



GRAND-DUCHÉ DE LUXEMBOURG

Ministère du Développement durable
et des Infrastructures
Département des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE
CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180

L-5201 Sandweiler



Référence: E13*10R00*10R05*14041*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Luxembourg, le 12 juillet 2016

Communication concernant:⁽²⁾

Communication concerning:



- la délivrance d'une homologation

approval granted

- l'extension d'homologation

approval extended

- le refus d'homologation

approval refused

- le retrait d'homologation

approval withdrawn

- l'arrêt définitif de la production

production definitely discontinued

d'un type de sous-ensemble électrique/électronique⁽²⁾ en ce qui concerne le Règlement N° 10

of a type of electrical/electronic sub-assembly with regard to Regulation N° 10

Numéro d'homologation par type:

Approval number:

E13*10R00*10R05*14041*00

Marque d'homologation:

Approval mark:



10R - 05 14041

1. Fabricant: (marque commerciale du constructeur):

Make (trade name of manufacturer):

Shenzhen Betoptek Electronics Co., Ltd

2. Type:

Type:

BTM500-690

Dénomination(s) commerciale(s) générale(s):

General commercial description(s):

Car Rear View System

Version(s)/Variante(s):

Version(s)/Variant(s):

BTM702-650, BTM701-890, BTM-430-660,
BTM-500, BRC-200, BRC-690, BRC-940

3.	Moyens d'identification du type, s'ils sont marqués sur le véhicule / composant / entité technique⁽²⁾: Means of identification of type, if marked on the vehicle / component / separate technical unit :	See item 6.
3.1.	Emplacement de ce marquage: Location of that marking:	See item 6.
4.	Catégorie du véhicule: Category of vehicle:	Not applicable
5.	Nom et adresse du constructeur: Name and address of manufacturer:	Shenzhen Betoptek Electronics Co., Ltd 4 th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
6.	Dans le cas de composants ou d'entités techniques, emplacement et procédé de fixation de la marque de réception CEE: In the case of components and separate technical units, location and method of affixing of the ECE approval mark:	Self adhesive label on the housing
7.	Adresse(s) de l' (des) usine(s) d'assemblage: Address(es) of assembly plant(s):	Shenzhen Betoptek Electronics Co., Ltd 4 th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
8.	Informations supplémentaires (s'il y a lieu): Additional informations (where applicable):	See appendix
9.	Autorité déléguée: <i>Assigned authority:</i> Service technique responsable de l'exécution des essais: Technical service responsible for carrying out the tests:	<i>Société Nationale de Certification et d'Homologation L-5201 Sandweiler</i> ATE EL s.à r.l. 14, op Huefdreisch L-6871 Wecker
10.	Date du rapport d'essai: Date of test report:	20.06.2016
11.	Numéro du rapport d'essai: Number of test report:	65BPA0001A
12.	Remarques (s'il y a lieu): Remarks (if any):	See appendix

13. **Lieu:** Luxembourg
Place:

14. **Date:** 12 juillet 2016
Date:

15. **Signature:**
Signature:

**Pour le Ministre du Développement durable
et des Infrastructures**

Pour la SNCH



[Signature of Marco FELTES]

Marco FELTES
Inspecteur Principal 1^{er} en rang

[Signature of Claude LIESCH]



Claude LIESCH
Directeur



16. **L'index de l'ensemble des renseignements déposé chez l'autorité de réception, qui peut être obtenu sur demande, est joint.**

The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

See index to type-approval report

17. **Raison(s) de l'extension:** Not applicable
Reason(s) for extension:

² **Biffer la mention inutile**
Strike out what does not apply

Appendice

Appendix

au certificat d'homologation par type N° E13*10R00*10R05*14041*00
to type-approval certificate N° E13*10R00*10R05*14041*00
concernant l'homologation par type d'un sous ensemble électrique/électronique selon le Règlement N° 10.
concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.

- | | | | | | | | | | | |
|------------------------|--|---|------------------------|--------------|-------------|--|-----------------------|----------------|-------------|--|
| 1. | Informations supplémentaires.
Additional information. | | | | | | | | | |
| 1.1. | Tension nominale du système électrique [V]:
Electrical system rated voltage [V]: | 12V DC | | | | | | | | |
| | Masse:
Ground: | Negative / Positive ⁽²⁾ | | | | | | | | |
| 1.2. | Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes:
This ESA can be used on any vehicle type with the following restrictions: | None | | | | | | | | |
| 1.2.1. | Conditions d'installation, s'il y a lieu:
Installation conditions, if any: | None | | | | | | | | |
| 1.3. | CE SEEE peut seulement être utilisé sur les types de véhicules suivants:
This ESA can be used only on the following vehicle types: | Not applicable | | | | | | | | |
| 1.3.1. | Conditions d'installation, s'il y a lieu:
Installation conditions, if any: | Not applicable | | | | | | | | |
| 1.4. | La (les) méthode(s) spécifique(s) d'essais utilisée(s) et les bandes de fréquences couvertes pour déterminer l'immunité étai(ent): (indiquez s'il vous plaît à partir de l'annexe 9 la méthode précise utilisée).
The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from annex 9). | <table border="0"><tr><td>Bulk current injection</td><td>20 to 200MHz</td></tr><tr><td>ISO 11452-4</td><td></td></tr><tr><td>Absorber chamber test</td><td>200 to 2000MHz</td></tr><tr><td>ISO 11452-2</td><td></td></tr></table> | Bulk current injection | 20 to 200MHz | ISO 11452-4 | | Absorber chamber test | 200 to 2000MHz | ISO 11452-2 | |
| Bulk current injection | 20 to 200MHz | | | | | | | | | |
| ISO 11452-4 | | | | | | | | | | |
| Absorber chamber test | 200 to 2000MHz | | | | | | | | | |
| ISO 11452-2 | | | | | | | | | | |
| 1.5. | Laboratoire accrédité au titre de la norme ISO 17025 et reconnu par l'autorité d'homologation chargé d'effectuer les essais:
Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: | Not applicable | | | | | | | | |
| 2. | Commentaires:
Remarks: | None | | | | | | | | |



Référence: E13*10R00*10R05*14041*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Luxembourg, le 12 juillet 2016

Index du dossier d'homologation

Index to type-approval report

Numéro d'homologation:

Approval number:

E13*10R00*10R05*14041*00

Révision:

Revision:

00

Marque de fabrique ou de commerce:

Trade name or mark:

Shenzhen Betoptek Electronics Co., Ltd

Type:

Type:

BTM500-690

1. Procès-verbal d'essai:

Test report:

N° 65BPA0001A

- Technical report:
- Index:
- Test report:
- General information:

Page 1 & 2
Annex I1 – Page 1
Annex T – Page 1 to 8
Annex GI1 – Page 1 & 2

2. Dossier du constructeur:

Report of the manufacturer:

Annex MID

- Manufacturer's information document
No. BTM500-690-00-R10:

Page 1 to 23

3. Autres documents annexés:

Other documents annexed:

Not applicable

4. Date de délivrance de l'homologation initiale:

Date of issue of initial type approval:

12.07.2016

5. Date de la dernière délivrance de pages révisées:

Date of last issue of revised pages:

Not applicable

6. Date de la dernière délivrance d'une homologation révisée:

Date of last extension:

Not applicable



Allied Technology Experts-
Enterprise of Luxembourg

Technical Report No. 65BPA0001A
Type: BTM500-690

Tests and inspection concerning

ELECTROMAGNETIC COMPATIBILITY

according to the ECE Regulation No. 10 including all amendments
up to Series 05 of 09.10.2014

Manufacturer: Shenzhen Betoptek Electronics Co., Ltd
4th Floor, Block B,
Hengqiang Industrial Zone,
Tianbei, Guanlan,
Longhua, Shenzhen, China

Type: BTM500-690

Type of Approval: ECE	Type Approval No.: E13*10R00*10R05*....*00	Manufacturer: Shenzhen Betoptek Electronics Co., Ltd
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Conclusion: The tests and checks carried out have shown the compliance of the type described in this report and the attached annexes with the Regulation mentioned above.

Shanghai, le 20.06.2016

p.o. Mengting Xu
Ingénieur Inspecteur

Index: see Annex I1

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1 Tests and inspection results

Refer to Annex T

2 Type and variants

The tests and inspections carried out and described in this technical report have been selected in order to include the following variants and versions of the type and its equipments, as far as these are relevant for the topic of this report, into the judgement:

As stated in Annex MID (Manufacturer's Information Document):	Item
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-Variant(s)	2.
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3 Remark

3.1 General

None.



Allied Technology Experts-
Enterprise of Luxembourg

Annex I1 Page 1

Technical Report No. 65BPA0001A
Type: BTM500-690

Compilation of Dossier No.: 65BPA0001

Extension 00

Technical Report no.: 65BPA0001A

page 1 and 2

Composition of Annex:

I1:	Index	page 1
T:	General Test Report	page 1 to 8
GI1:	General Information	page 1 to 2
MID:	Manufacturer's Information Document	page 1 to 23

Index of the appendices to the Manufacturer's Information Document: see Annex MID,page 1



General Test Report

The data in this section refer only to the items submitted to testing or inspection.

0 Abstract

0.1 Denomination BTM500-690

1 Dates and resources

1.1 Date of receipt of test item 03.06.2016

1.2 Date of test 03.06.2016

1.3 Place of test CQC Intime(Suzhou)Testing Technology Co.,Ltd.
Suzhou, Jiangsu, China

1.4 Testing site and testing equipment:

All measuring and test equipment used to carry out the inspections are in accordance with ISO 17025 and the regulatory act(s) applied.

1.5 Resources

1.5.1 Configuration other than "REESS charging mode coupled to the power grid"

1.5.1.1 Broadband and narrowband emissions:

1.5.1.1.1 Broadband emissions

The requirements of item 3 of Annex 7 of the Regulation have been fulfilled.
The test have been conducted in measurements performed in a semi anechoic chamber.

1.5.1.1.2 Narrowband emissions

The requirements of item 3 of Annex 8 of the Regulation have been fulfilled.
The test have been conducted in measurements performed in a semi anechoic chamber.

1.5.1.2 The immunity of ESAs to electromagnetic radiation

The requirements of item 3 and item 4 of Annex 9 of the Regulation have been fulfilled.
The specific test requirements shall include the absorber chamber test and bulk current injection testing.

1.5.1.3 The immunity to transient disturbances conducted along supply lines

The requirements of item 2 of Annex 10 of the Regulation have been fulfilled.
This test method shall ensure the immunity of ESAs to conducted transients on the vehicle power supply.



General Test Report

1.5.1.4 The emission of conducted disturbances

The requirements of item 3 of Annex 10 of the Regulation have been fulfilled.
This test method shall ensure limit conducted transients from ESAs to the vehicle power supply.

1.5.2 Configuration "REESS charging mode coupled to the power grid"

1.5.2.1 Broadband emissions

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.2 The immunity of ESAs to electromagnetic radiation

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.3 Emission of harmonics on AC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.4 Emission of voltage changes, voltage fluctuations and flicker on AC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.5 Emission of radiofrequency conducted disturbances on AC or DC power lines from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.6 Emission of radiofrequency conducted disturbances on network and telecommunication access from an ESA

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.7 Immunity of an ESA to electrical fast transient/burst disturbances conducted along AC and DC power lines

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"

1.5.2.8 Immunity of ESA to surge conducted along AC and DC power lines

Not applicable. Other ESA's than involved in "REESS charging mode coupled to the power grid"



General Test Report

2 Test object

The tests were conducted with a test ESA which is representative of the ESA type to be approved.

2.1 Description

The ESA is a Car Rear View System.

The ESA can be used with 12V voltage.

ESA configuration: Other ESA's than involved in "REESS charging mode coupled to the power grid"
ID: BTM500-690

2.2 Equipment

Optional equipment installed on the ESA: none

3 Tests and inspections

3.1 Measurement of radiated broadband electromagnetic emissions from ESA

Antenna position: According to item 6.5.2.1 of the Regulation

Bandwidth: 120 kHz

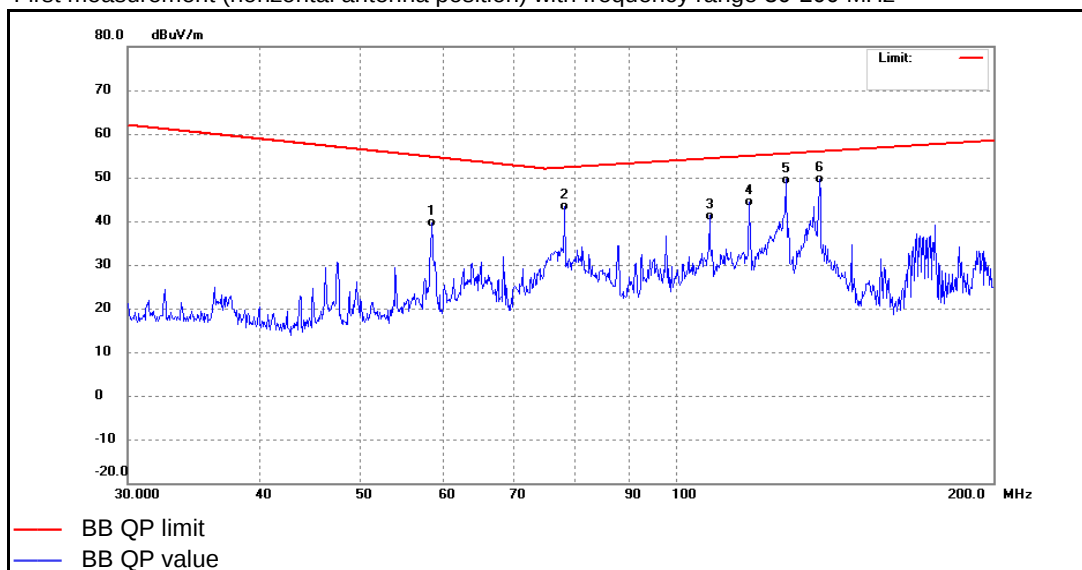
Frequency range: 30 to 1000 MHz

Detector: Quasi Peak (CISPR 12)

