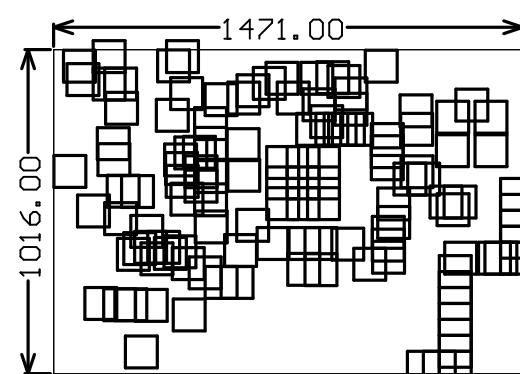


Fabrication Notes:

1. All dimensions in inches. Tolerance = +/- 0.005 unless noted otherwise.
2. All materials: laminates, resins, metallizations and soldermask to be compliant to EU RoHS directive 2002/95/EC IAW SP-12509-01.
3. 370 HR FR-4 or similar grade glass epoxy.
4. Tg > 170 degrees celcius, glass transition temperature.
5. TD > 350 degrees celcius, thermal decomposition.
6. Er = 4.0 +/- 5% @ 2.5GHz.
7. Minimum flammability rating UL94V-0, maximum dissipation factor 0.025.
8. Adjust prepreg for 0.062, +/- 0.003 finished thickness measured over soldermask.
9. Copper thickness 0.0014, (<1 oz).
10. Hole size tolerance = +/- 0.003 unless noted otherwise.
11. Hole centers and pad centers to be concentric within 0.002.
12. Drill chart dimensions are drill sizes and not finished hole sizes.
13. Finish - immersion gold over nickel. No exposed bare copper permitted.
14. Thieving not allowed on layer 1.
15. Solder mask over bare copper, LPI class 2 gen. industrial registration +/- 0.004 .
16. No coverage on solder pads permitted.
17. Refer to soldermask gerbers for tenting of vias.
18. White silkscreen legend over red soldermask - both sides.
19. Manufacturer icons not permitted on the silkscreen top layer.
20. PCB serialization/panel placement ID on silkscreen bottom.
21. Full electrical test against IPC-356A netlist.



| Layer | Name | Material | Thickness | Constant | Board Layer Stack |
|-------|----------------|---------------|-----------|----------|-------------------|
| 1 | Top Paste | | | | |
| 2 | Top Overlay | | | | |
| 3 | Top Solder | Solder Resist | 0.40mil | 3.5 | |
| 4 | Top Layer | Copper | 1.40mil | | |
| 5 | Dielectric1 | HR370 | 58.00mil | 3.9 | |
| 6 | Bottom Layer | Copper | 1.40mil | | |
| 7 | Bottom Solder | Solder Resist | 0.40mil | 3.5 | |
| 8 | Bottom Overlay | | | | |
| 9 | Bottom Paste | | | | |

| Symbol | Hit Count | Finished Hole Size | Plated | Hole Type |
|--------------------------|-----------|---------------------|--------|-----------|
| <input type="checkbox"/> | 125 | 10.00mil (<0.254mm) | PTH | Round |
| | 125 Total | | | |

MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.



| | |
|---|--------------------|
| TITLE: EM35xx Ceramic Balun 2-Layer Reference Design | REV: A1 |
| FILE NAME: EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc | |
| Board NO.: | |
| Layer: Drill Drawing | DATE: 7/31/2014 |

A

A

B

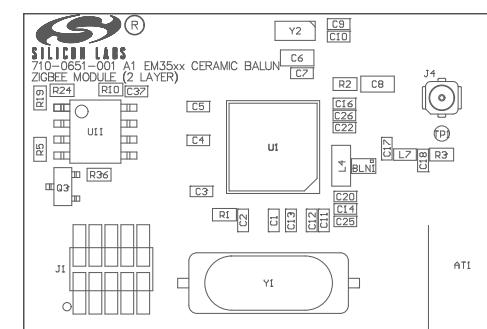
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.



SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.:
A1

Layer:
M1 Top Assembly

REV:
DATE:
7/31/2014

A

A

B

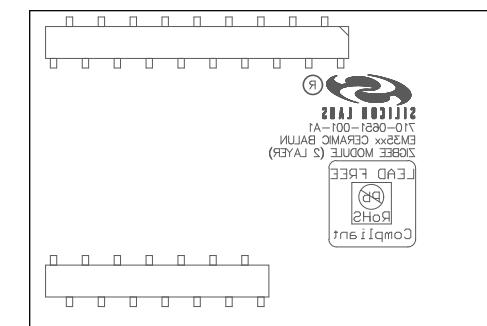
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.

| | | |
|---|---|--------------------|
| | TITLE: EM35xx Ceramic Balun 2-Layer Reference Design | |
| | FILE NAME: EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc | |
| 25 Thomson Place 2nd Floor Boston, MA 02210 www.silabs.com 617-951-0200 | Board NO.: | REV: A1 |
| | Layer: M2 Bottom Assembly | DATE: 7/31/2014 |

A

A

B

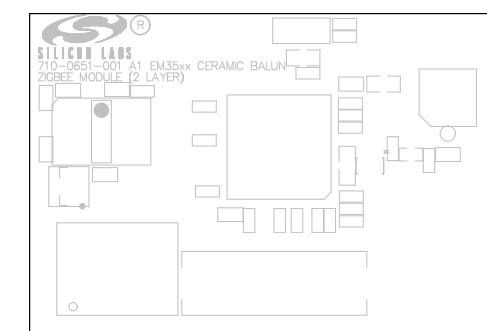
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation



| | | |
|------------|---|--|
| TITLE: | EM35xx Ceramic Balun 2-Layer Reference Design | |
| FILE NAME: | EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc | |

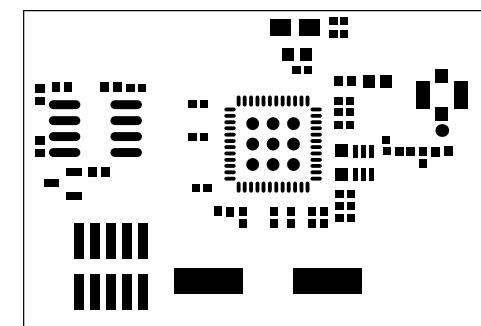
| | |
|-------------|-----------|
| Board NO.: | REV: |
| | A1 |
| Layer: | DATE: |
| Top Overlay | 7/31/2014 |

A

A

B

B



C

C

MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.



