



THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING APPROVAL EXTENDED OF A TYPE OF ELECTRONIC SUB-
ASSEMBLY WITH REGARD TO REGULATION NO. 10.06



Approval No: E11*10R06/02*11872*01

1. Make (trade name of manufacturer): MOVON CORPORATION
2. Type and general commercial description(s): MDSM-22 (Driver Safety Monitoring System) / MDSM-22, MDSM-22S, MDSM-22P
3. Means of identification of type, if marked on the component: MDSM-22, MDSM-22S, MDSM-22P
 - 3.1. Location of that marking: Bottom side of product
4. Category of vehicle: Not applicable
5. Name and address of manufacturer:

Movon Corporation
Derkoo Bldg., 7
Seolleung-ro 94-gil
Gangnam-gu
Seoul
Korea
6. In the case of components and separate technical units, location and method of affixing of the approval mark: Label on the bottom side of product

7. Address(es) of assembly plant(s):

Qingdao Movon Electronics Co., Ltd.
No.70 Building-B
Song Hua Jlang Road
Qingdao Economic & Technical Development
Shan-Dong
China
8. Additional information (where applicable): See Appendix below
9. Technical Service responsible for carrying out the tests: Vehicle Certification Agency
10. Date of test report: As before(17 OCTOBER 2022)
11. No. of test report: As before(KSA578361 (11872))
12. Remarks (if any): See Appendix below
13. Place: BRISTOL
14. Date: 11 MARCH 2024
15. Signature:



C McCABE
Chief Technical and Statutory Operations Officer

16. The index to the information package lodged with the Approval Authority, which may be obtained on request, is attached.
17. Reasons for extension:
- 1) Addition of variant models
 - 2) Update of manufacturer's address and supplement level

Appendix

to type approval communication form No. E11*10R06/02*11872*01
concerning the type approval of an electrical/electronic sub-assembly under UN Regulation No. 10.06

1. Additional information:
 - 1.1. Electrical system rated voltage: DC 10V ~ 36 V. neg ground
 - 1.2. This ESA can be used on any vehicle type with the following restrictions: 12V and 24V negative earth vehicles only
 - 1.2.1. Installation conditions, if any:

See the manufacturer's documentation, Page 3
 - 1.3. This ESA can be used only 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):

Not applicable
 - 1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: Not applicable
2. Remarks: None



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APPROVAL NUMBER: E11*10R06/02*11872*01

INFORMATION PACKAGE CONTENTS

INDEX REVISION NUMBER: 01

Conformity of Production (COP) Declaration COP Confirmed

Assessment Method COP Audit

Date of Initial Clearance January 2017

Date of Last Clearance July 2023

Total number of sheets: 15 (Fifteen)

Reasons for Revision: See manufacturer's documentation

Revision Date
&
Office Stamp





Information document no. 10R-0611872-01

for type-approval of an electrical/electronic sub-assembly with respect to electromagnetic compatibility

Page: 1

ECE R10.06

ESA Type : MDSM-22

Reason for extension :

- 1) Addition of variant models
- 2) Update of manufacturer's address

1. Make (trade name of manufacturer) : MOVON CORPORATION
2. Type : MDSM-22 (Driver Safety Monitoring System)
3. Means of identification of type, if marked on the component : MDSM-22, **MDSM-22S, MDSM-22P #**
- 3.1. Location of that marking : Bottom side of product
4. Name and address of manufacturer : Movon Corporation
Derkoo # Bldg., 7, Seolleung-ro 94-gil, Gangnam-gu, Seoul, Korea
- Name and address of authorized representative, if any : Not Applicable
5. In the case of components, location and method of affixing of the approval mark : Label on the bottom side of product
6. Address (es) of assembly plant(s) : Qingdao Movon Electronics Co., Ltd.
No.70 Building-B, Song Hua Jlang Road, Qingdao Economic & Technical Development, Shan-Dong, China
7. This ESA shall be approved as a component
8. Any restriction of use and conditions for fitting : Manufacturer's instructions to be followed, 12V and 24V negative earth vehicles only
9. Electrical system rated voltage : DC 10V ~ DC 36V , negative ground
10. Charger : Not Applicable