ESA condition: According to item 2 of Annex 7 of the Regulation

3.1.1 Test results:

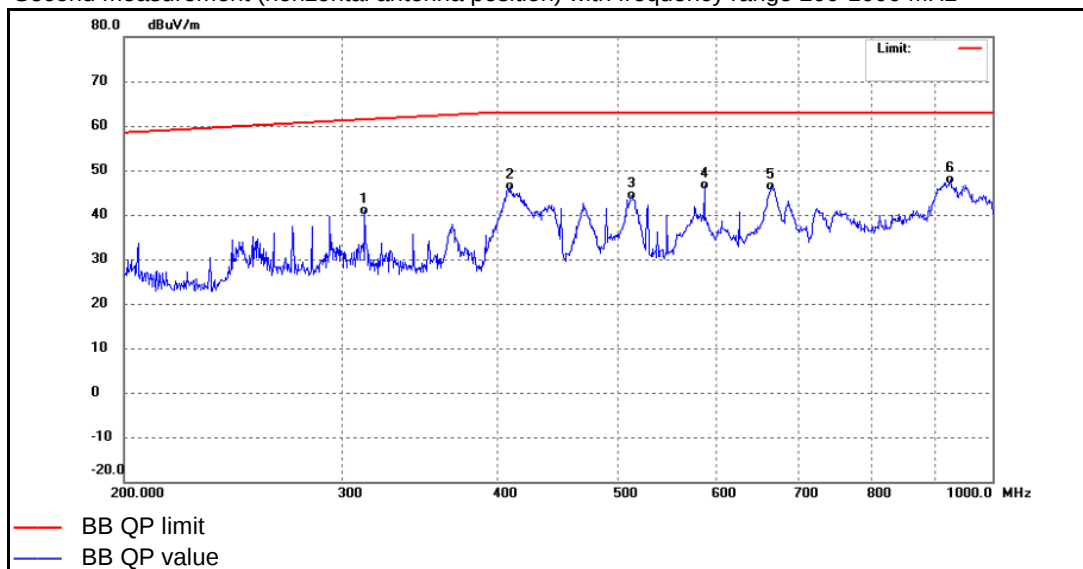
First measurement (horizontal antenna position) with frequency range 30-200 MHz



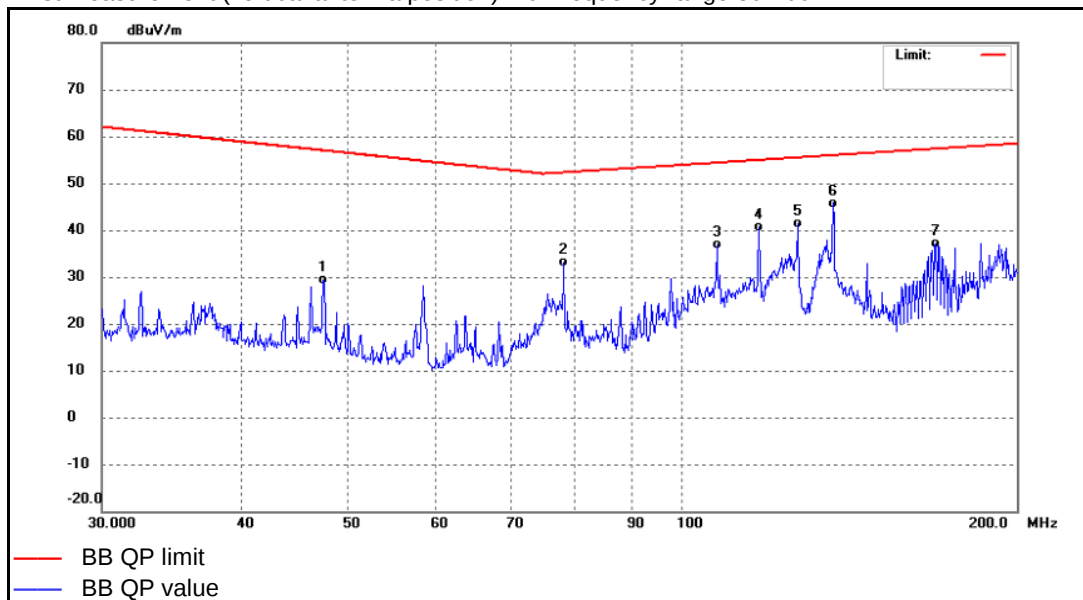


General Test Report

Second measurement (horizontal antenna position) with frequency range 200-1000 MHz

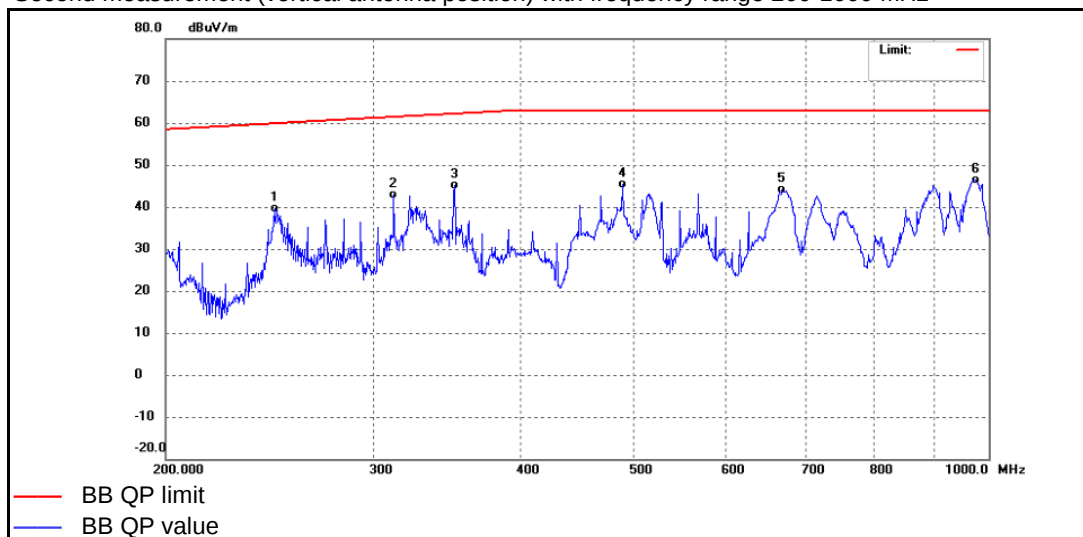


First measurement (vertical antenna position) with frequency range 30-200 MHz



General Test Report

Second measurement (vertical antenna position) with frequency range 200-1000 MHz



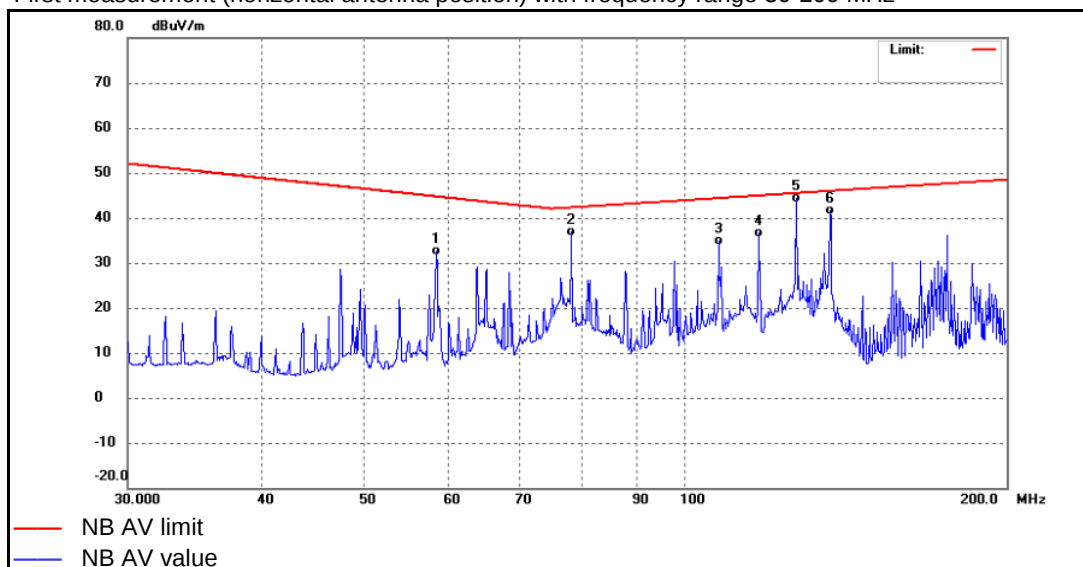
The requirements of item 6.5.2.2 of the Regulation are fulfilled.

3.2 Measurement of radiated narrowband electromagnetic emissions from ESA

Antenna position: According to item 6.6.2.1 of the Regulation
Bandwidth: 120 kHz
Frequency range: 30 to 1000 MHz
Detector: Average detector
ESA condition: According to item 2 of Annex 8 of the Regulation

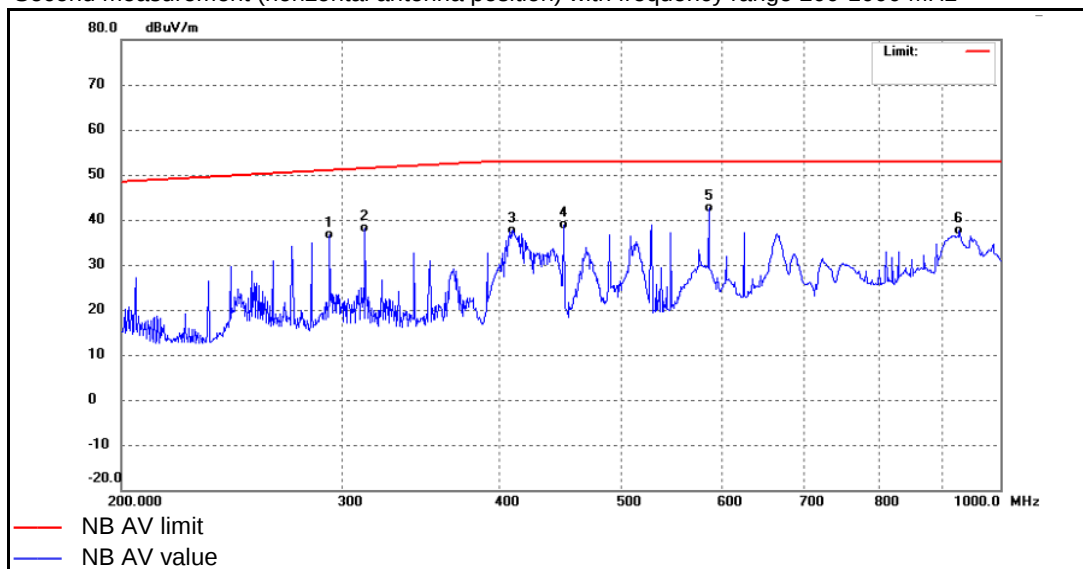
3.2.1 Test results

First measurement (horizontal antenna position) with frequency range 30-200 MHz

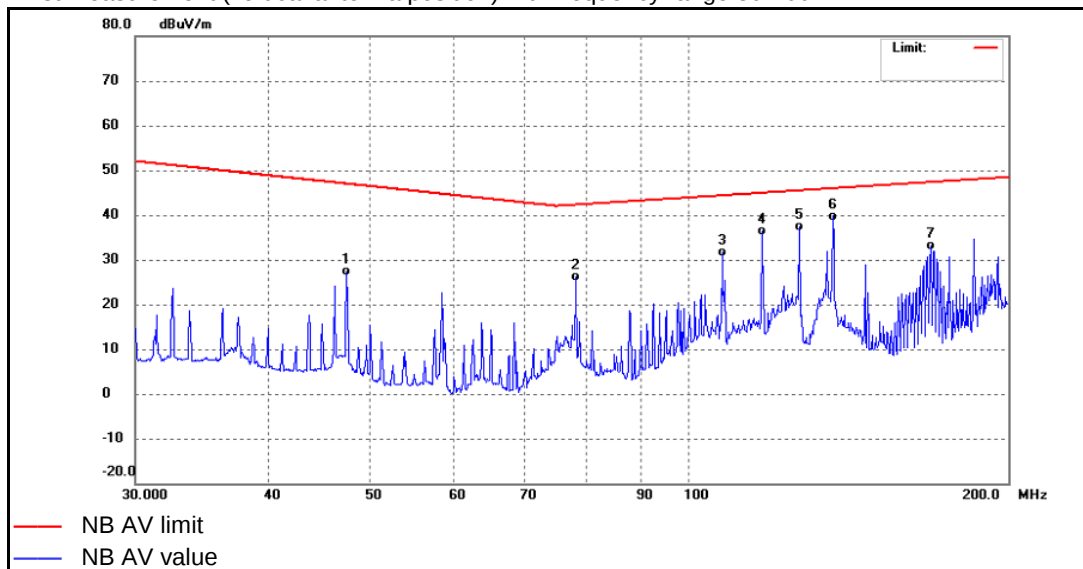


General Test Report

Second measurement (horizontal antenna position) with frequency range 200-1000 MHz

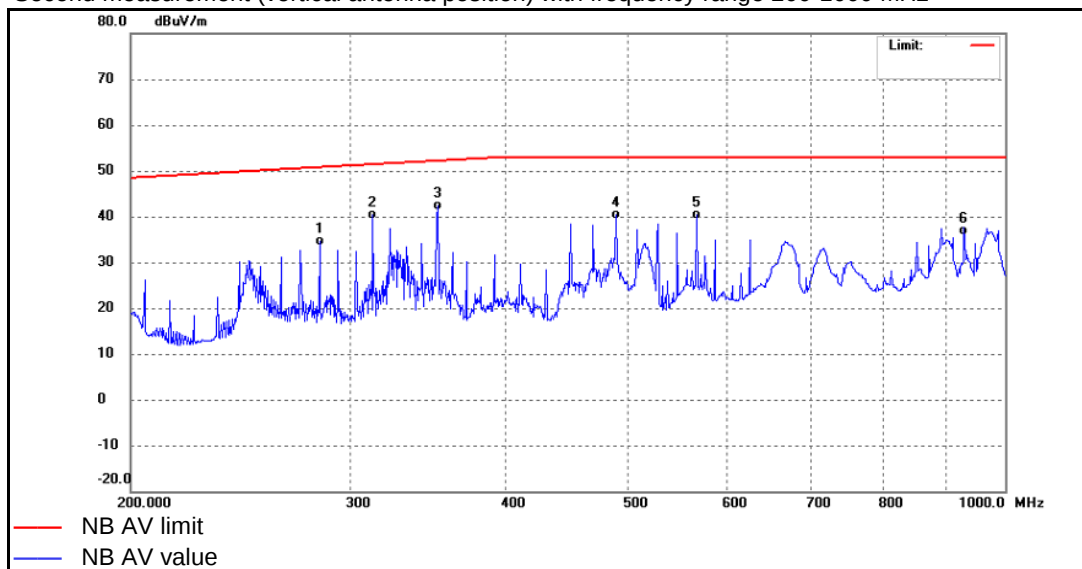


First measurement (vertical antenna position) with frequency range 30-200 MHz



General Test Report

Second measurement (vertical antenna position) with frequency range 200-1000 MHz



The requirements of item 6.6.2.2 of the Regulation are fulfilled.

