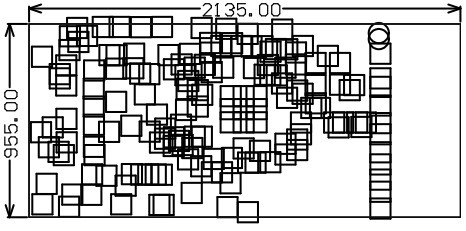
Fabrication Notes:

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	16.00mil	3.9	
6	Gnd Layer 2	Copper	1.40mil		
7	Dielectric2	HR370	24.00mil	3.9	
8	Power Layer 3	Copper	1.40mil		
9	Dielectric3	HR370	16.00mil	3.9	
10	Bottom Layer	Copper	1.40mil		
11	Bottom Solder	Solder Resist	0.40mil	3.5	
12	Bottom Overlay				
13	Bottom Paste				



Symbol	Hit Count	Finished Hole Size	Plated	Hole Type
○	2	12.00mil (0.305mm)	PTH	Round
□	166	10.00mil (0.254mm)	PTH	Round
	168 Total			

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617-951-0200

TITLE: Ceramic Balun W/USB 4 Layer Ref.Design

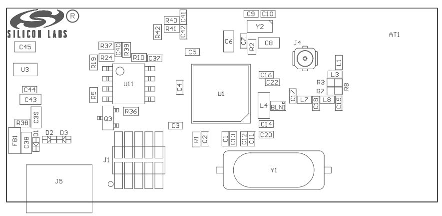
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc

Board NO.: EM358x_REF_DES_CER_USB_INV-F

REV: A0

Layer: Drill Drawing

DATE: 3/27/2014



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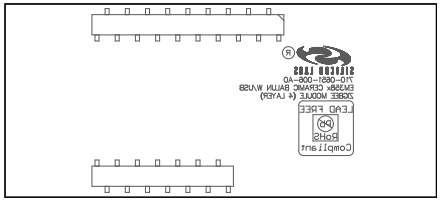
TITLE: Ceramic Balun W/USB 4 Layer Ref.Design	
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: M1 Top Assembly	DATE: 3/27/2014



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FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: M2 Bottom Assembly	DATE: 3/27/2014

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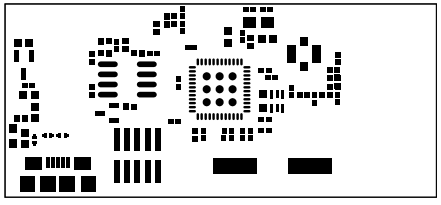
TITLE: Ceramic Balun W/USB 4 Layer Ref.Design	
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Top Overlay	DATE: 3/27/2014



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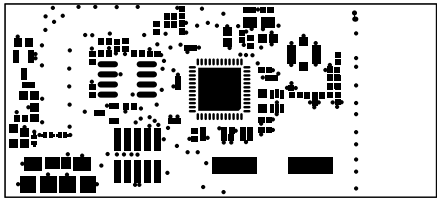
FILE NAME:	EM358x_REF_DES_CER_USB_INV-F.PcbDoc
Board NO.:	EM358x_REF_DES_CER_USB_INV-F
REV:	A0
Layer:	Top Paste
DATE:	3/27/2014



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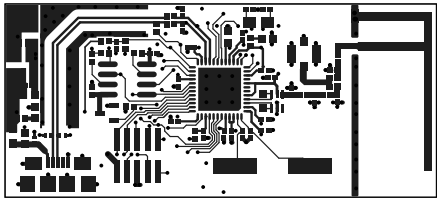
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Top Solder	DATE: 3/27/2014



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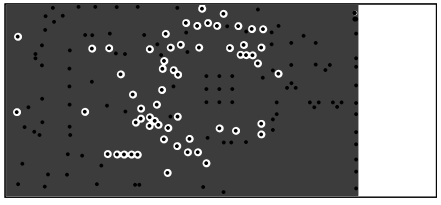
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Top Layer	DATE: 3/27/2014



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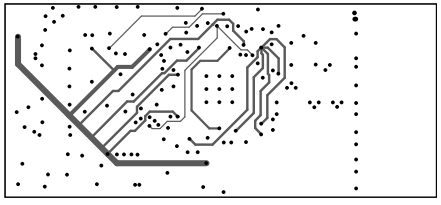
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Gnd Layer 2	DATE: 3/27/2014



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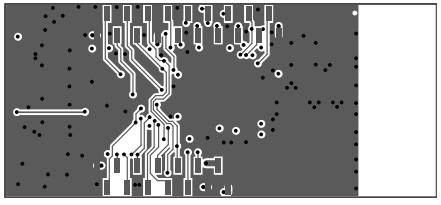
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Power Layer 3	DATE: 3/27/2014



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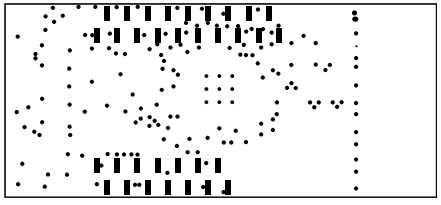
FILE NAME: EM358x_REF_DES_CER_USB_INV-F.PcbDoc	
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Bottom Layer	DATE: 3/27/2014



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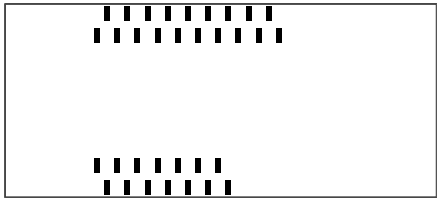
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Bottom Solder	DATE: 3/27/2014



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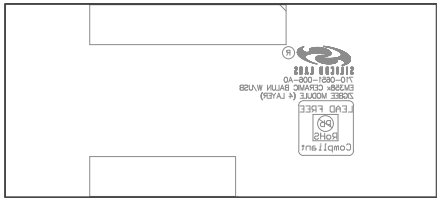
Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Bottom Paste	DATE: 3/27/2014



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Board NO.: EM358x_REF_DES_CER_USB_INV-F	REV: A0
Layer: Bottom Overlay	DATE: 3/27/2014