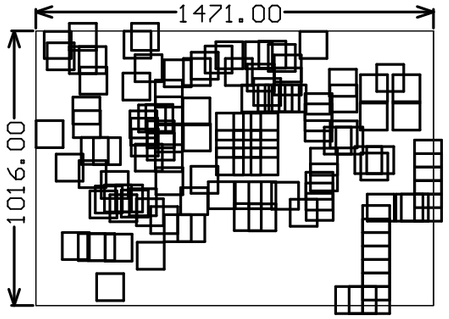
## Fabrication Notes:

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 |
|---|---|---|---|---|
| □ | 125 | 10.00mil (0.254mm) | PTH | Round |
| | 125 Total | | | |



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

TITLE: EM35xx Ceramic Balun 2-Layer Reference Design

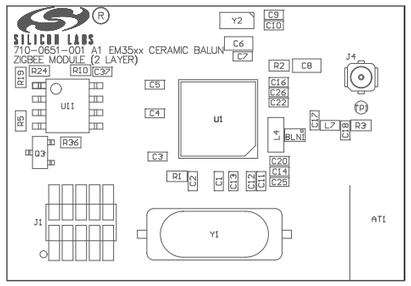
FILE NAME: EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.:

REV: A1

Layer: Drill Drawing

DATE: 7/31/2014






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

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

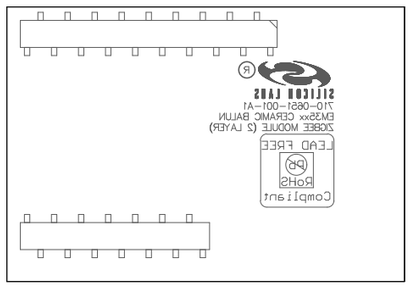
FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.:

REV:
A1

Layer:
M1 Top Assembly

DATE:
7/31/2014

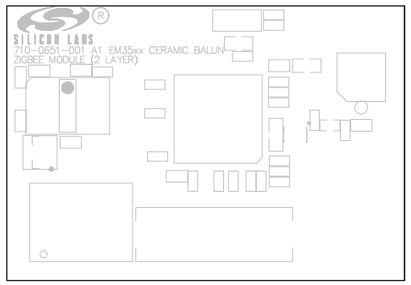



MCU & Wireless Division Simplicity Support Group



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: M2 Bottom Assembly | DATE: 7/31/2014 |




MCU & Wireless Division Simplicity Support Group



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

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

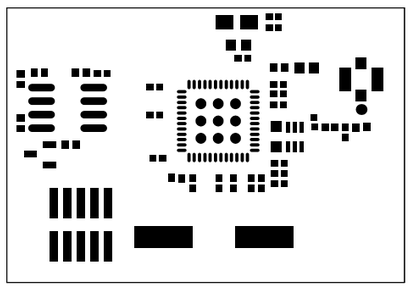
FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

Board NO.:

REV:
A1

Layer:
Top Overlay

DATE:
7/31/2014



MCU & Wireless Division Simplicity Support Group

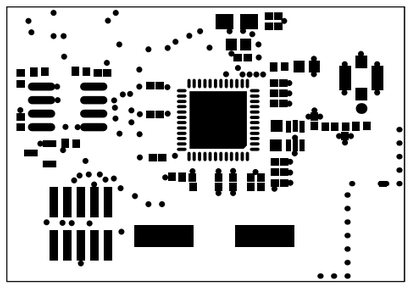


SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

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



MCU & Wireless Division Simplicity Support Group

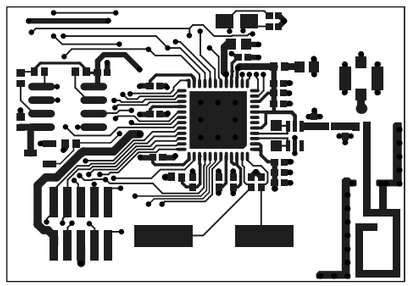


SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

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



MCU & Wireless Division Simplicity Support Group

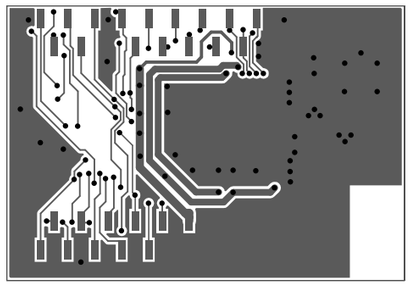


SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

TITLE:
EM35xx Ceramic Balun 2-Layer Reference Design

FILE NAME:
EM35xx_REF_DES_CER_SPIRAL-INV-F_A1.PcbDoc

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



MCU & Wireless Division Simplicity Support Group

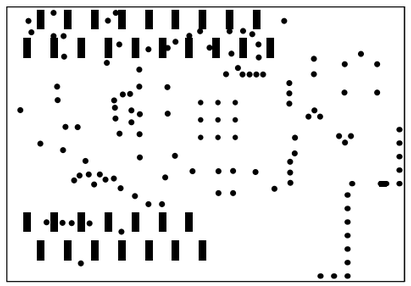


25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

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 Layer | DATE: 7/31/2014 |



MCU & Wireless Division Simplicity Support Group

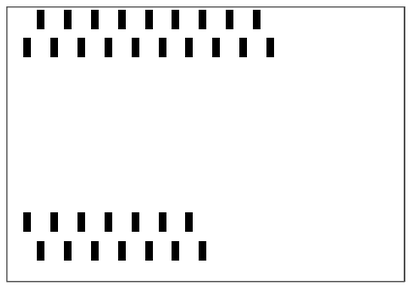


SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

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 |



MCU & Wireless Division Simplicity Support Group

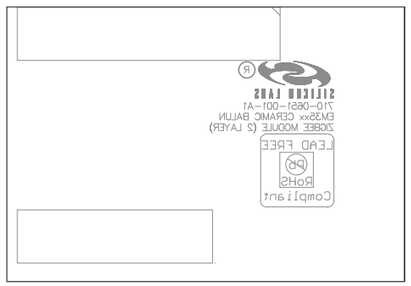


SILICON LABS
25 Thomson Place
2nd Floor
Boston, MA 02210
www.silabs.com
617-951-0200

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 Paste | DATE: 7/31/2014 |




MCU & Wireless Division Simplicity Support Group



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 Overlay

DATE:
7/31/2014