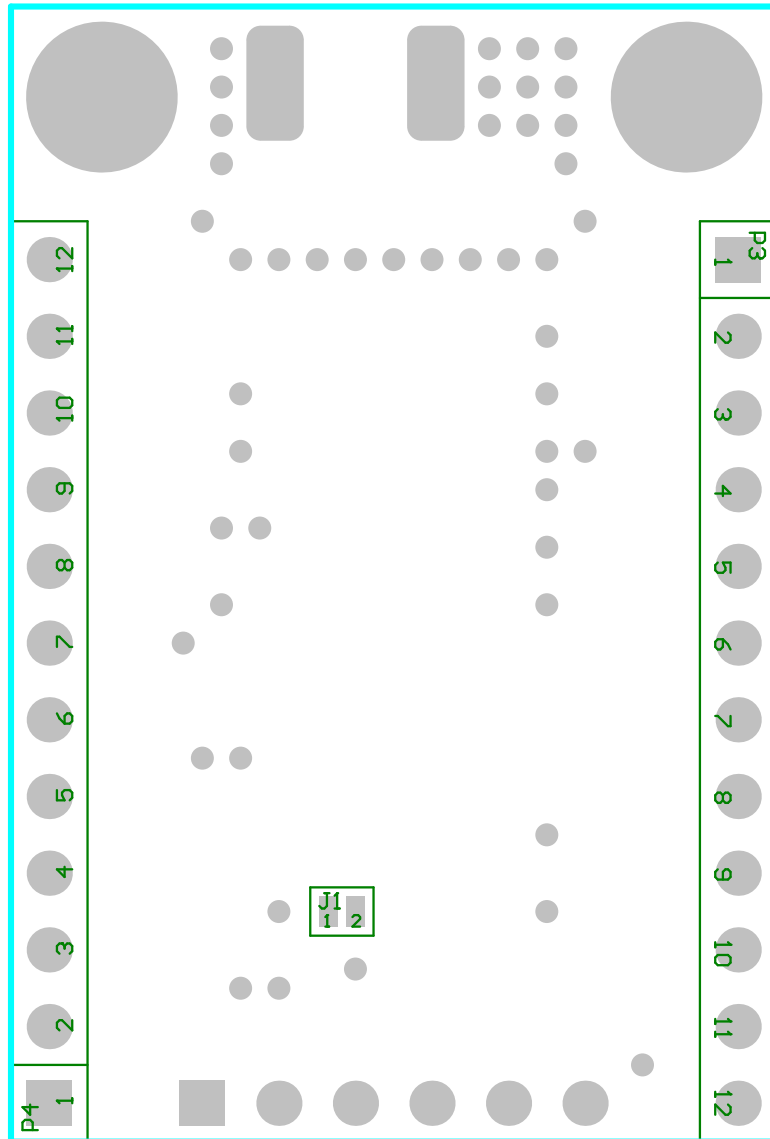
Top Layer Outline



Bottom Layer Outline



Top Layer Assembly



Bottom Layer Assembly

## Design Rules Verification Report

Filename : C:\Users\bc547\Documents\bcdev-data\projects\rn2483\_breakout\hardware\rn2483\_breakout.PcbDoc

Warnings 0  
Rule Violations 0

Warnings	
Total	0

Rule Violations	
Board Clearance Constraint (Gap=0mil) (not OnSilkscreen)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint ( All )	0
Clearance Constraint (Gap=10mil) (All),(All)	0
Power Plane Connect Rule(Relief Connect )(Expansion=20mil) (Conductor Width=10mil) (Air Gap=10mil) (Entries=4)	0
Width Constraint (Min=10mil) (Max=50mil) (Preferred=10mil) (All)	0
Height Constraint (Min=0mil) (Max=1000mil) (Preferred=500mil) (All)	0
Hole Size Constraint (Min=13mil) (Max=100mil) (All)	0
Hole To Hole Clearance (Gap=10mil) (All),(All)	0
Minimum Solder Mask Sliver (Gap=3mil) (All),(All)	0
Silk To Solder Mask (Clearance=5mil) (IsPad),(All)	0
Silk to Silk (Clearance=5mil) (All),(All)	0
Net Antennae (Tolerance=0mil) (All)	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Minimum Annular Ring (Minimum=7mil) (All)	0
Total	0



