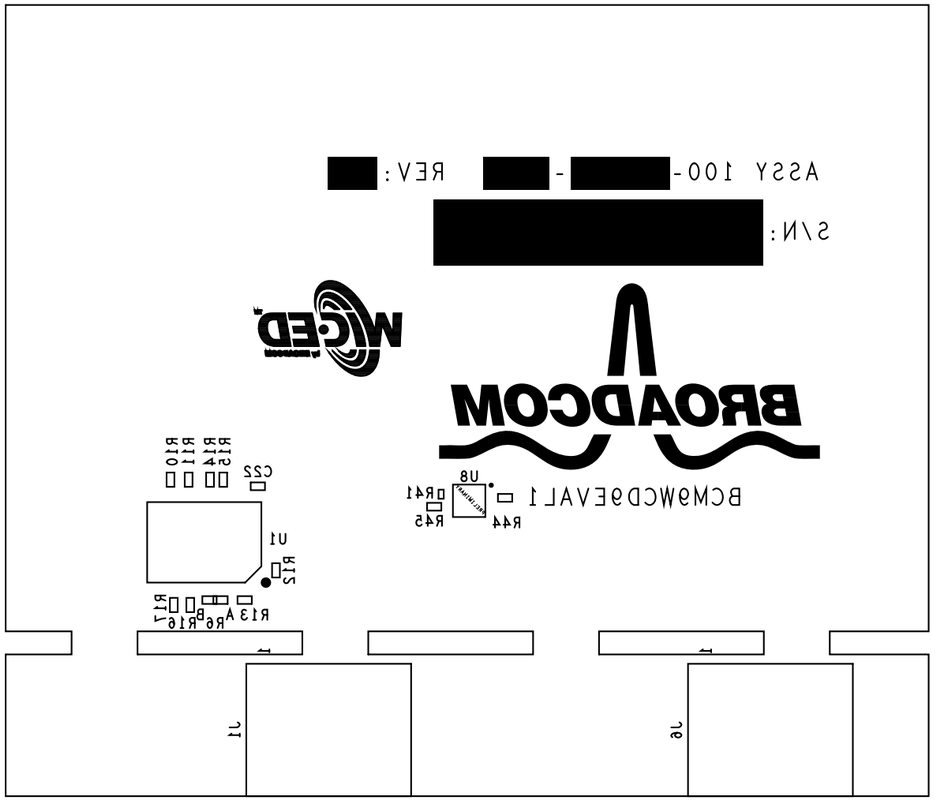
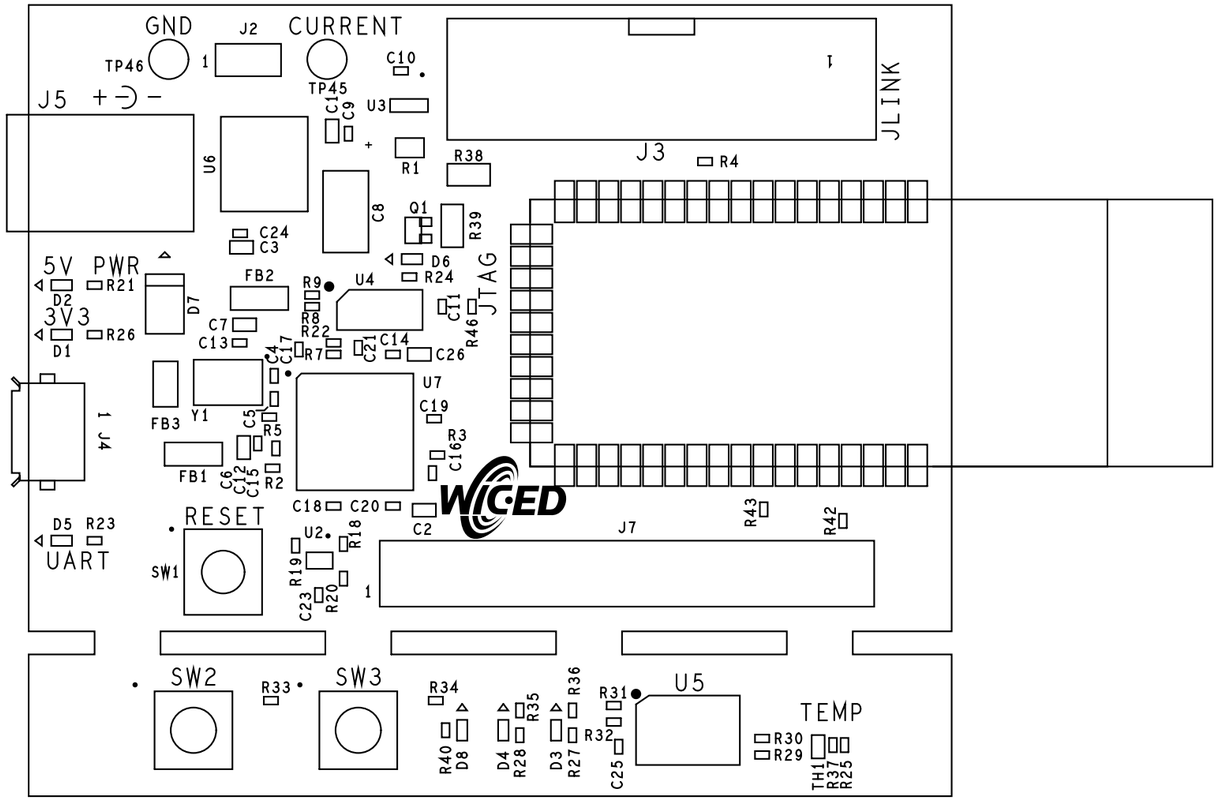


ASSEMBLY BOTTOM

BROADCOM IRVINE, CA	PROJECT: BCM9WCD9EVAL1_5		
THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM	DRAWN BY: ALISON SEE		
	LAYER: SILKSCREEN BOTTOM		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