#Modification





Information document no. 10R-0611872-01
for type-approval of an electrical/electronic sub-assembly with
respect to electromagnetic compatibility

Page: 2

ECE R10.06

ESA Type : MDSM-22

- | | | |
|-----|--|------------------|
| 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 Rsce value | : Not Applicable |

List of contents

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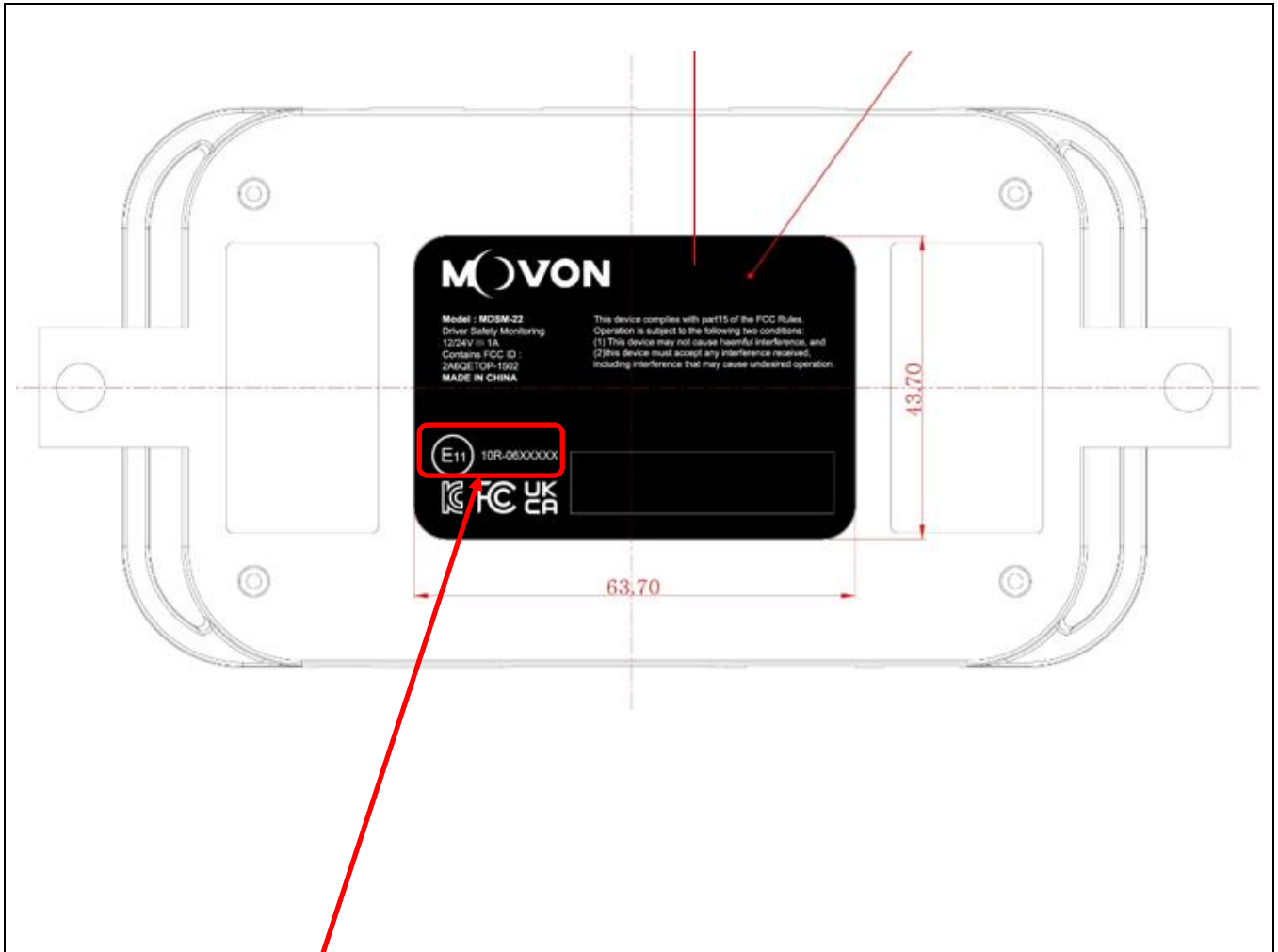
This information document consists of pages 1 to 15 including Appendix and Attachments.