3.3 The immunity of ESAs to electromagnetic radiation

3.3.1 Absorber chamber test

Method of testing: ISO 11452-2
Frequency range: 200 to 2000 MHz
Test level: 30V/m
Type of modulation: 200-800 MHz: 80% AM, 1kHz
800-2000 MHz: PM, $t_{on}=577\mu s$, period 4,600 μs
ESA condition: According to item 2 of Annex 9 of the Regulation

3.3.1.1 Test results

There is no degradation of performance of "immunity related functions".
The requirements of item 6.8.2.2 of the Regulation are fulfilled.

3.3.2 Bulk current injection test

Method of testing: ISO 11452-4
Frequency range: 20 to 200 MHz
Test level: 60mA
Type of modulation: 80% AM, 1kHz
ESA condition: According to item 2 of Annex 9 of the Regulation

3.3.2.1 Test results

There is no degradation of performance of "immunity related functions".
The requirements of item 6.8.2.2 of the Regulation are fulfilled.



General Test Report

3.4 Measurement of the immunity to transient disturbances conducted along 12/24V supply lines

Method of testing: ISO 7637-2
Test pulse number: 1, 2a, 2b, 3a/3b,4
Immunity test level: III
ESA condition: According to item 4 of ISO 7637-2

3.4.1 Test results

Test pulse number	Test voltage	Number of pulses/duration	Required functional status	Functional status during test
1	-75V	5000 pulses	C	C
2a	+37V	5000 pulses	B	B
2b	+10V	10 pulses	C	C
3a	-112V	1 h	A	A
3b	+75V	1 h	A	A
4	-6V	1 pulse	C	C

The requirements of item 6.9.1 of the Regulation are fulfilled.

3.5 Measurement of Emission of transient conducted disturbances generated by ESAs on 12/24V supply lines

Method of testing: ISO 7637-2
ESA condition: According to item 4 of ISO 7637-2

3.5.1 Test results

Polarity of pulse amplitude	Maximum allowed pulse amplitude for vehicle with 12 V system	Result
Positive	+75V	Pass
Negative	-100V	Pass

The requirements of item 6.7.1 of the Regulation are fulfilled.



General Information

[]	Numbering according to annex 3B of the type-approval certificate following Regulation No.10 Communication concerning the type-approval / extension of type-approval	
	EC type-approval mark to be affixed on ESA :	E13 10R 05
[1.]	Make (trade name of manufacturer)	Shenzhen Betoptek Electronics Co., Ltd
[2.]	Type and general commercial description: Type: Variants: Commercial description(s):	BTM500-690 BTM702-650, BTM701-890, BTM-430-660, BTM-500, BRC-200, BRC-690, BRC-940 Car Rear View System
[3.]	Means of identification of type, if marked on the vehicle/ component/ separate technical unit:	See item 6
[3.1.]	Location of that marking:	See item 6
[4.]	Category of vehicle:	Not applicable
[5.]	Name and address of manufacturer:	Shenzhen Betoptek Electronics Co., Ltd 4th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
[6.]	In the case of components and separate technical units, location and method of affixing of the approval mark:	Self adhesive label on the housing
[7.]	Address(es) of the production plant(s):	Shenzhen Betoptek Electronics Co., Ltd 4th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
[8.]	Additional information: (where applicable)	See appendix
[9.]	Technical service responsible for carrying out the tests:	ATE EL s.à r.l. 14, op Huefdreich L-6871 Wecker
[10.]	Date of test report:	20.06.2016
[11.]	Number of test report:	65BPA0001A
[12.]	Remarks: (if any):	See appendix



General Information

[13.]

[14.]

[15.]

[16.]

[17.]

Reasons for extension:

Not applicable

Appendix to type-approval communication form No. 65BPA0001A concerning the type-approval of an electrical/ electronic sub-assembly under Regulation No. 10

[1.]

Additional information:

[1.1.]

Electrical system rated voltage:

12V DC, negative ground

[1.2.]

This ESA can be used on any vehicle type with the following restrictions:

None

[1.2.1.]

Installation conditions, if any:

None

[1.3.]

This ESA can only be used on the following vehicle types:

Not applicable.

[1.3.1.]

Installation conditions, if any:

Not applicable.

[1.4.]

The specific test method(s) used and the frequency ranges covered to determine immunity were: (please specify precise method used from Annex 9)

Absorber chamber test according to ISO 11452-2 (from 200-2000MHz)
Bulk current injection test according to ISO 11452-4 (from 20-200MHz)

[1.5.]

Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests:

Not applicable.

[2.]

Remarks:

None

<i>Type:</i> BTM500-690	Shenzhen Betoptek Electronics Co., Ltd	Date : JUN. 2016 Ext. : 00
UNIFORM PROVISIONS CONCERNING THE EC TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUBASSEMBLY WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY REGULATION No. 10.05 (Information Document No. BTM500-690-00-R10)		

INDEX OF DOCUMENTATION

<i>Page</i>	<i>Concept</i>	<i>Date</i>
2	GENERAL	JUN. 2016
3	LOCATION OF THE ECE APPROVAL MARK	JUN. 2016
4-7	SCHEMATIC OF THE DEVICE	JUN. 2016
8-21	PCB	JUN. 2016
22-23	LIST OF MAIN COMPONENT CONSTITUTING THE ESA	JUN. 2016

APPLICATION HISTORY

Extension No.	Extension Reasons	APPLICATION DATE
00	Not applicable(Base Approval)	JUN. 2016

Type: BTM500-690	Shenzhen Betoptek Electronics Co., Ltd	Date : JUN. 2016
		Ext. : 00

GENERAL

1. Make (trade name of manufacturer): **Shenzhen Betoptek Electronics Co., Ltd**
2. Type: **BTM500-690**
 Variants: **BTM702-650, BTM701-890, BTM-430-660, BTM-500, BRC-200, BRC-690, BRC-940**
 Commercial description(s): **Car Rear View System**
 Function: **The ESA is a Car Rear View System.**
3. Means of identification of type, if marked on the component/separate technical unit (a):
 - 3.1. Location of that marking:
Self adhesive label on the housing, see drawing of the ESA.
4. Name and address of manufacturer:
Shenzhen Betoptek Electronics Co., Ltd
4th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
 Name and address of authorised representative, if any: **N.A**
5. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
Self adhesive label on the housing, see drawing of the ESA.
6. Address(es) of assembly plant(s):
Shenzhen Betoptek Electronics Co., Ltd
4th Floor, Block B, Hengqiang Industrial Zone, Tianbei, Guanlan, Longhua, Shenzhen, China
7. This ESA shall be approved as a component/STU²⁾: **Component**
8. Any restrictions of use and conditions for fitting: **Not Applicable**
9. Electrical system rated voltage: V, positive/negative²⁾ ground
12V DC, negative ground
10. Charger: **Not Applicable**
11. Charging current: **Not Applicable**
12. Maximal nominal current (in each mode if necessary): **Not Applicable**
13. Nominal charging voltage: **Not Applicable**
14. Basic ESA interface functions: **Not Applicable**
15. Minimum R_{sce} value: **Not Applicable**

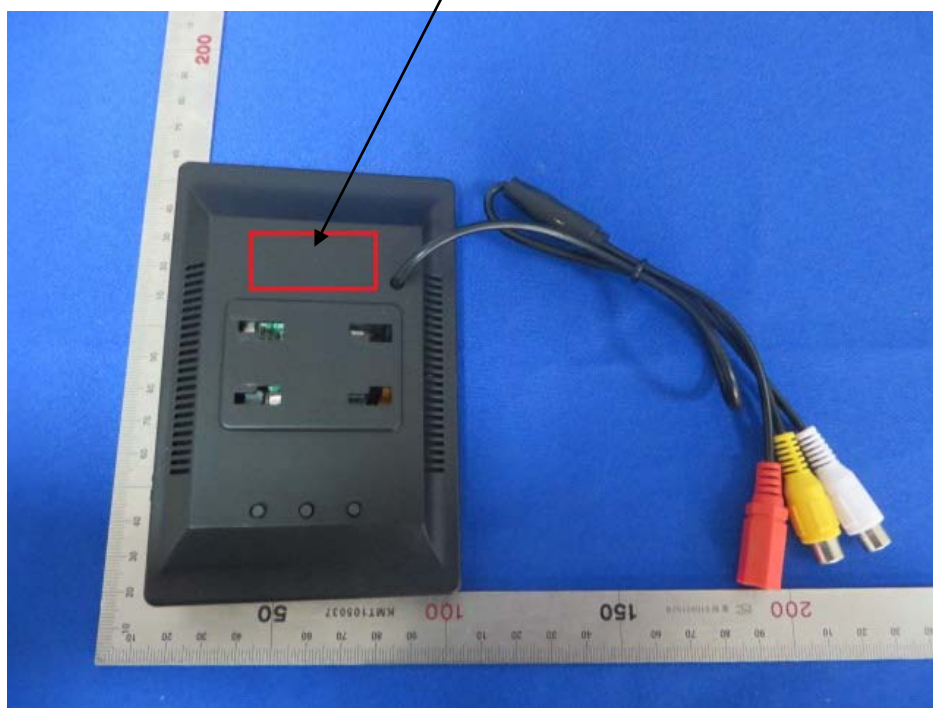
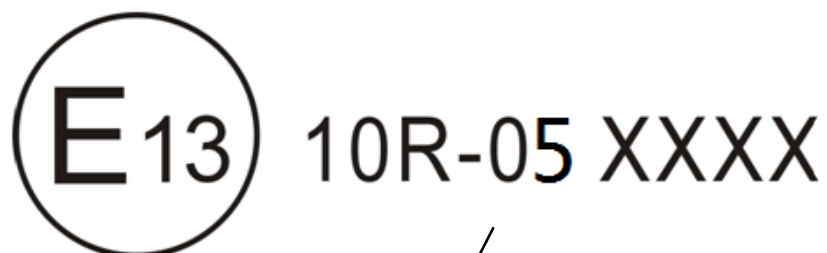
Type: **BTM500-690**