JOB - 128990-0050_01 LAYER - assy_b

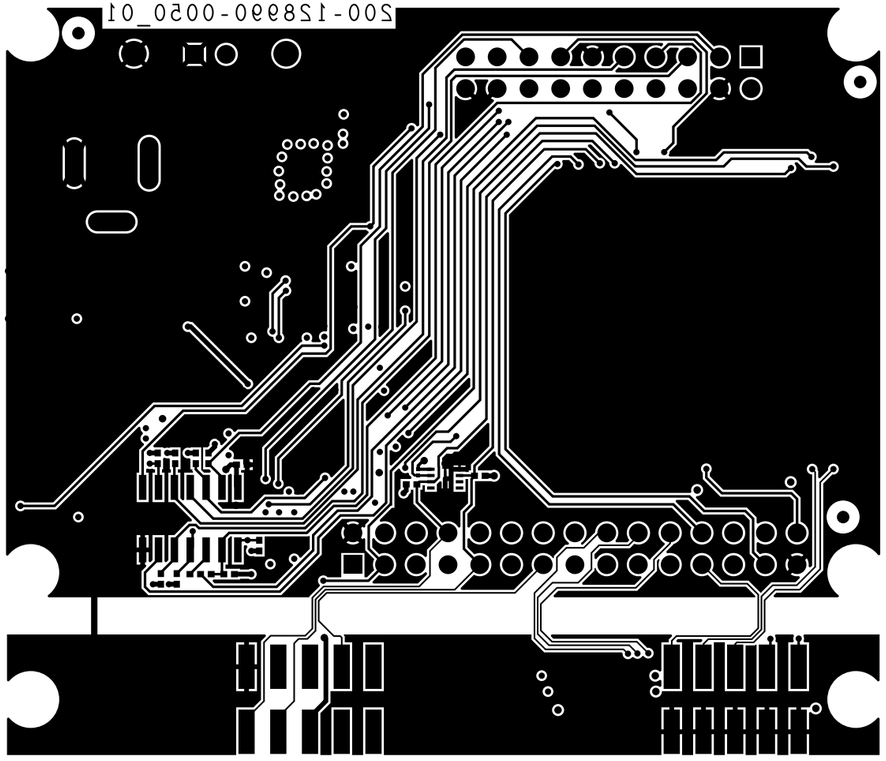


ASSEMBLY TOP

BROADCOM IRVINE, CA	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: SILKSCREEN TOP		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

JOB - 128990-0050_01 LAYER - assy_t



BROADCOM IRVINE, CA THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: BOTTOM SIDE		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

JOB - 128990-0050_01 LAYER - bottom

BRCM P/N	SH	REV
822-128990-0050	1	01

REVISIONS						
ECO NO.	REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
BCG-27588	01	07/08/15	RESPIN FOR IMPROVEMENT	ALISON SEE	-	A.ESPIRITU

NOTES: UNLESS OTHERWISE SPECIFIED

1. SPECIFICATIONS/TOLERANCES:
   A. FABRICATE PER IPC-6012, CLASS 2, USING PROVIDED DATA FILES 200-128990-0050_01.TGZ OR 823-128990-0050_01.ZIP.
   B. ALL SPECIFICATIONS USED SHALL BE PER THEIR LATEST REVISIONS.
   C. THE DIMENSIONS OF CIRCUIT FEATURES IN THE PROVIDED DATA MAY BE ADJUSTED ONLY TO COMPENSATE FOR PROCESS TOLERANCES; ADDING, REMOVING OR RELOCATING CIRCUIT FEATURES, INCLUDING NON-FUNCTIONAL PADS, IS NOT ALLOWED, AND THE DESIGN OF ALL PLANE STRUCTURES MUST BE MAINTAINED TO ENSURE PROPER ELECTRICAL PERFORMANCE.
   D. REMOVE ALL BURRS AND BREAK SHARP EDGES, .381 [.015] MAX RADIUS.
   E. PARENTHETICAL INFORMATION IS FOR REFERENCE ONLY.
   F. REPAIR OF PCB DEFECTS IS NOT PERMITTED.

2. DIELECTRIC MATERIAL:
   A. DIELECTRIC MATERIAL SHALL BE PER IPC-4101/99, /124, /126 OR /129 (RoHS COMPLIANT EPOXY-GLASS).
   B. MINIMUM DIELECTRIC THICKNESS SHALL BE .051 [.002] FOR REFERENCED STACK-UP DIMENSIONS OF.076 [.003] OR GREATER; IPC-6012 REQUIREMENTS SHALL OTHERWISE APPLY. SINGLE-PLY CONSTRUCTION IS ALLOWED.
   C. SEE LAYER STACK-UP FOR REQUIRED COPPER WEIGHTS AND THE FINISHED PCB THICKNESS. IF SPECIFIED, 1/3 OZ. STARTING FOIL MAY BE ACHIEVED BY 1/2 OZ. FOIL REDUCTION.
   D. FINISHED PCB THICKNESS SHALL BE MEASURED OVER LANDS AND/OR CONDUCTORS NOT COVERED BY SOLDER MASK.

3. DRILLING:
   A. VIA DIAMETERS (TOL. = +.051/- DRILL DIAMETER [+.0020/- DRILL DIAMETER]) SHALL BE VERIFIED BEFORE PLATING; ALL OTHER HOLE DIAMETERS SHALL BE VERIFIED AT FINAL INSPECTION.
   B. LAYER-TO-LAYER MISREGISTRATION SHALL BE .127 [.005] MAXIMUM.

4. SOLDER MASK:
   A. APPLY LPI SOLDER MASK USING PROVIDED DATA.
   B. SOLDER MASK SHALL BE PER IPC-SM-840, CLASS T, COLOR BLACK.
   C. THE DIMENSIONS OF SOLDER MASK-DEFINED PADS ON PLANES AND/OR WIDE CONDUCTORS SHALL NOT BE MODIFIED.

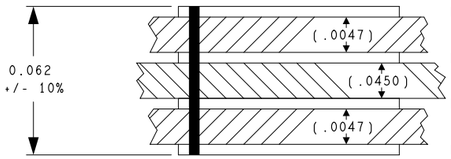
5. MARKING:
   A. MARK PCB PER PROVIDED DATA USING SILKSCREEN OR AUTOMATED INJET PROCESSING WITH PERMANENT, NON-CONDUCTIVE INK, COLOR WHITE.
   B. SUPPLIER ID AND TRACEABILITY INFORMATION SHALL BE APPLIED USING PERMANENT, NON-CONDUCTIVE INK, COLOR WHITE.
   C. INK SHALL NOT BE APPLIED TO ANY SOLDERABLE SURFACE.

6. ELECTRICAL TEST:
   A. DESIGN VERIFICATION SHALL BE DONE PRIOR TO PCB FABRICATION USING SUPPLIED VALOR ODB++ DATABASE, OR GERBER DATA AND AN IPC-D-356 NETLIST.
   B. ALL PCBS SHALL BE 100% ELECTRICALLY TESTED FOR OPENS AND SHORTS USING PROVIDED DATA.
   C. APPLY TEST STAMP IN NON-LEGEND AREA ON REAR SIDE OF PCB; OK TO APPLY TO PANEL RAILS IF SPACE DOES NOT PERMIT.

7. FINAL FINISH:
   A. FINAL FINISH ON ALL EXPOSED CONDUCTORS SHALL BE IMMERSION SILVER PER IPC-4553, .15 - .38 MICROMETERS [6 - 15 MICROINCHES] THICK.