#Modification

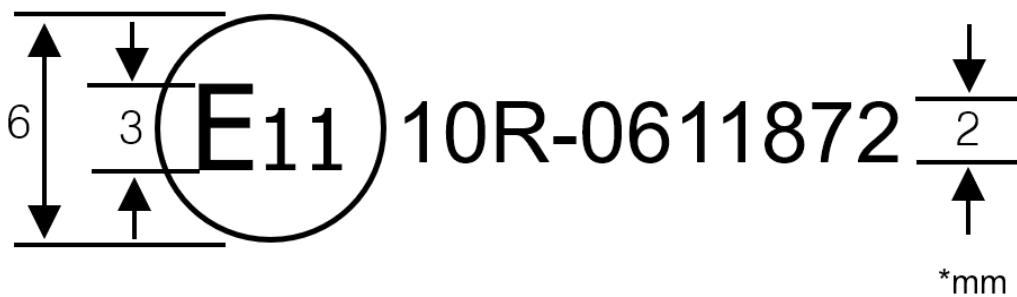


Item		Description	Note
Processor		ARM Cortex A7 Quad-Core	
Internal Memory	NAND Flash	4Gb (512Mbyte) SLC NAND Flash	
	SDRAM	DDR3 4Gb * 2 (512MByte)	
Record		30fps H.264	
Audio	Audio Out	1W, 8Ω, 90dB±3dB, 23Ø x 4.3T	
	Audio In	-42dB MEMS-MIC	
Interface	USB-C	USB 2.0 Device (For Calibration)	
	CAN	CAN 2.0 (Support Version A,B)	
	GPIO	Input 1 Port (IGN/ACC) B+ Level Output 1 Port (For Warning Signal)	
ETC.	GMAC/EMAC	RGMII PHY(10/100/1000Mbps)	
	GPS	NMEA0183 Protocol Support	
	SD/MMC	MicroSD Memory Interface default 32Gbyte class10 / Max 128Gbyte Support	
Operating Temperature		-20~70°C	
Storage Temperature		-40~85°C	
Input Voltage		DC 12V & 24V (DC 10V ~ 36V)	