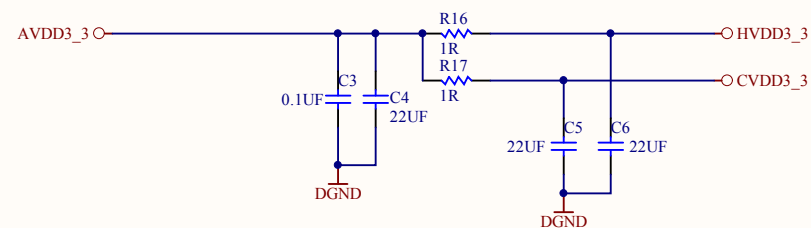
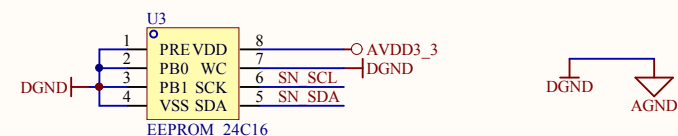
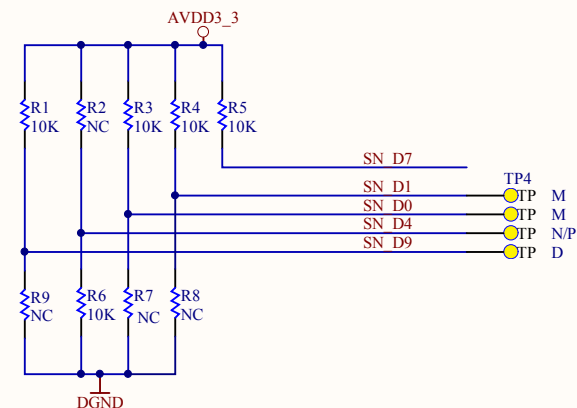
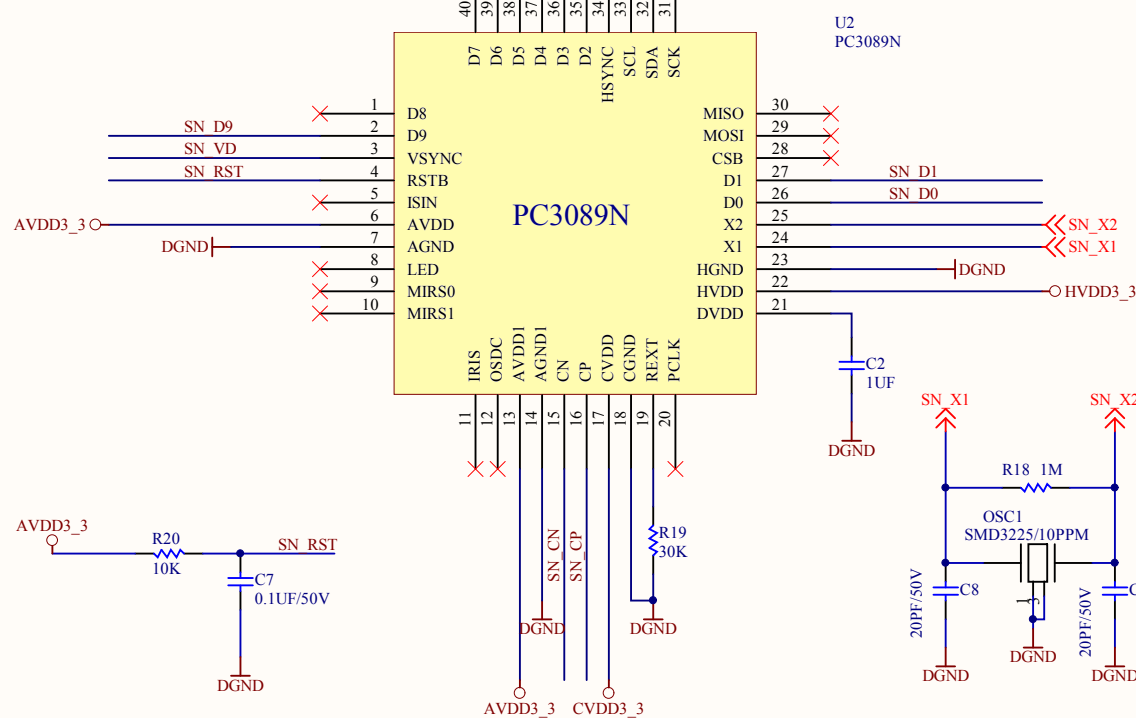
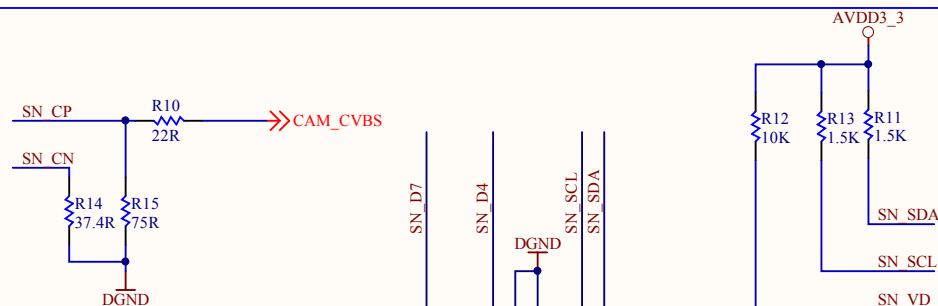
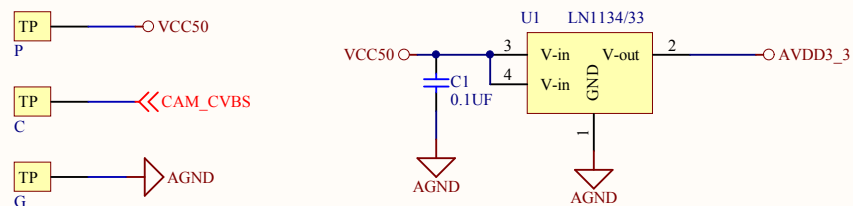
Shenzhen Betoptek Electronics Co., Ltd

Date : JUN. 2016
Ext. : 00

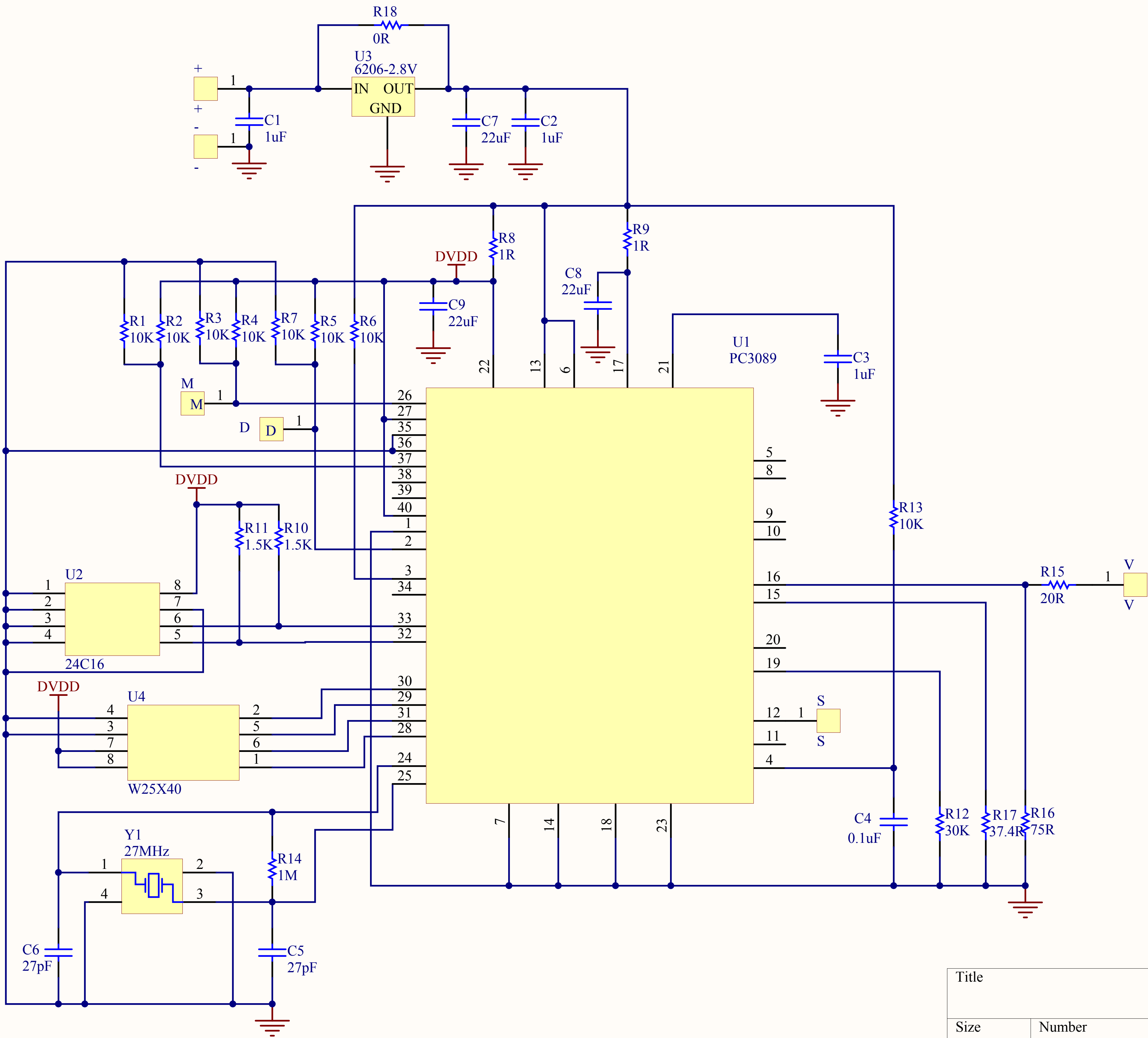
DRAWINGS OF THE ESA

LOCATION OF THE ECE APPROVAL MARK





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Size A4	Number	Revision
Date:	2016/5/27	Sheet of
File:	E:_\PC3089N.SchDoc	Drawn By: MACK



Title			
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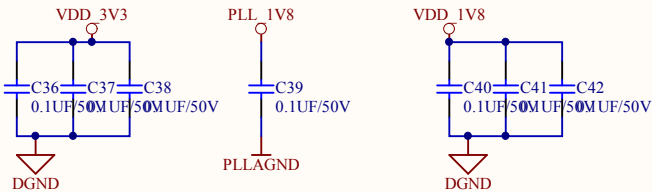
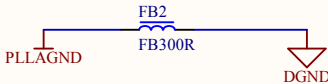
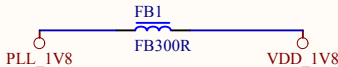
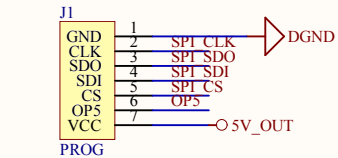
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3