8. IMPEDANCE:
   A. IMPEDANCE TOLERANCE SHALL BE +/- 10%.
   B. SEE LAYER STACK-UP FOR IMPEDANCE REQUIREMENTS.

9. IF PANELIZATION SPECIFICATIONS ARE PROVIDED, THE PCBS SHALL BE DELIVERED IN PANEL FORM. HOWEVER, THESE SPECIFICATIONS MAY BE CHANGED AS REQUIRED BY THE CONTRACT MANUFACTURER TO SUPPORT VOLUME ASSEMBLY REQUIREMENTS.



LAYER DESCRIPTION	START COPPER WT	SE IMP OHMS	SE TRACE WIDTH	REF LAYER	CPW SPACE	DIFF IMP OHMS	DIFF TRACE WIDTH/SPACE	REF LAYER	CPW SPACE
L01 - TOP	0.5 OZ	--	.-----	---	-----	---	.-----/.-----	---	-----
L02 - PLANE	1.0 OZ	--	-----	---	-----	---	----	---	-----
L03 - PLANE	1.0 OZ	--	-----	---	-----	---	----	---	-----
L04 - BOTTOM	0.5 OZ	--	.-----	---	-----	---	.-----/.-----	---	-----

STACK-UP

SEE BOM	SEE BOM
NEXT ASSY	USED ON
APPLICATION	

THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY TO BROADCOM CORPORATION AND SHALL NOT BE REPRODUCED OR DISCLOSED IN WHOLE OR IN PART OR USED FOR ANY DESIGN, MANUFACTURE, OR OTHERWISE, EXCEPT WHEN SUCH USER POSSESSES DIRECT, WRITTEN AUTHORIZATION FROM BROADCOM CORPORATION.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN METRIC WITH INCHES IN BRACKETS
.XXX ±.064 [±.005] .XX ±.13 [±.01] ANGLES ±.5°

MATERIAL 2

FINISH 7

DO NOT SCALE DRAWING	
APPROVALS	DATE
DRAWN ALISON SEE	07/08/15
ENGINEER A.ESPIRITU	07/08/15
CHECKER -	-
QA -	-
PROJ. ENG. -	-

BROADCOM Connecting everything™ IRVINE, CA USA

TITLE: PCB FABRICATION, BCM9WCD9EVAL1_5

SIZE	CAGE CODE	BRCM P/N
D	-	822-128990-0050

SCALE	SHEET	REV
1/1	1 OF 3	01

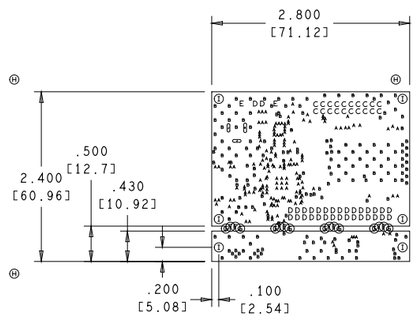
FAB NOTES REV 08/01/14

COMPUTER GENERATED DRAWING
DO NOT CHANGE MANUALLY

ALLEGRO FILE: 200-128990-0050_01.BRD

BRCM P/N	SH	REV
822-128990-0050	2	01

REVISIONS						
ECO NO.	REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
			SEE SHEET 1			



DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN INCHES				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
A	0.010	+0.002/-0.010	PLATED	167
B	0.012	+0.002/-0.012	PLATED	188
C	0.035	+0.003/-0.003	PLATED	20
D	0.039	+0.003/-0.003	PLATED	32
E	0.051	+0.003/-0.003	PLATED	2
F	0.020	+0.002/-0.002	NON-PLATED	8
G	0.071	+0.002/-0.002	NON-PLATED	8
H	0.126	+0.002/-0.002	NON-PLATED	3
I	0.140	+0.002/-0.002	NON-PLATED	6
J	0.120x0.039	+0.005/-0.005	PLATED	1
K	0.120x0.039	+0.005/-0.005	PLATED	1
L	0.136x0.039	+0.005/-0.005	PLATED	1

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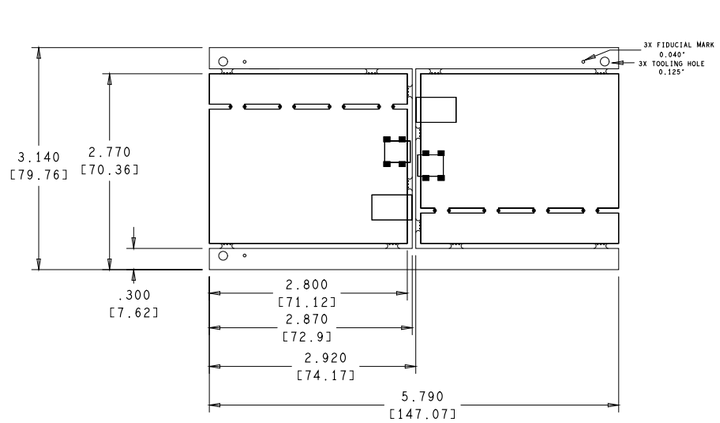
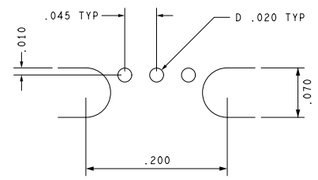
SIZE	CAGE CODE	BRCM P/N
D	-	822-128990-0050
SCALE 1/1		SHEET 2 / REV 01

COMPUTER GENERATED DRAWING
DO NOT CHANGE MANUALLY

ALLEGRO FILE: 200-128990-0050_01.BRD

REVISIONS						
ECO NO.	REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
			SEE SHEET 1			