Label View



Location of E-mark and Type Designation



#Modification

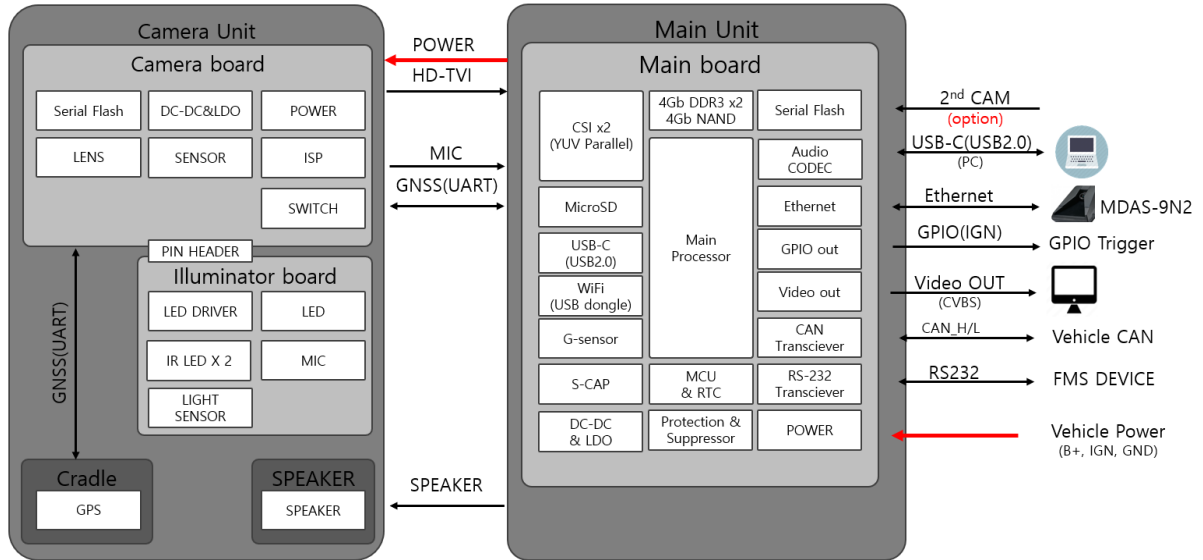
Main Unit



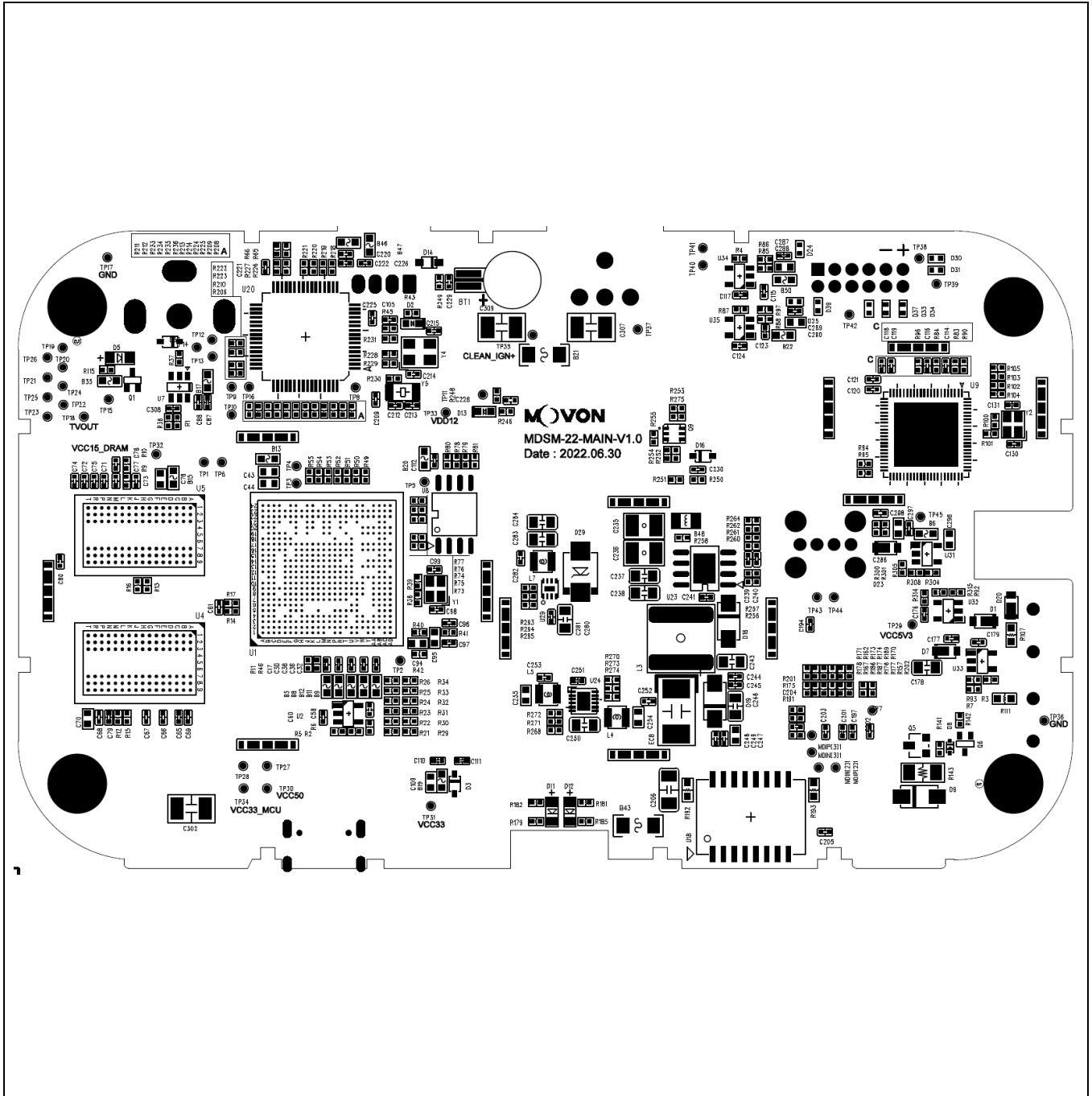
Camera Unit