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A

A



B

B

C

C

D

D

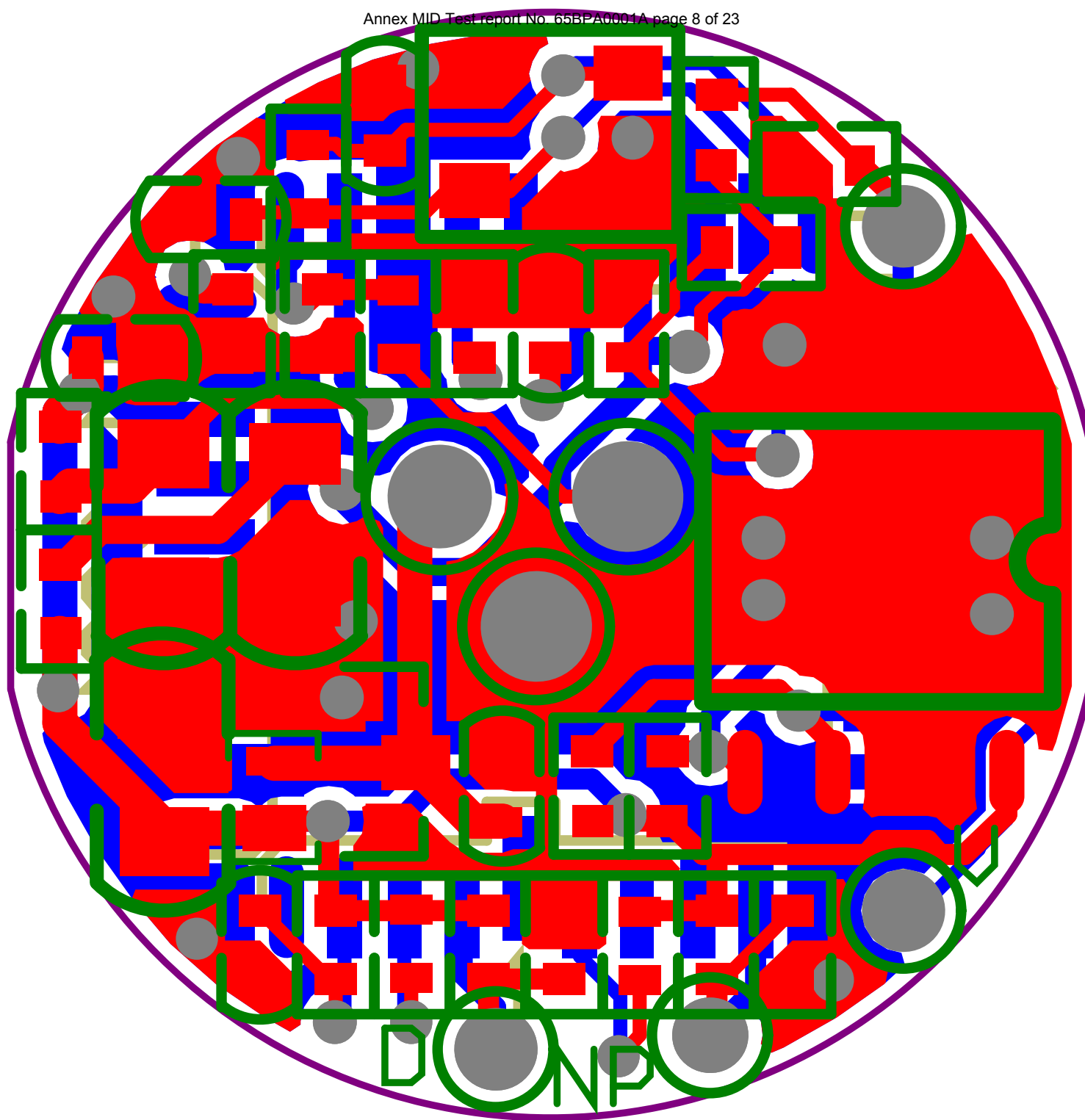
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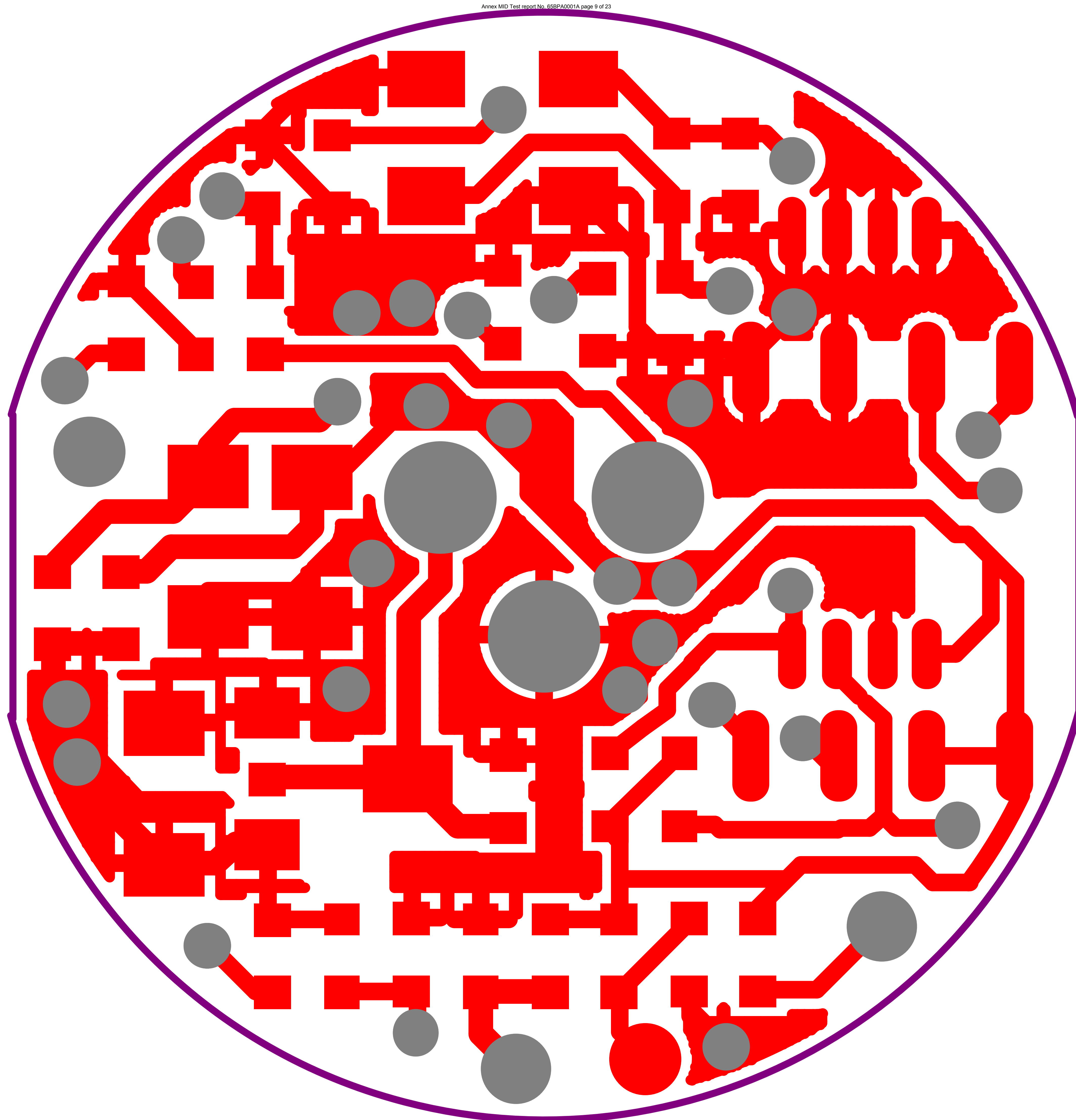
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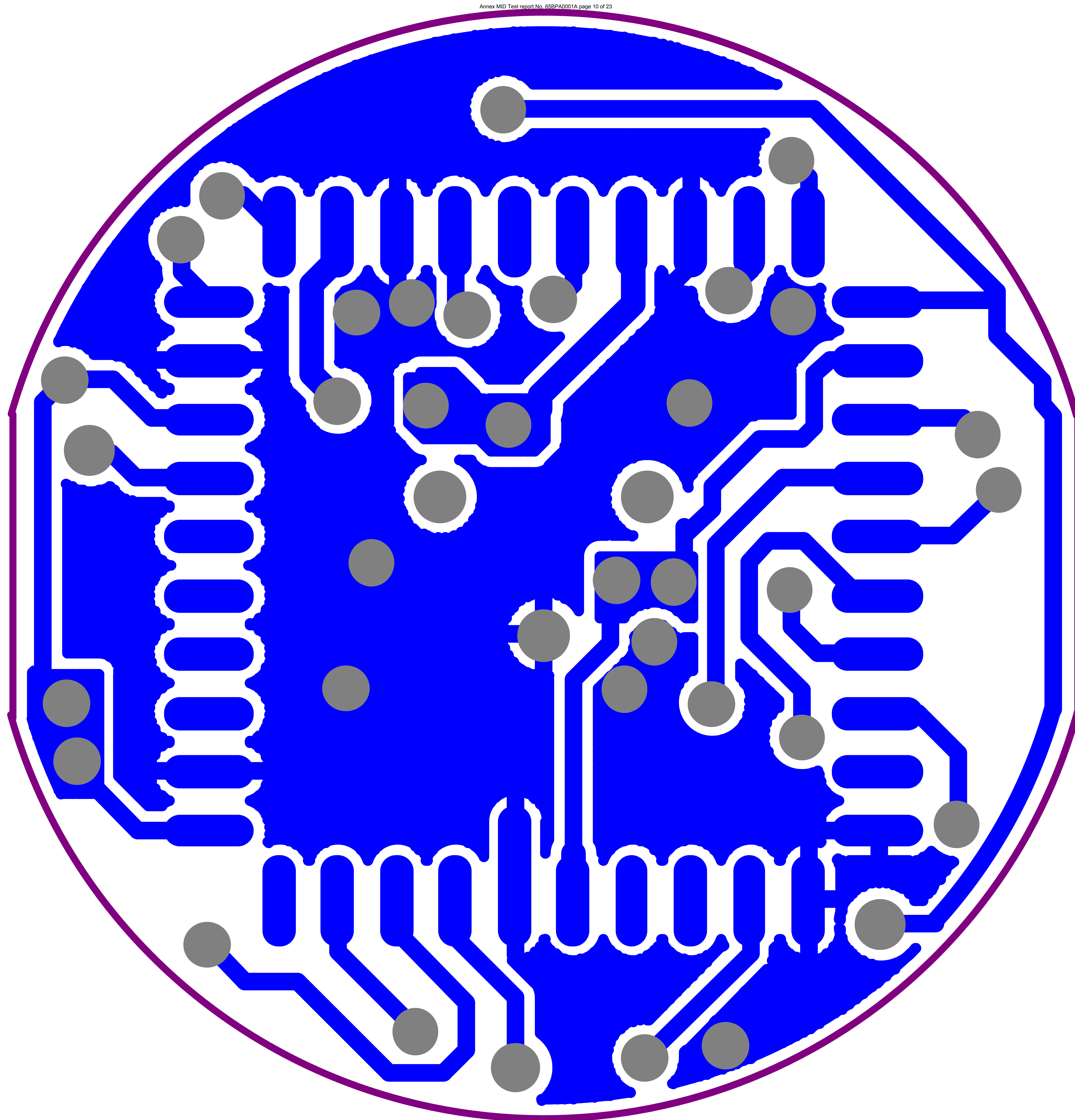
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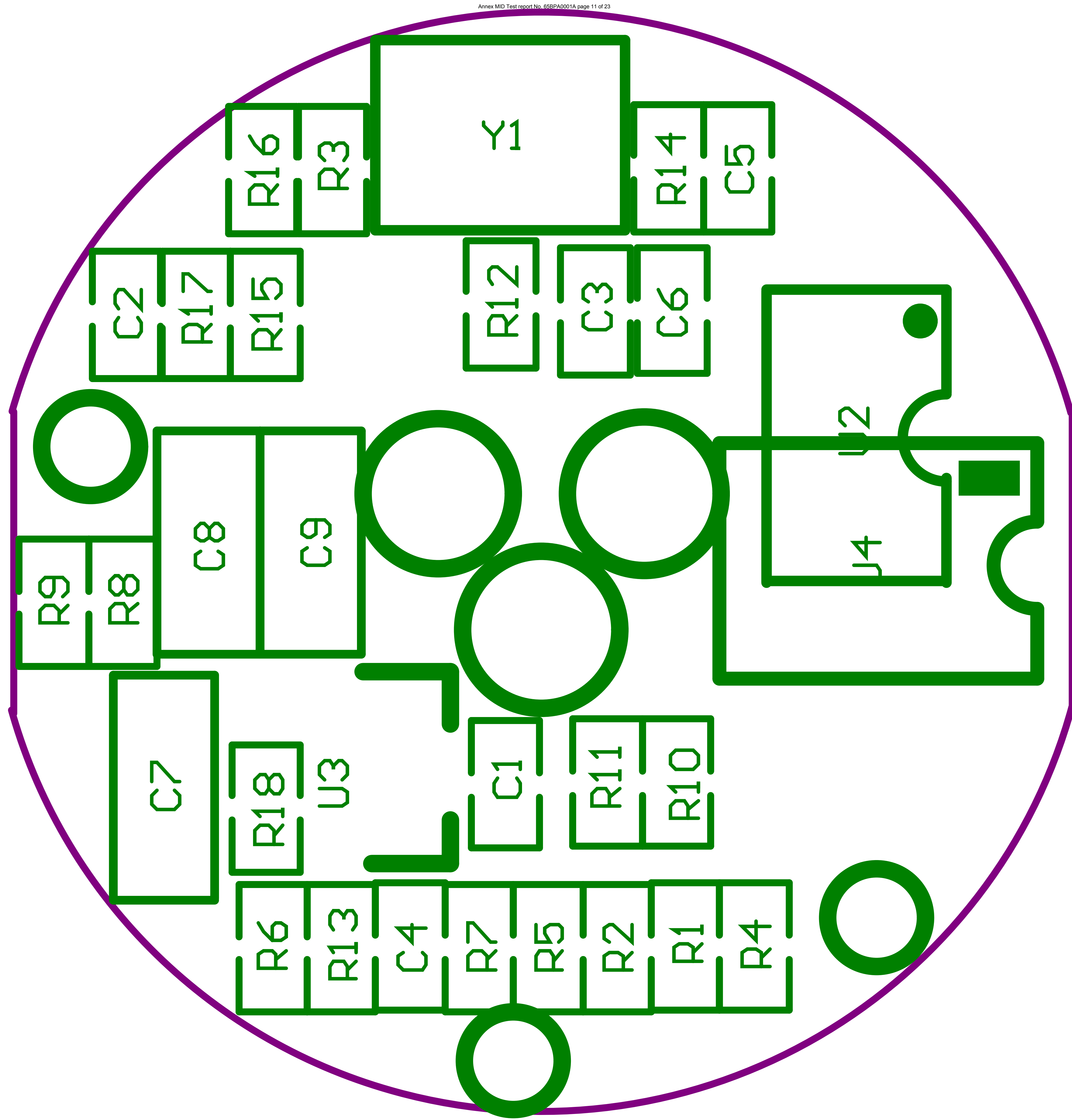
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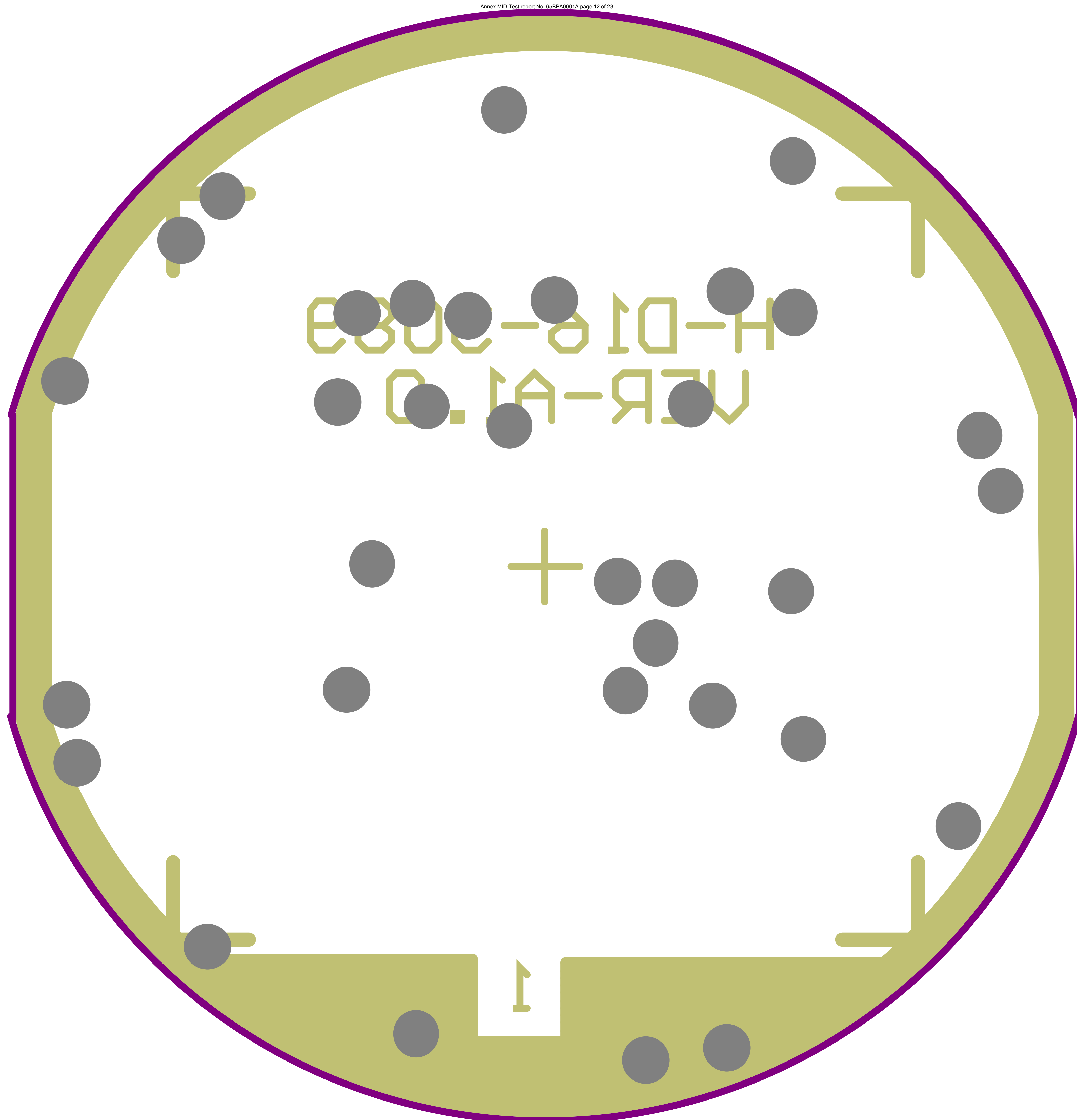
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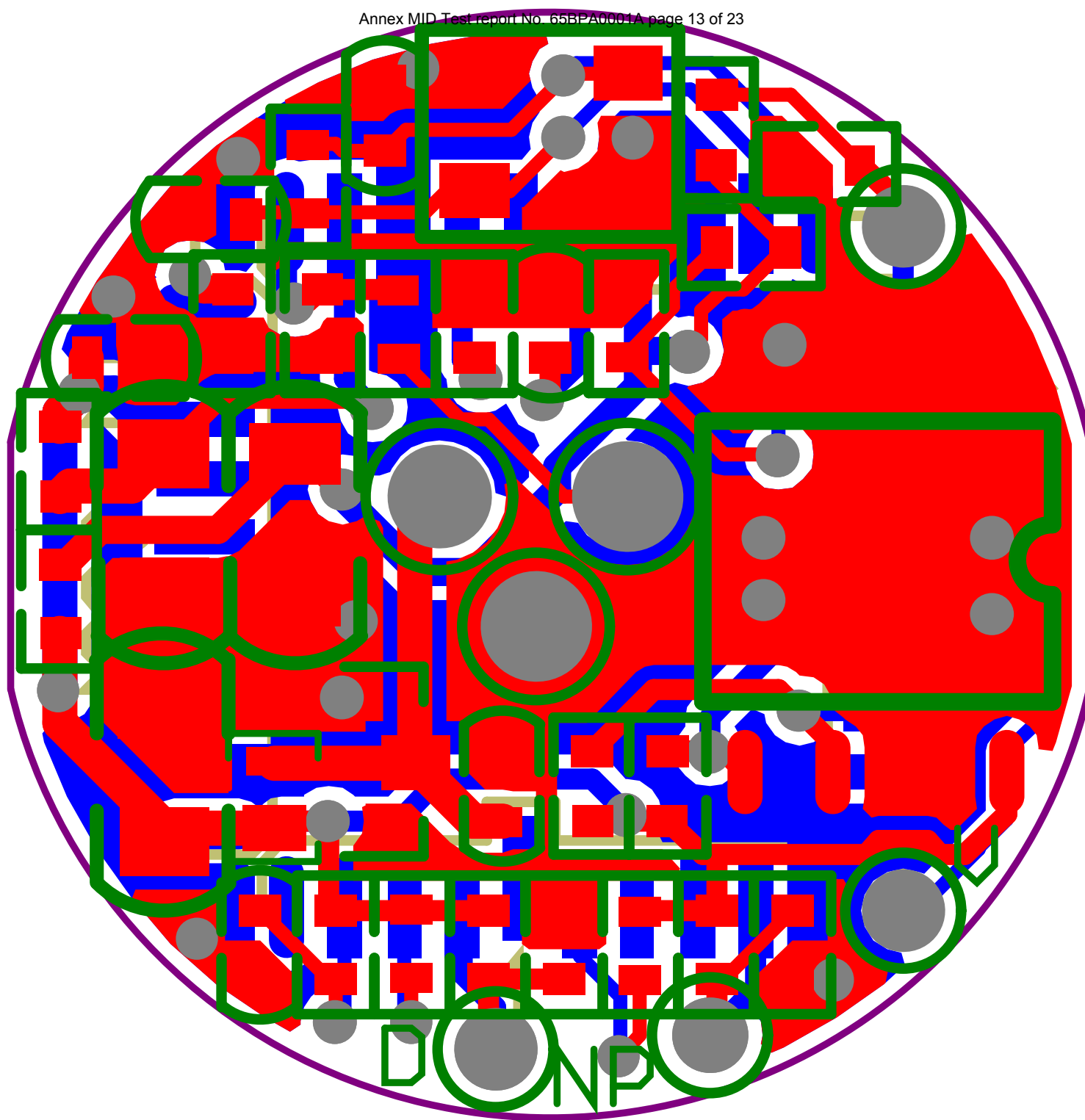