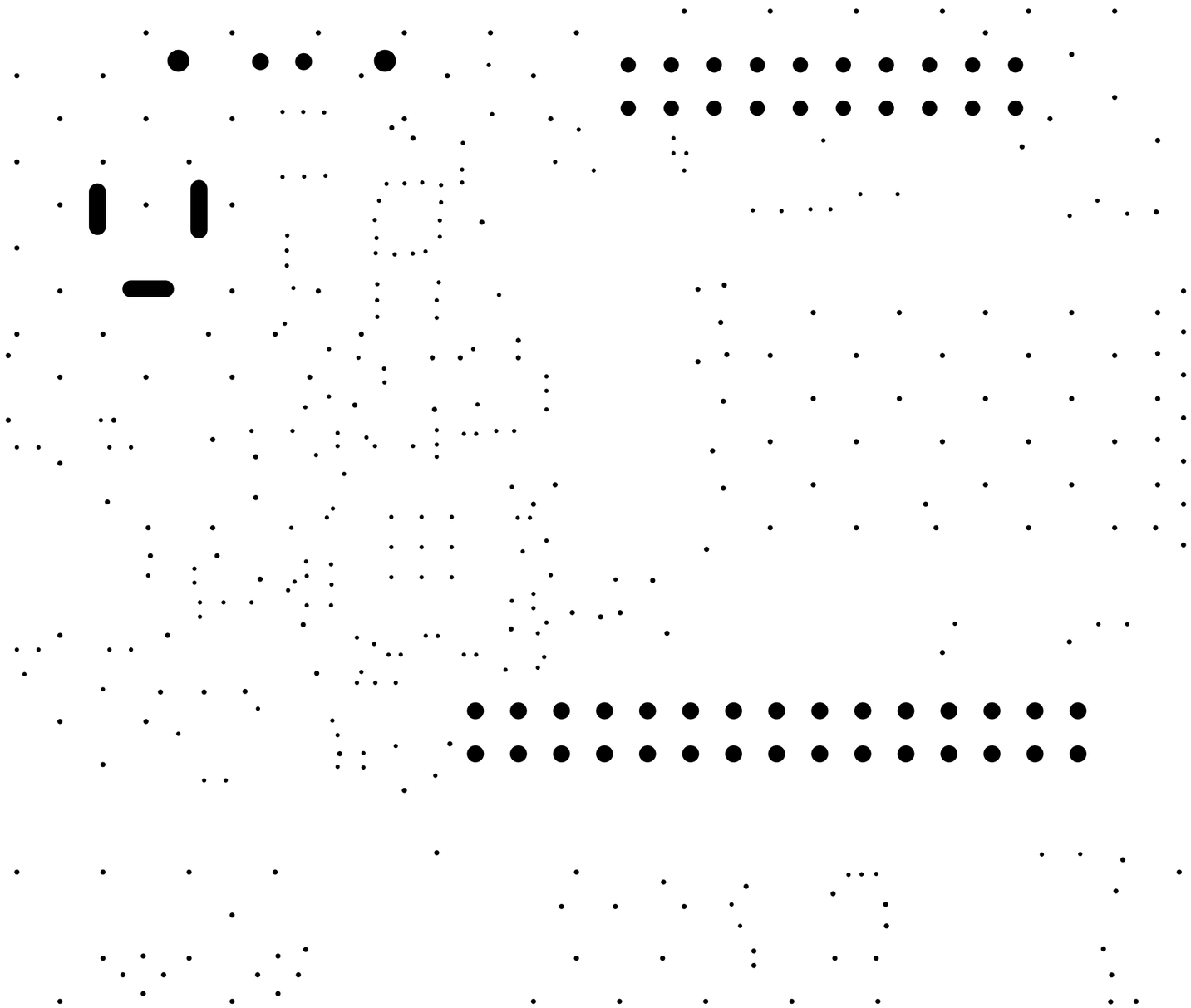
DETAIL B

THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY TO BROADCOM CORPORATION AND SHALL NOT BE REPRODUCED OR DISCLOSED IN WHOLE OR IN PART OR USED FOR ANY DESIGN, MANUFACTURE, OR OTHERWISE, EXCEPT WHEN SUCH USER POSSESSES DIRECT, WRITTEN AUTHORIZATION FROM BROADCOM CORPORATION.

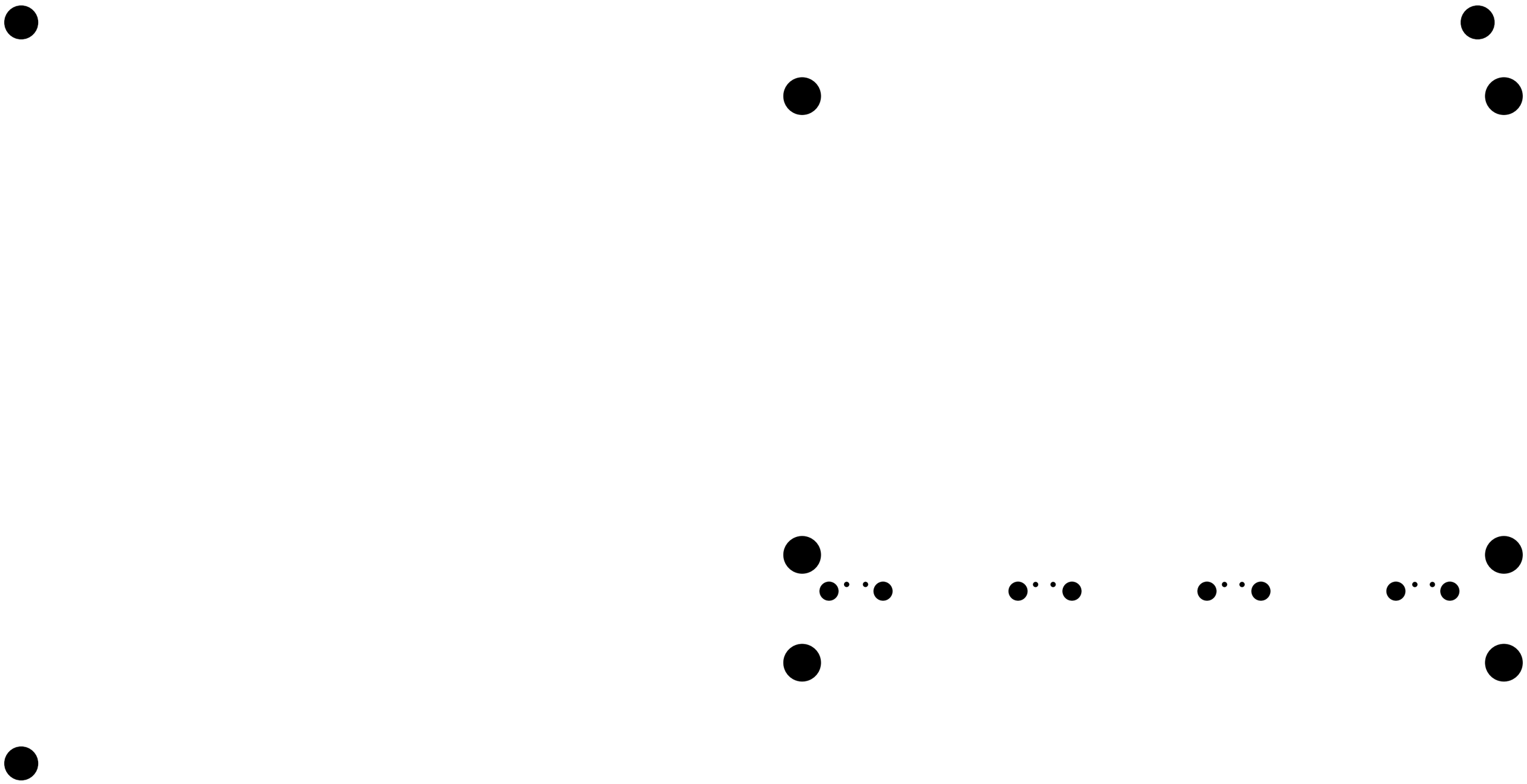
SIZE	CAGE CODE	BRCM P/N
D	-	822-128990-0050
SCALE 1/1		SHEET 3 / REV 01