25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.: A1

Layer: Top Paste DATE: 7/31/2014

A

A

B

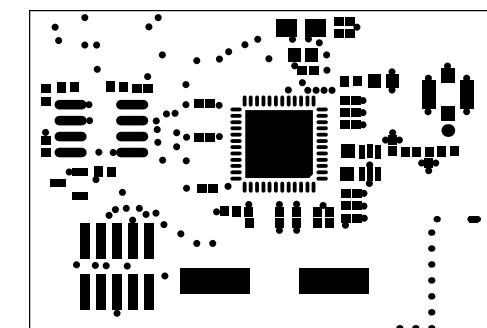
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.



25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.: A1

Layer: Top Solder

REV: A1

DATE: 7/31/2014

A

A

B

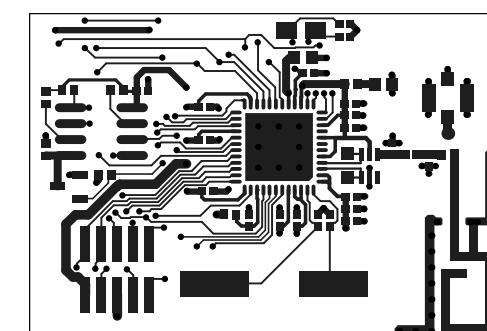
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.



25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.: A1
REV:

Layer: Top Layer
DATE: 7/31/2014

A

A

B

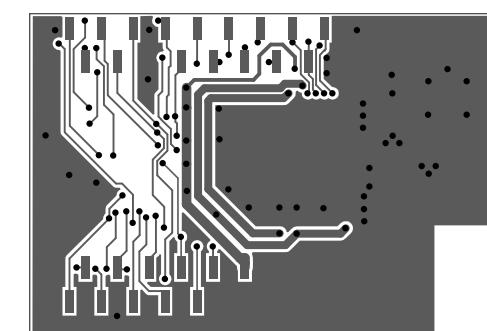
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation

| | |
|---|---|
| 25 Thomson Place 2nd Floor Boston, MA 02210 www.silabs.com 617-951-0200 | TITLE: EM35xx Ceramic Balun 2-Layer Reference Design |
| | FILE NAME: EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc |
| | Board NO.: REV: A1 |
| | Layer: DATE: Bottom Layer 7/31/2014 |

A

A

B

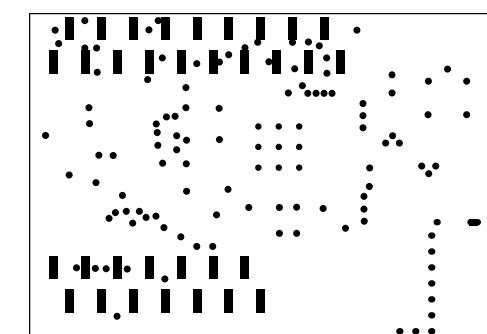
B

C

C

D

D

**MCU & Wireless Division Simplicity Support Group**

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation



SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.: REV:
A1

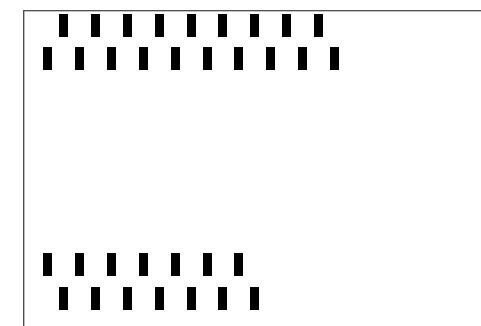
Layer:
Bottom Solder DATE:
7/31/2014

A

A

B

B



C

C

MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation



25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.: REV:
A1

Layer: DATE:
Bottom Paste 7/31/2014

A

A

B

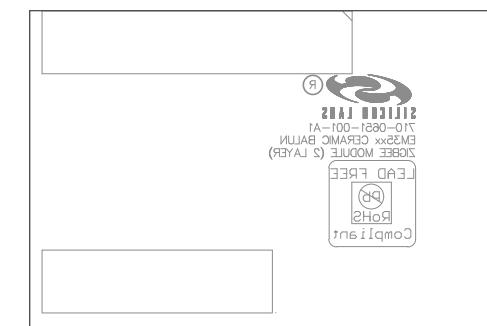
B

C

C

D

D



MCU & Wireless Division Simplicity Support Group

The information in this document is subject to change without notice. The statements, configurations, technical data and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. The information in this document is the proprietary and confidential property of Ember Corporation and is privileged. No part of the drawing or information may be duplicated or otherwise used without the express permission of Ember Corporation.

| | |
|---|---|
| 25 Thomson Place 2nd Floor Boston, MA 02210 www.silabs.com 617-951-0200 | TITLE: EM35xx Ceramic Balun 2-Layer Reference Design |
| | FILE NAME: EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc |
| | Board NO.: A1 |
| | Layer: Bottom Overlay |