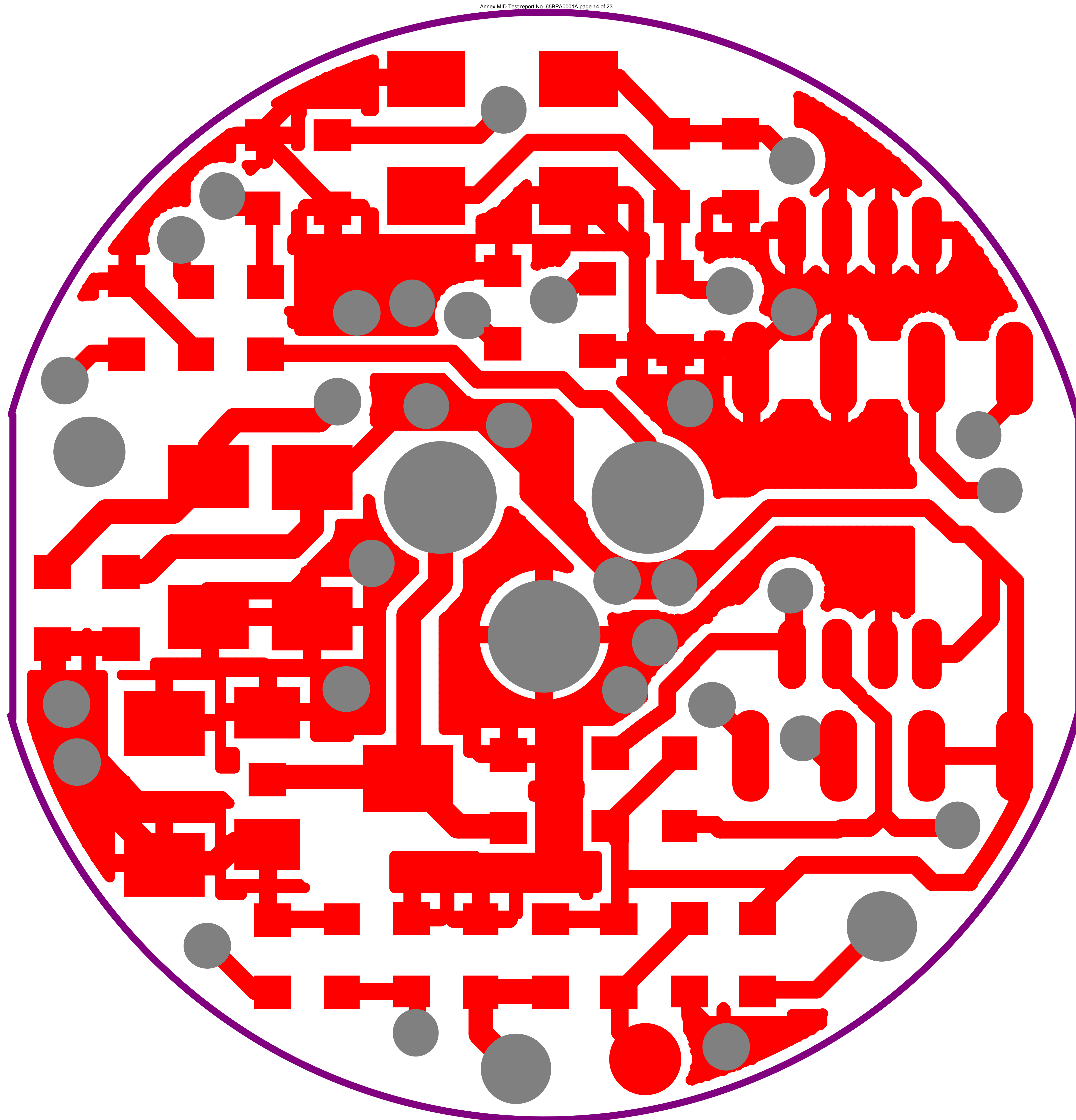


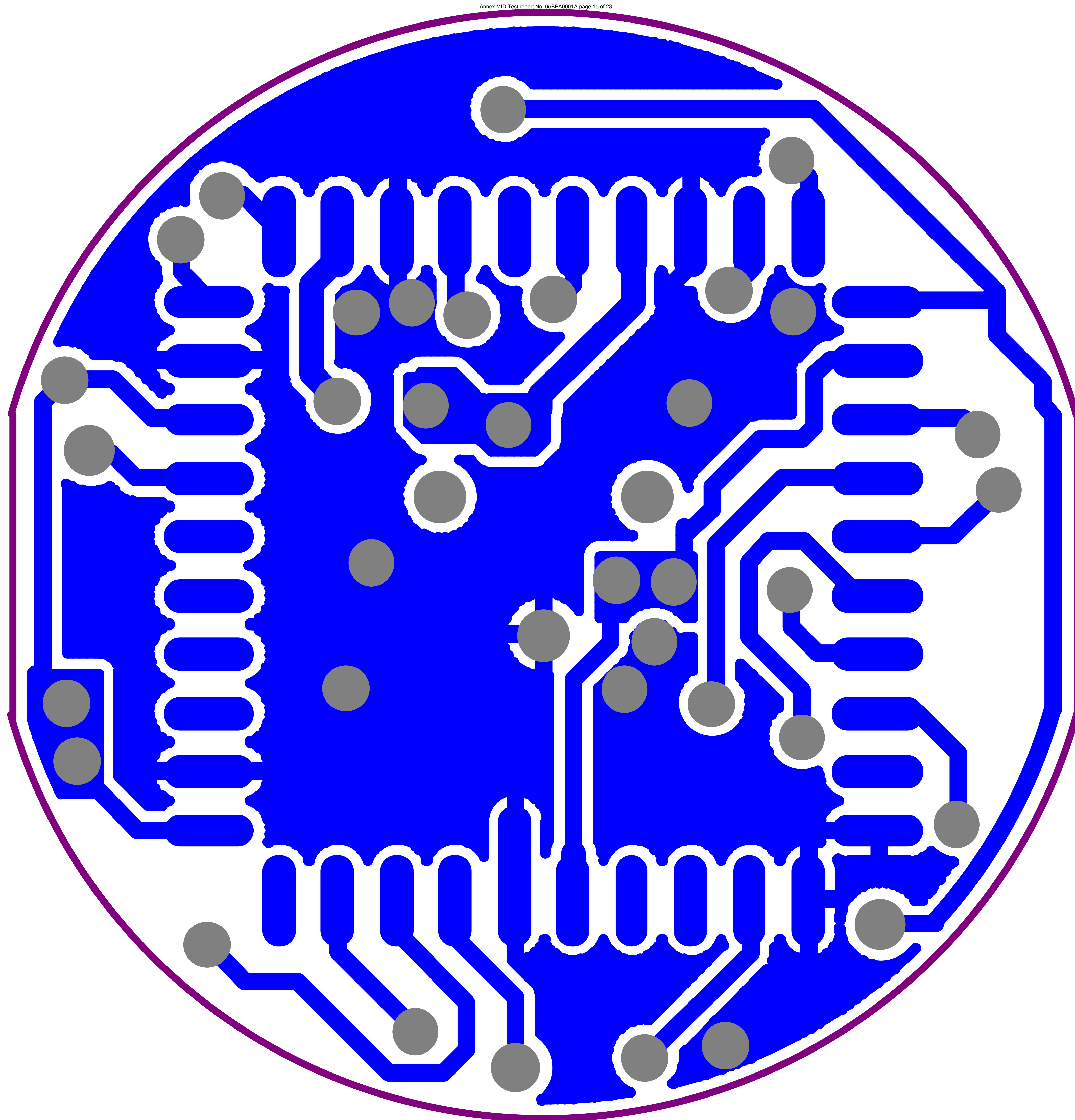


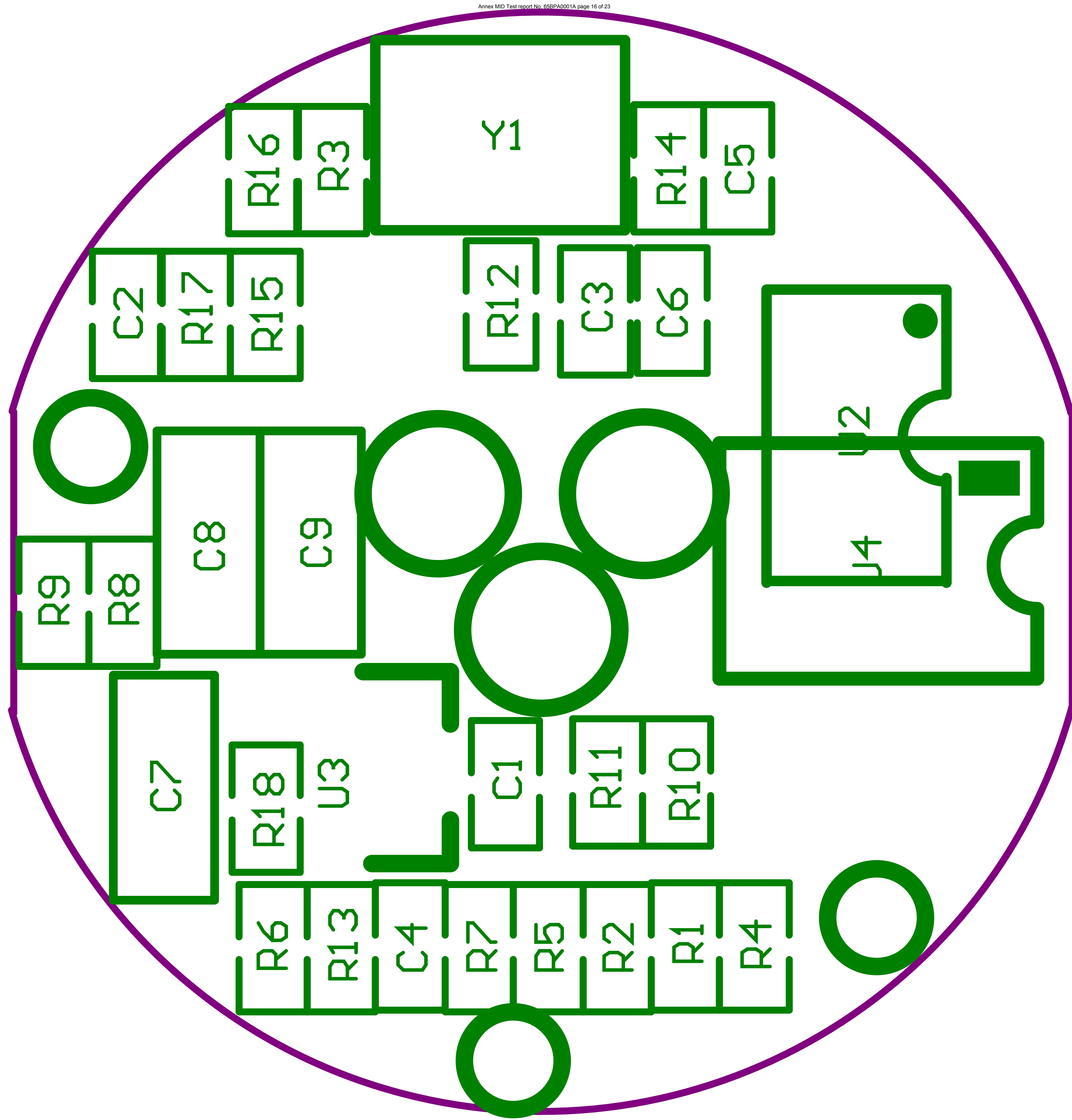


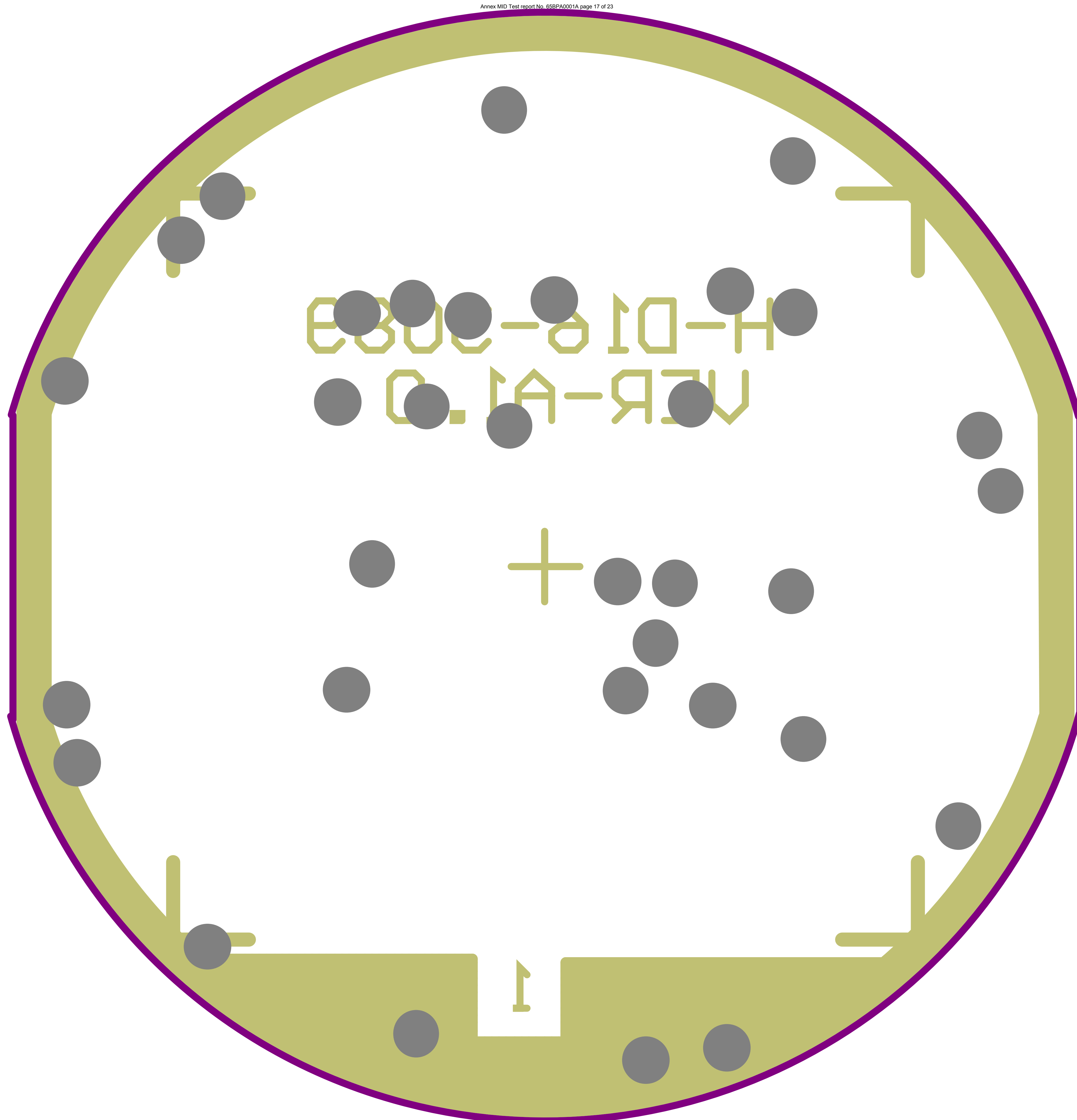


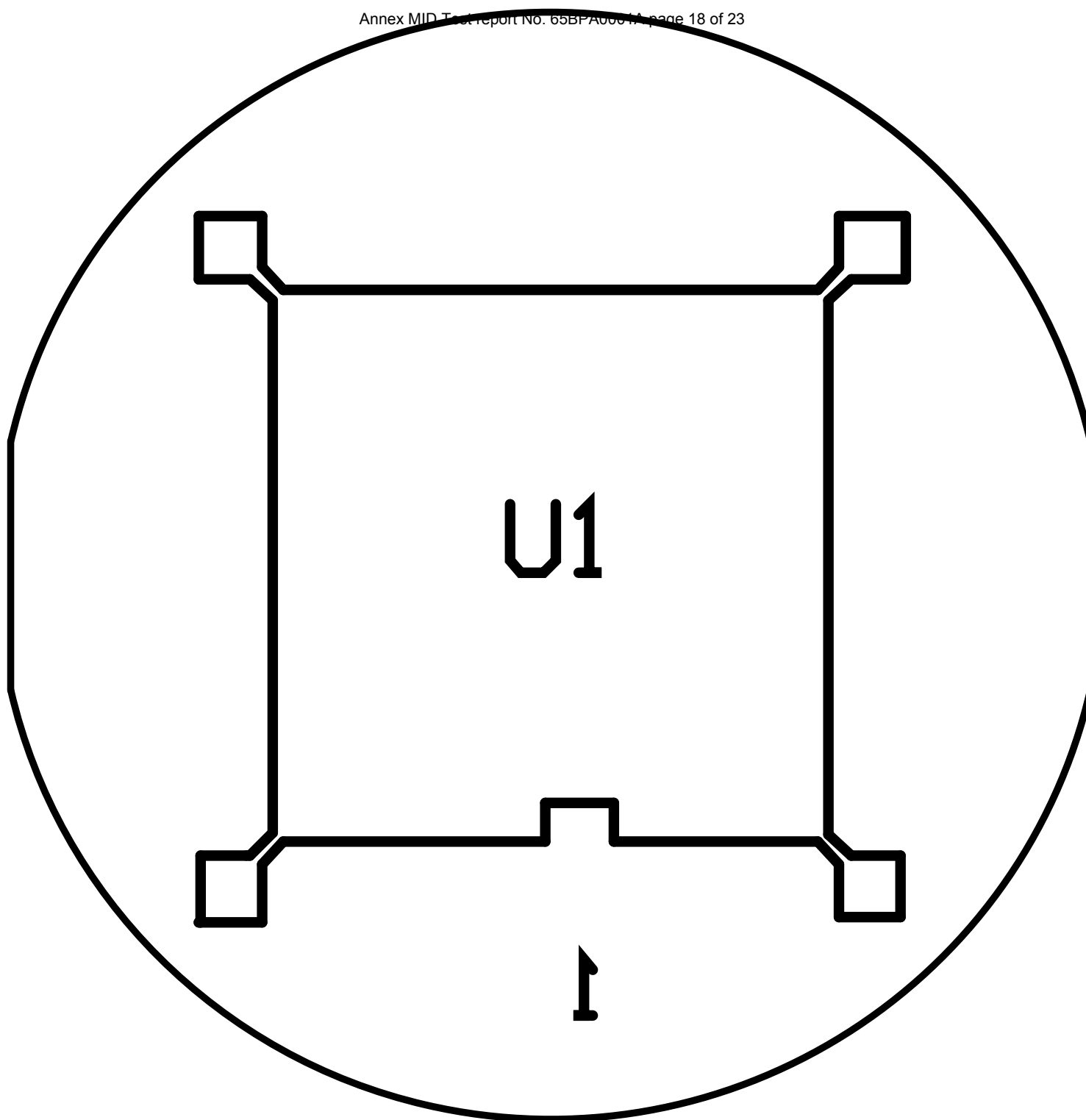


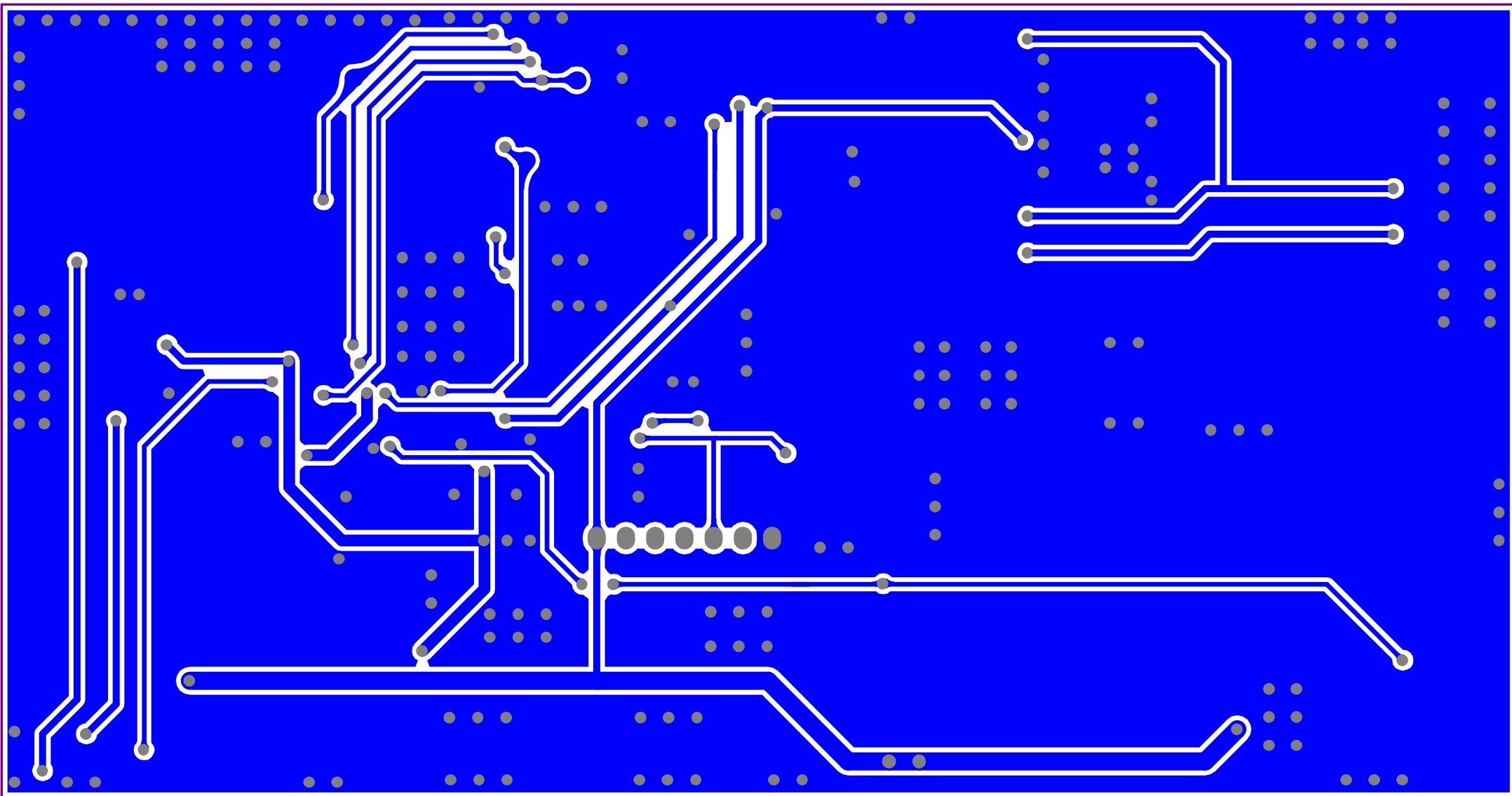


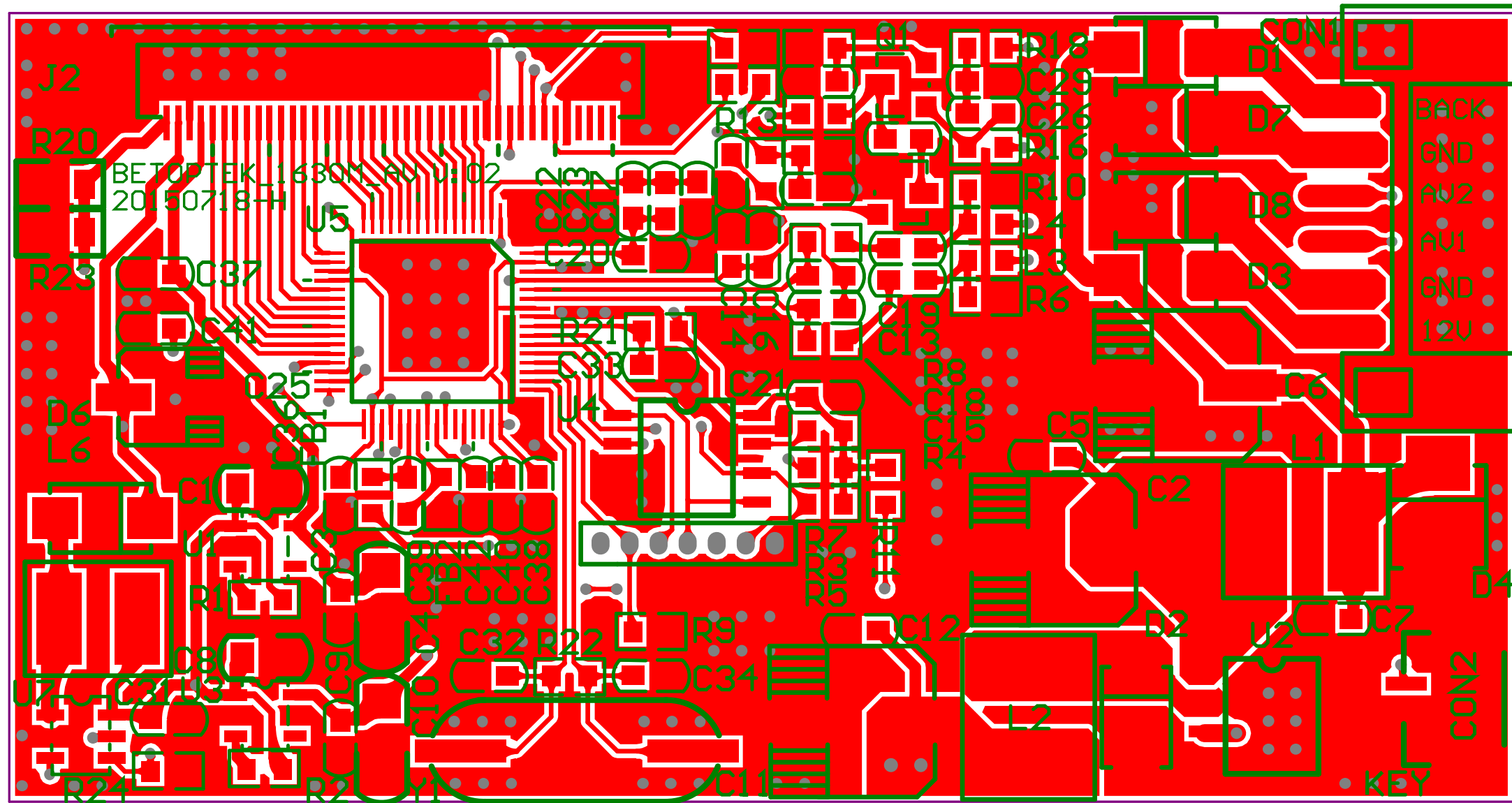


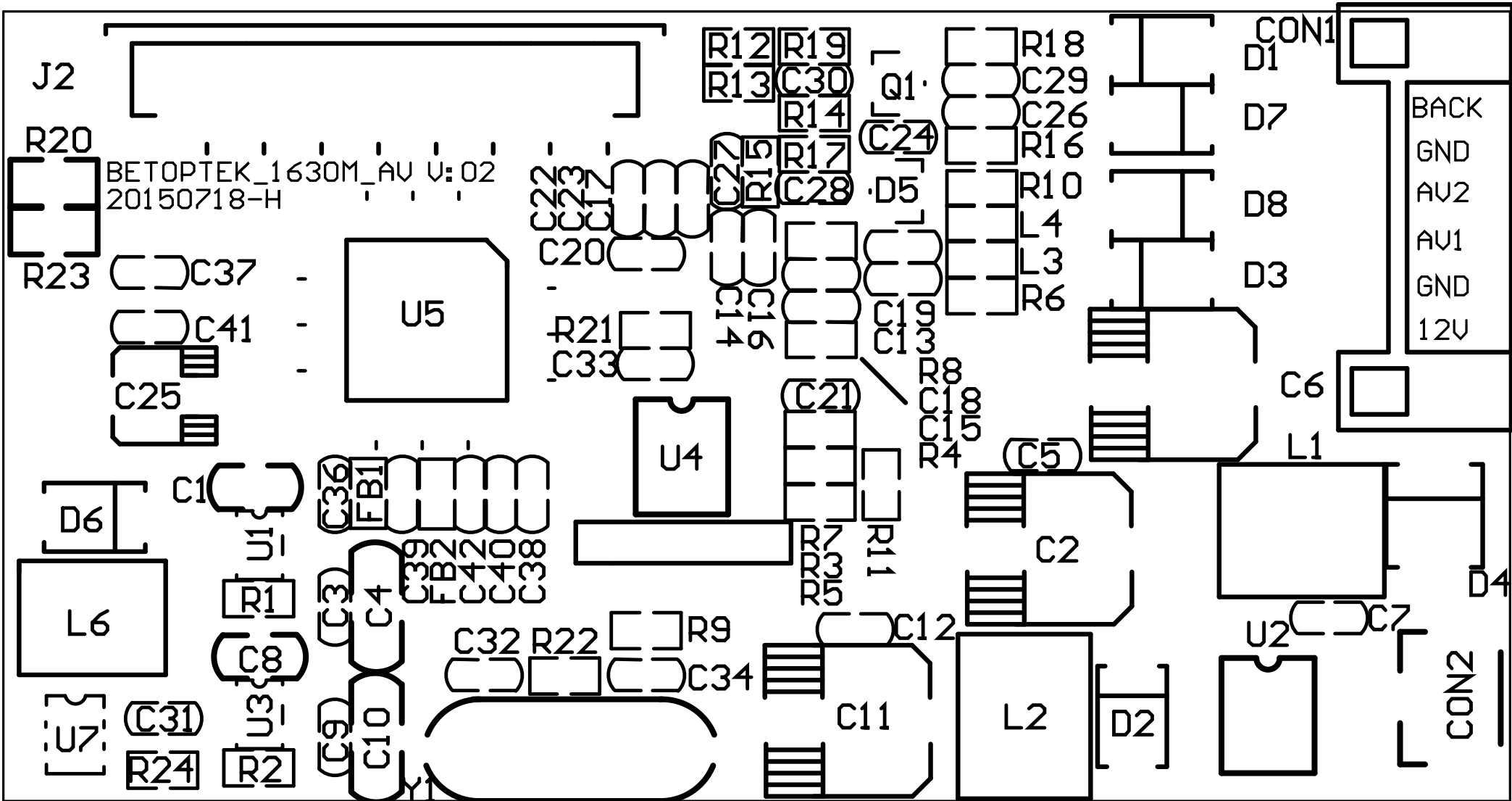












Creation Date: 2016/5/14				
Print Date: 42534				
Name	Footing	Specification	Position	Quantity
Patch ceramic capacitor	C0805	10UF/16V	C1, C8	2
Patch ceramic capacitor	C6*5	47UF/35V	C2, C6	2
Patch ceramic capacitor	C0603	0.1UF/50V	C3, C5, C7, C9, C12, C14, C17, C20, C21, C24, C25, C26, C27, C28, C29, C36, C37, C38, C39, C40, C41, C42	21
Patch ceramic capacitor	C1206	22UF/6.3V	C4, C10	2
Patch ceramic capacitor	C6*5	220UF/10V	C11	1
Patch ceramic capacitor	C0603	1UF/50V	C13, C19, C33	3
Patch ceramic capacitor	C0603	47PF/50V	C15, C18	2
Patch ceramic capacitor	C0603	2.2UF/50V	C16, C23	2
Patch Aluminium Electrolytic Capacitor	C4*5	10UF/25V	C22	1
Patch ceramic capacitors	C0603	27PF/50V	C32, C34	2
Patch element	CON2P1.25	2PIN1.25mm	CON2	1
Patch diode	DIODE_SMA	SS14	D2, D3, D7	3
Chip Bead	R0603	FB300R	FB1, FB2	2
Chip Nest	40PIN_0.5MM	40PIN0.5	J2	1
Surface mount inductors	CD54	100UH	L1	1
Patch inductors	CD54	15UH	L2	1
Patch inductors	R0603	1.5UH	L3, L4	2
Patch inductors	CD43	22UH	L5	1
Patch triode	SOT-23	BCW68	Q1, Q2	2
Patch triode	SOT-23	S8050	Q3, Q4, Q5, Q8	4
Patch triode	SOT-23	MMBT3904	Q6, Q7	2
Patch resistance	R0603	4.7K	R1, R2, R3, R5, R9	5
Patch resistance	R0603	56R	R4, R8	2
Patch resistance	R0603	75R	R6, R10, R34, R35	4