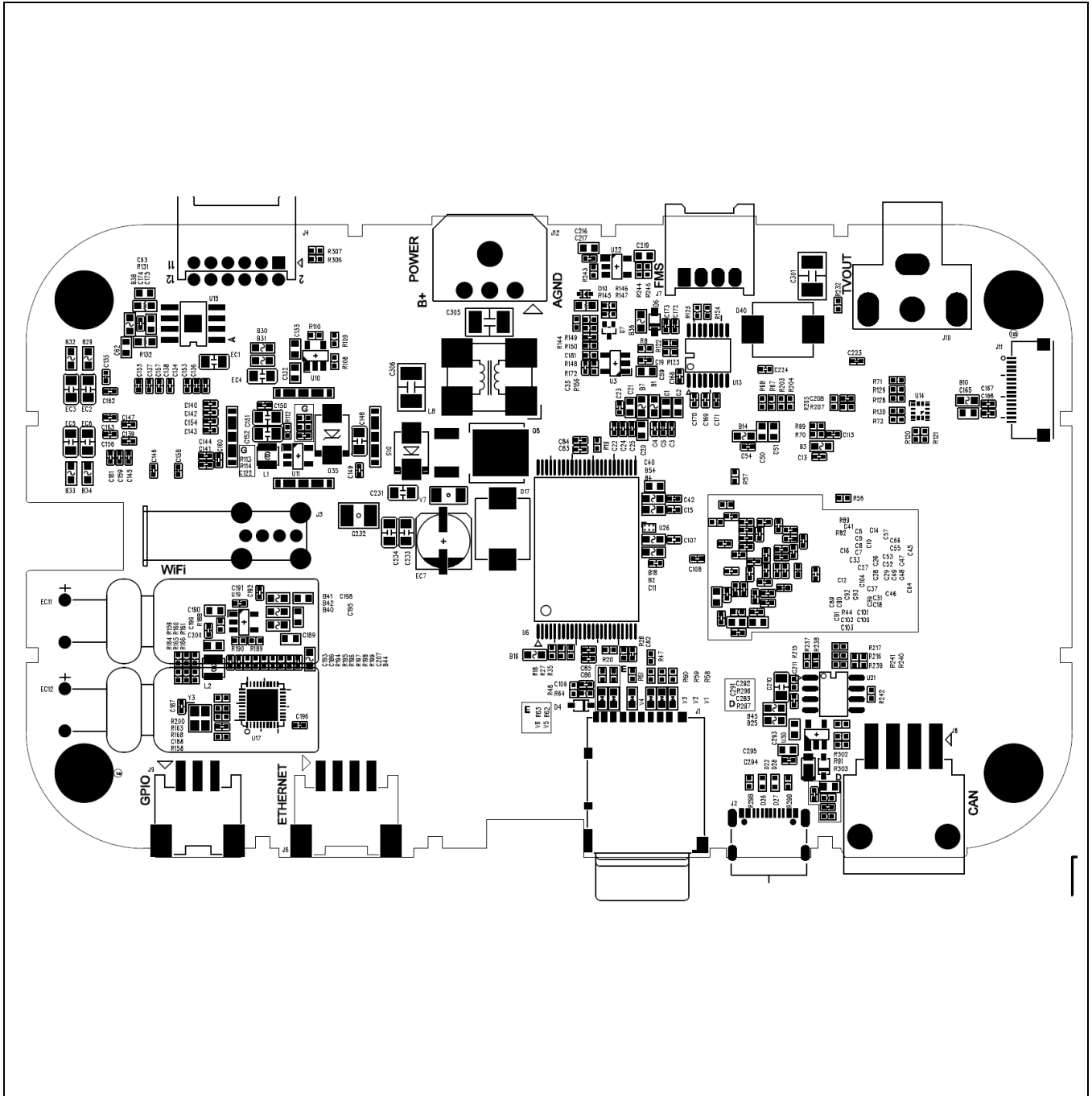
Block Diagram



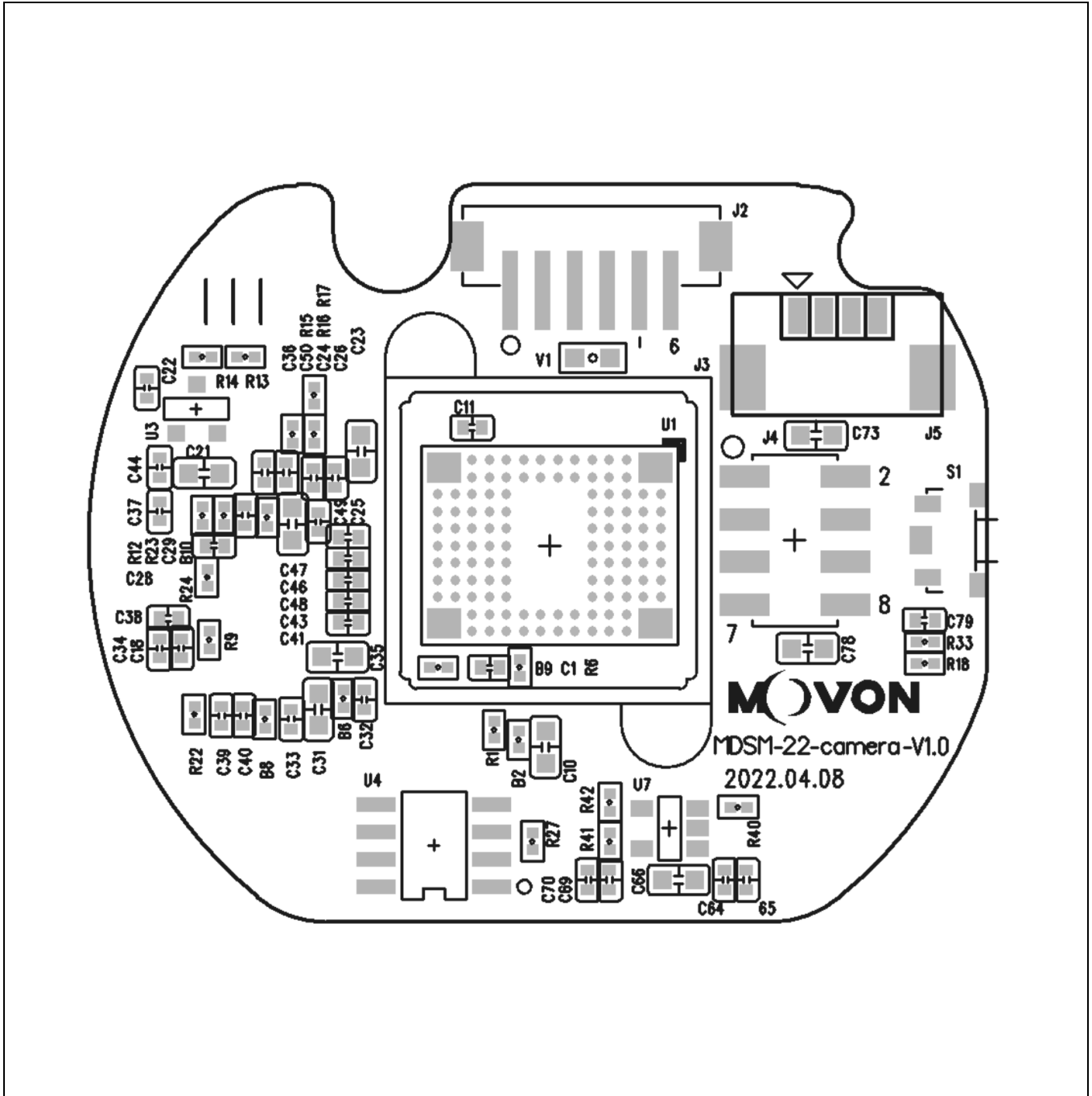