COMPUTER GENERATED DRAWING
DO NOT CHANGE MANUALLY

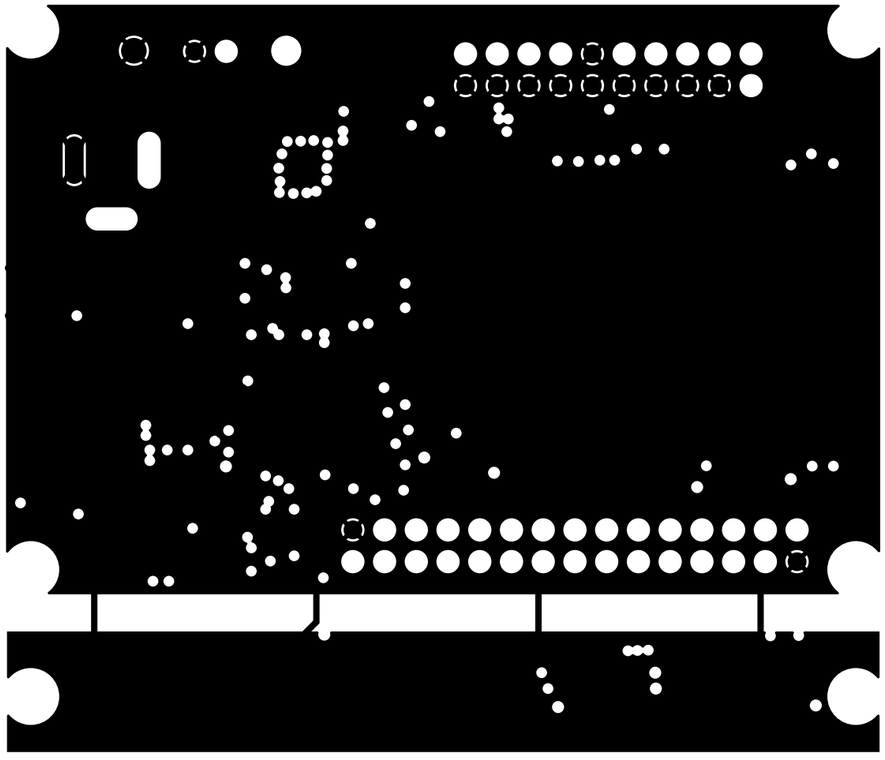
ALLEGRO FILE: 200-128990-0050_01.BRD



JOB - 128990-0050_01 LAYER - drill

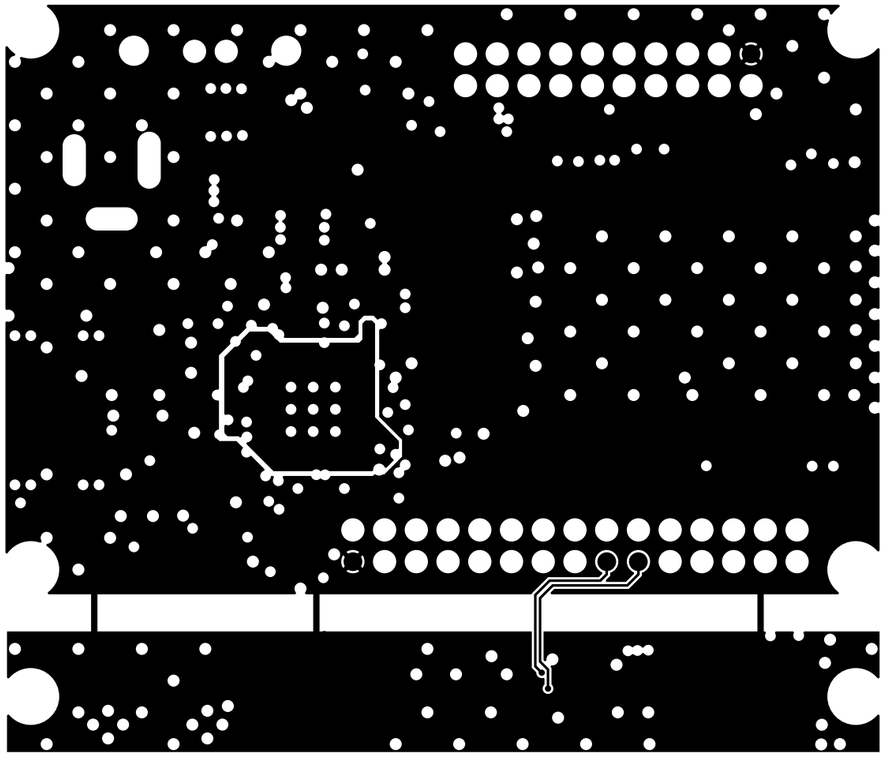


JOB - 128990-0050_01 LAYER - drill_npth



BROADCOM IRVINE, CA THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: L02_GND		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