Patch resistance	R0603	10K	R7, R12, R16, R21, R23, R24, R30, R39, R40, R41	10
Patch resistance	R0603	1K	R11, R13, R14, R15, R19	5
Patch resistance	R0805	NC	R17	1
Patch resistance	R0805	3.3R	R18	1
Patch resistance	R0603	30K	R20, R33	2
Patch resistance	R0603	1M	R22	1
Patch resistance	R0603	2.4K	R25, R36	2
Patch resistance	R0603	47K	R26, R27	2
Patch resistance	R0603	100K	R28, R29	2
Patch resistance	R0603	NC	R31, R32, R37, R38	4
LDO	SOT-23-5	LN1134_3V3	U1	1
Power IC	SOP_8L	D1509-5.0	U2	1
LDO	SOT-23-5	LN1134_1V8	U3	1
Flash	SOP_8L	GD25Q41B	U4	1
control chip	LQFP64_0.4	BIT1630M	U5	1
backlight IC	SOT-23-6	CL6201	U7	1
SMD crystal	HC49SMD	24.576M	Y1	1
PCBA board		three key buttons		1
Key Board		wide key board (three buttons) with 2PIN terminal plug		1
screen		5inch screen		1
Monitor shell		5 inch shell, three pcs hole, ABS		1
Bracket		Oval bottom base bracket		1
3M sticker		Oval bottom base 3M sticker		1
cable		Monitor cable, 0.5m with yellow & white RCA female connector, Red female power connector		1
cable		2PIN same direction cable, Connect PCBA board and key board		1
Empty PCB board		Yellow glossy PCB board, with 2 pcs screw hole		1
tie-wraps		white tie-wraps, Non-GB, 3mm*60mm		1
Label		QC Passed label		1
Tape		Black Glue, 2mm*1cm		5
Sticker		2mm Green double sticker, 50mm*30mm (Between PCBA bord & Screen)		1
hot melt adhesive		White hot melt adhesive		1
Screw		black PA2mm*5mm, (Fixed Empty board)		2
Screw		black PA2mm*5mm, (base pad)		3
Screw		black PA1.7mm*5mm (Base and link post)		1
Power cable		1m power cable		1
Manual		Normal manual		1

Name	Spcification	Footing	Units	Quantity