JOB - 128990-0050_01 LAYER - l02_gnd



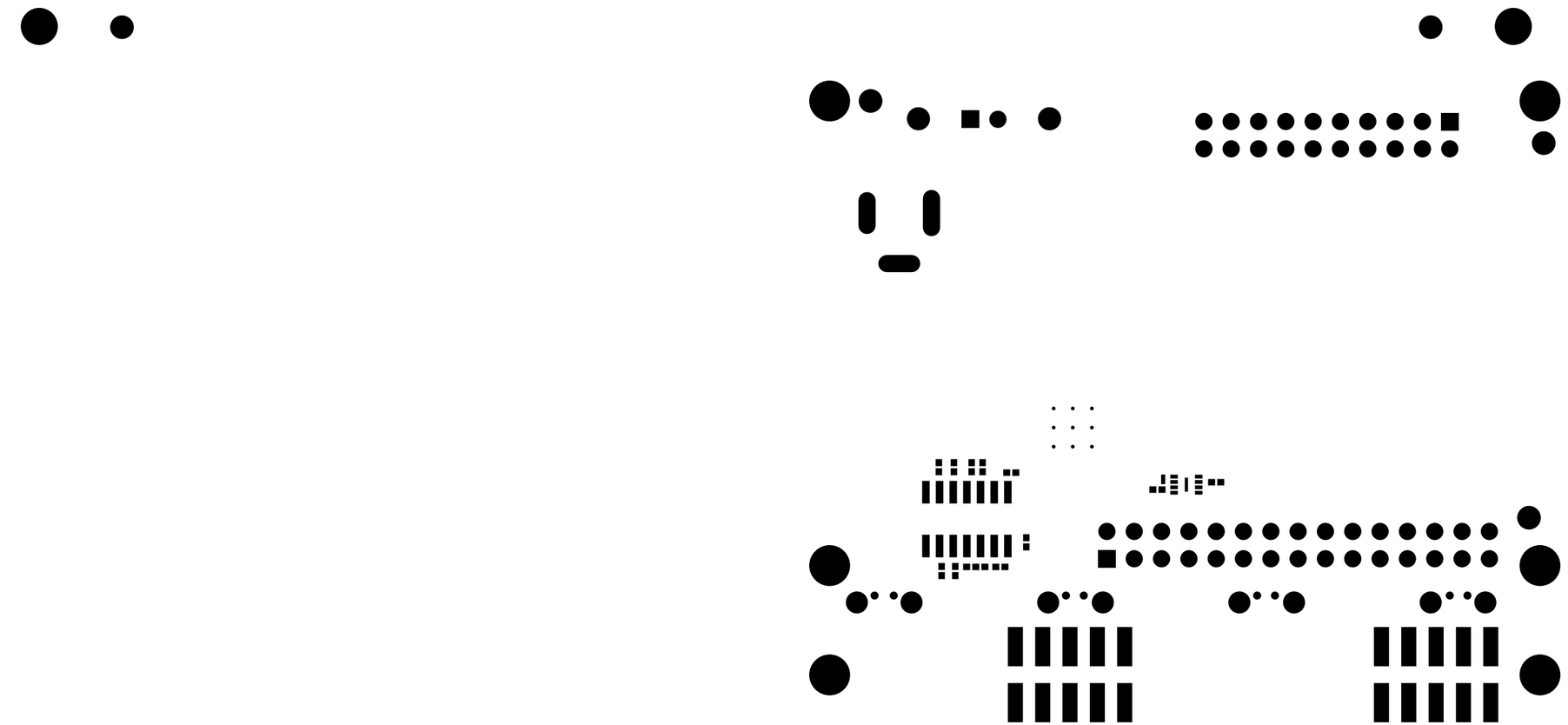
BROADCOM

IRVINE, CA

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

PROJECT: BCM9WCD9EVAL1_5			
DRAWN BY: ALISON SEE			
LAYER: L03_PWR			
DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15	

JOB - 128990-0050_01 LAYER - l03_pwr



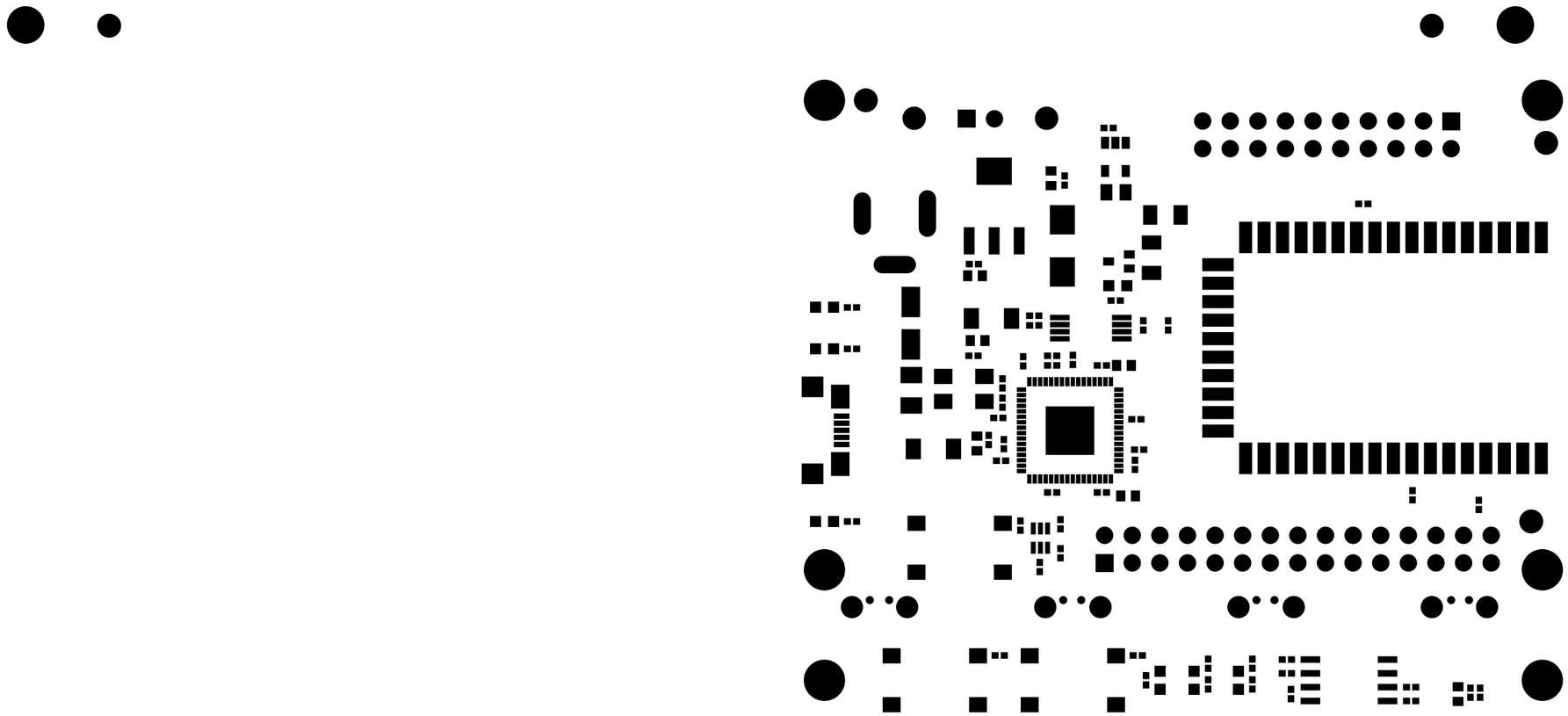
BROADCOM

IRVINE, CA

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

PROJECT: BCM9WCD9EVAL1_5			
DRAWN BY: ALISON SEE			
LAYER: SOLDERMASK BOTTOM			
DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15	

JOB - 128990-0050_01 LAYER - smb

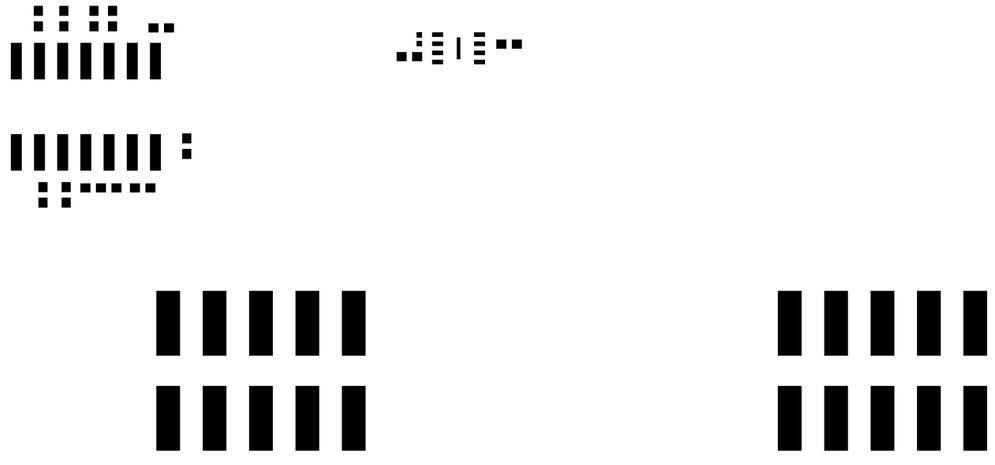


IRVINE, CA

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

PROJECT: BCM9WCD9EVAL1_5			
DRAWN BY: ALISON SEE			
LAYER: SOLDERMASK TOP			
DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15	

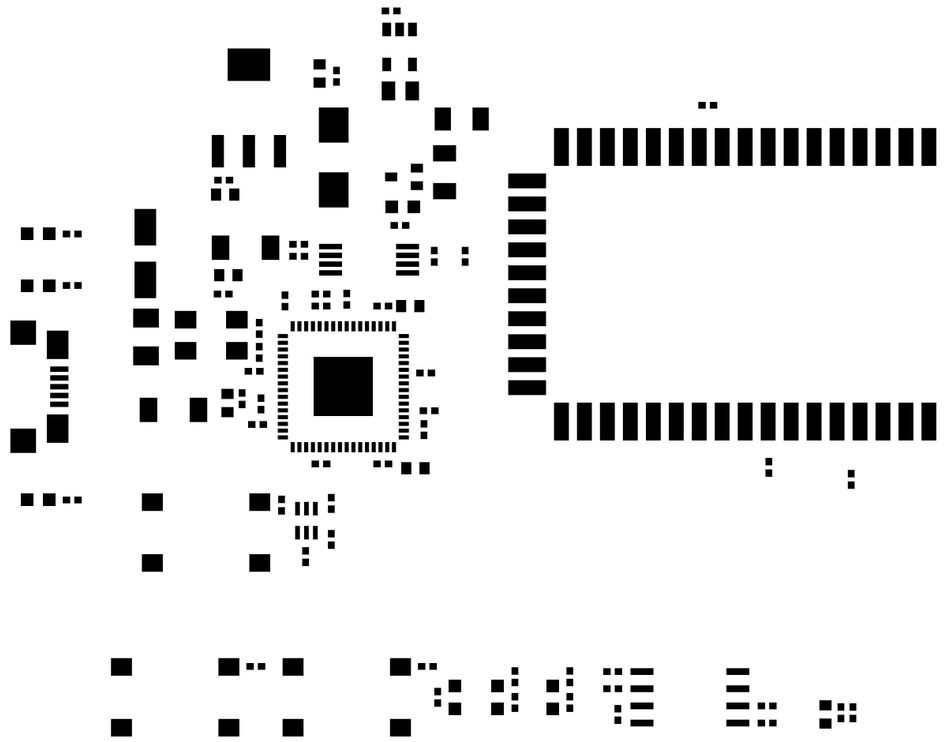
JOB - 128990-0050_01 LAYER - smt



BROADCOM IRVINE, CA	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: SOLDERPASTE BOTTOM		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

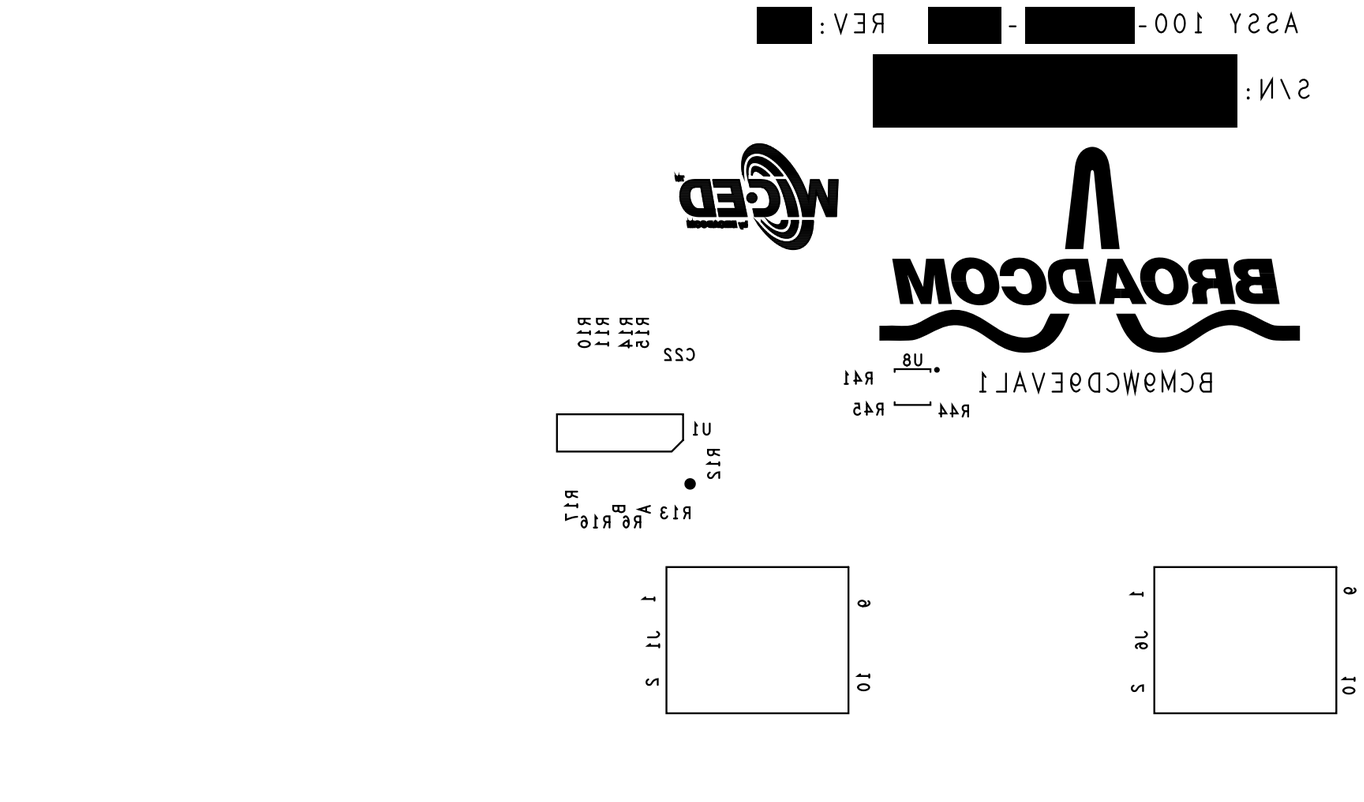
THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