chip capacitor	1uF 10V X7R 0402	C1, C2, C3	pcs	3
chip capacitor	0.1uF 16V X7R 0402	C4	pcs	1
chip capacitor	27pF 50V NPO 0402	C5, C6	pcs	2
chip capacitor	22uF 6.3V X7R 0805	C7, C8, C9	pcs	3
Patch resistance	10K $\pm$ 5% 0402	R1, R2, R3, R4, R5, R6, R7, R13	pcs	8
Patch resistance	1R $\pm$ 5% 0402	R8, R9, R18	pcs	3
Patch resistance	1.5K $\pm$ 5% 0402	R10, R11	pcs	2
Patch resistance	30K $\pm$ 5% 0402	R12	pcs	1
Patch resistance	1M $\pm$ 5% 0402	R14	pcs	1
Patch resistance	20R $\pm$ 5% 0402	R15	pcs	1
Patch resistance	75R $\pm$ 5% 0402	R16	pcs	1
Patch resistance	37.4R $\pm$ 1% 0402	R17	pcs	1
Patch IC	PC3089 CLCC40	U1	pcs	1
Patch IC	24C08 TSSOP8	U2	pcs	1
Patch IC	6206-3.3V SOT-23	U3	pcs	1
Chip IC	W25X40 SOP-8	U4	pcs	1
SMD crystal	27MHz SMD3225	Y1	pcs	1
Chip	3089 ceramic seal, Pal or NSTC TV system		pcs	1
Lens mount	outer diameter :12mm*12mm, inside diameter:10mm*10mm, Round outer diameter: 14mm, inside diameter:12mm, High: 8mm		pcs	1
Lens	2G2P, horizontal angle :110 degree		pcs	1
Camera house	white or black or silver, size: 35MM*32MM*25MM		pcs	1
base pad	white or black or silver, size: 25MM*28MM		pcs	1
Post	Size: M6*24MM			
ScREW	with package		pcs	1
snap ring	Silver U-shaped wire snap ring		pcs	1
waterproof sealant	white waterproof sealant		pcs	1
Silica gel	black Silica gel			
Hot Melt adhesive	White Hot Melt adhesive		pcs	1
cable	1m black camera cable with 4pin BMW plug		pcs	1
cable	6m video cable		pcs	1
cable	1.5m cable with PCB panel		pcs	1
plastics bag	Silver hex nut, 60mm*90mm		pcs	1
Label	QC Passed label		pcs	1
Label on color box			pcs	1
Foam bag	White Foam bag , 10.5cm*15cm		pcs	1
Manul	Normal manual		pcs	1