JOB - 128990-0050_01 LAYER - spb



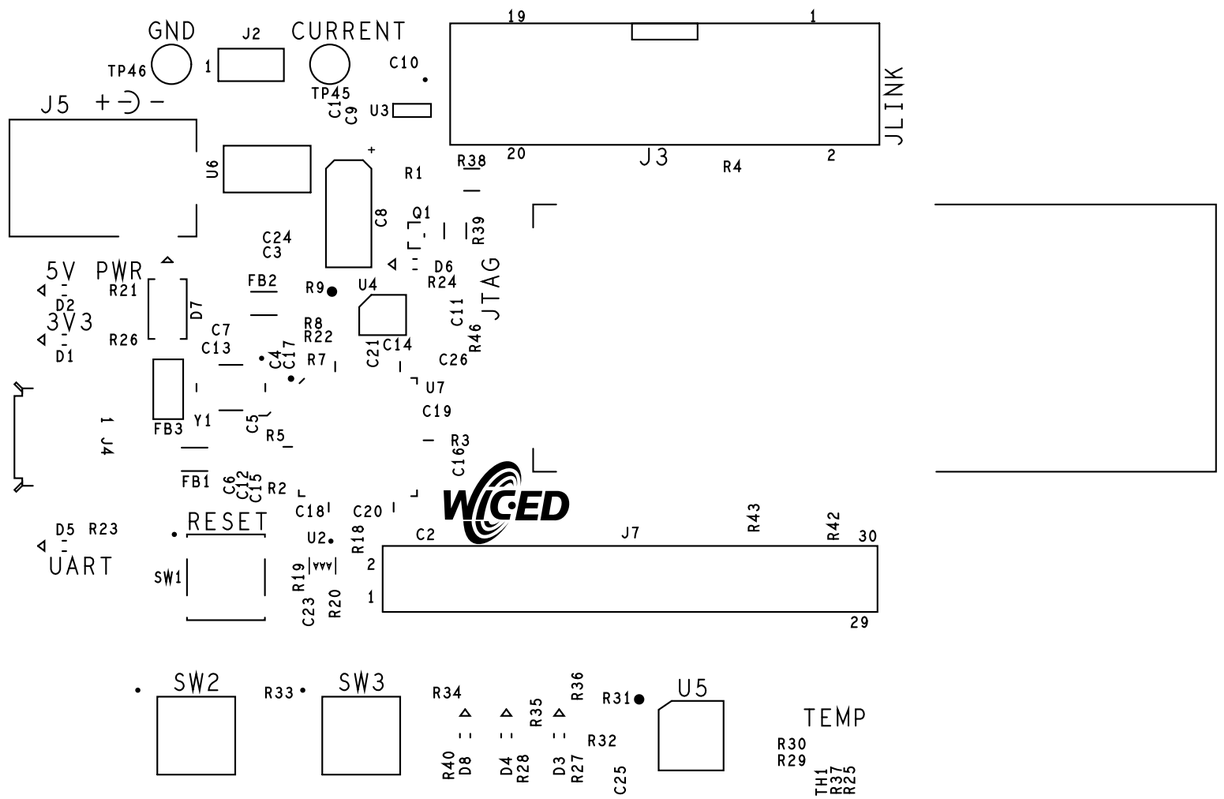
BROADCOM IRVINE, CA THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: SOLDERPASTE TOP		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

JOB - 128990-0050_01 LAYER - spt



BROADCOM IRVINE, CA THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM	PROJECT: BCM9WCD9EVAL1_5		
	DRAWN BY: ALISON SEE		
	LAYER: SILKSCREEN BOTTOM		
	DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15

JOB - 128990-0050_01 LAYER - ssb



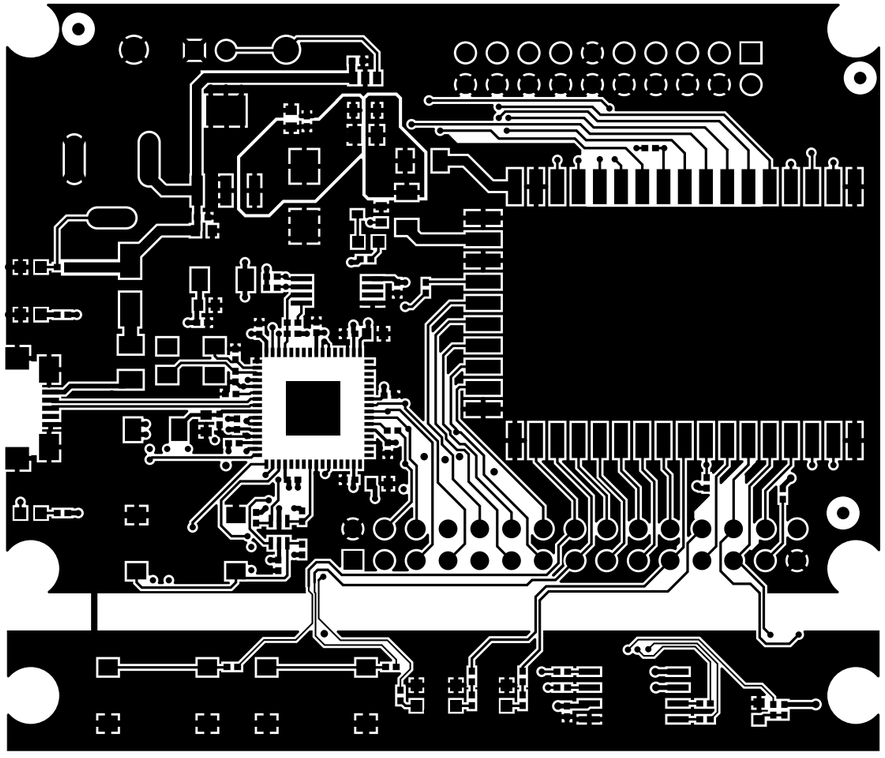
BROADCOM

IRVINE, CA

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

PROJECT: BCM9WCD9EVAL1_5			
DRAWN BY: ALISON SEE			
LAYER: SILKSCREEN TOP			
DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15	

JOB - 128990-0050_01 LAYER - sst



BROADCOM

IRVINE, CA

THE INFORMATION HEREIN IS PROPRIETARY TO BROADCOM

PROJECT: BCM9WCD9EVAL1_5			
DRAWN BY: ALISON SEE			
LAYER: TOP SIDE			
DWG NO: 823-128990-0050	REV: 01	DATE: 07/08/15	

JOB - 128990-0050_01 LAYER - top