TOP of MAIN PCB



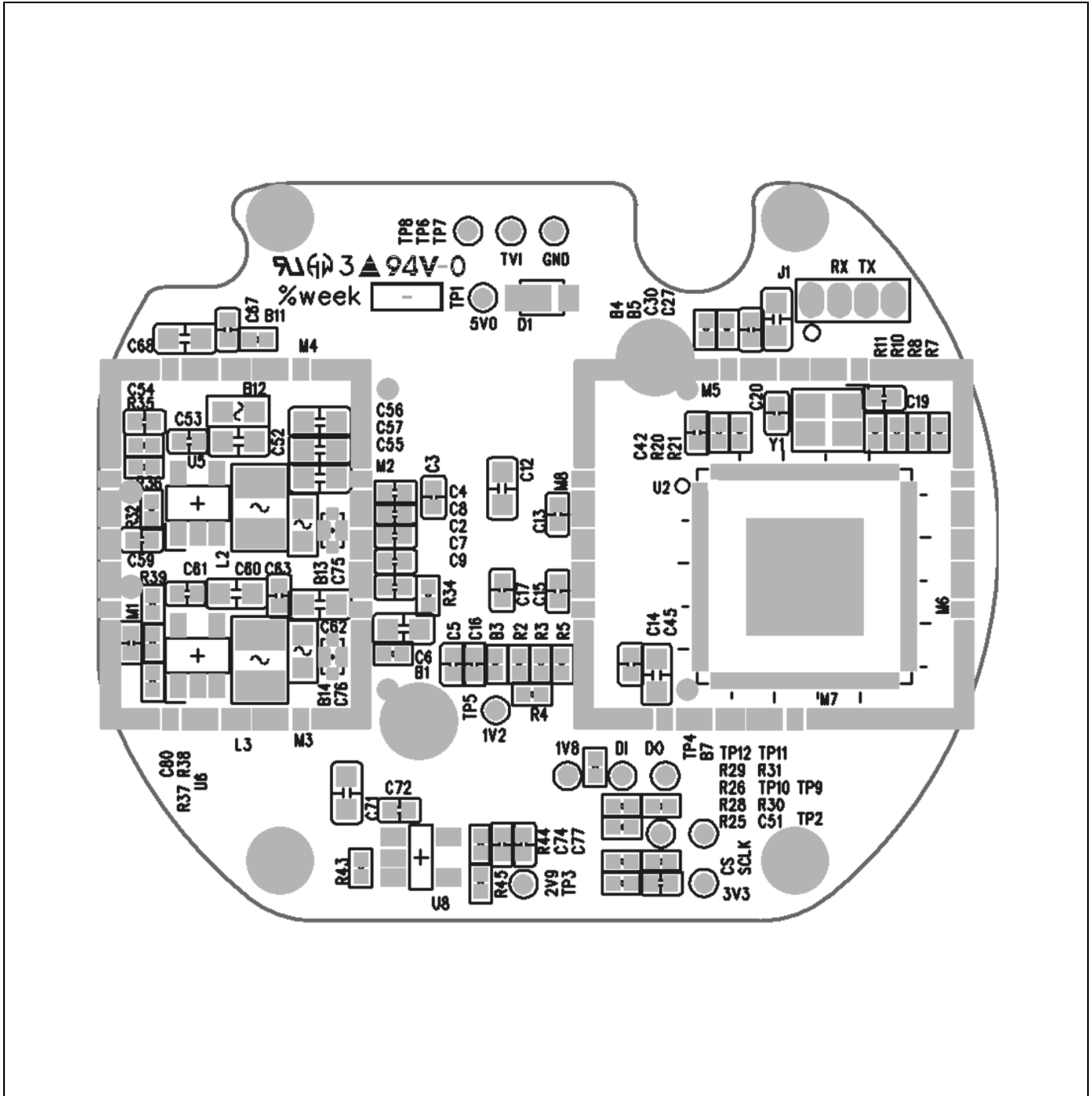
BOTTOM of MAIN PCB



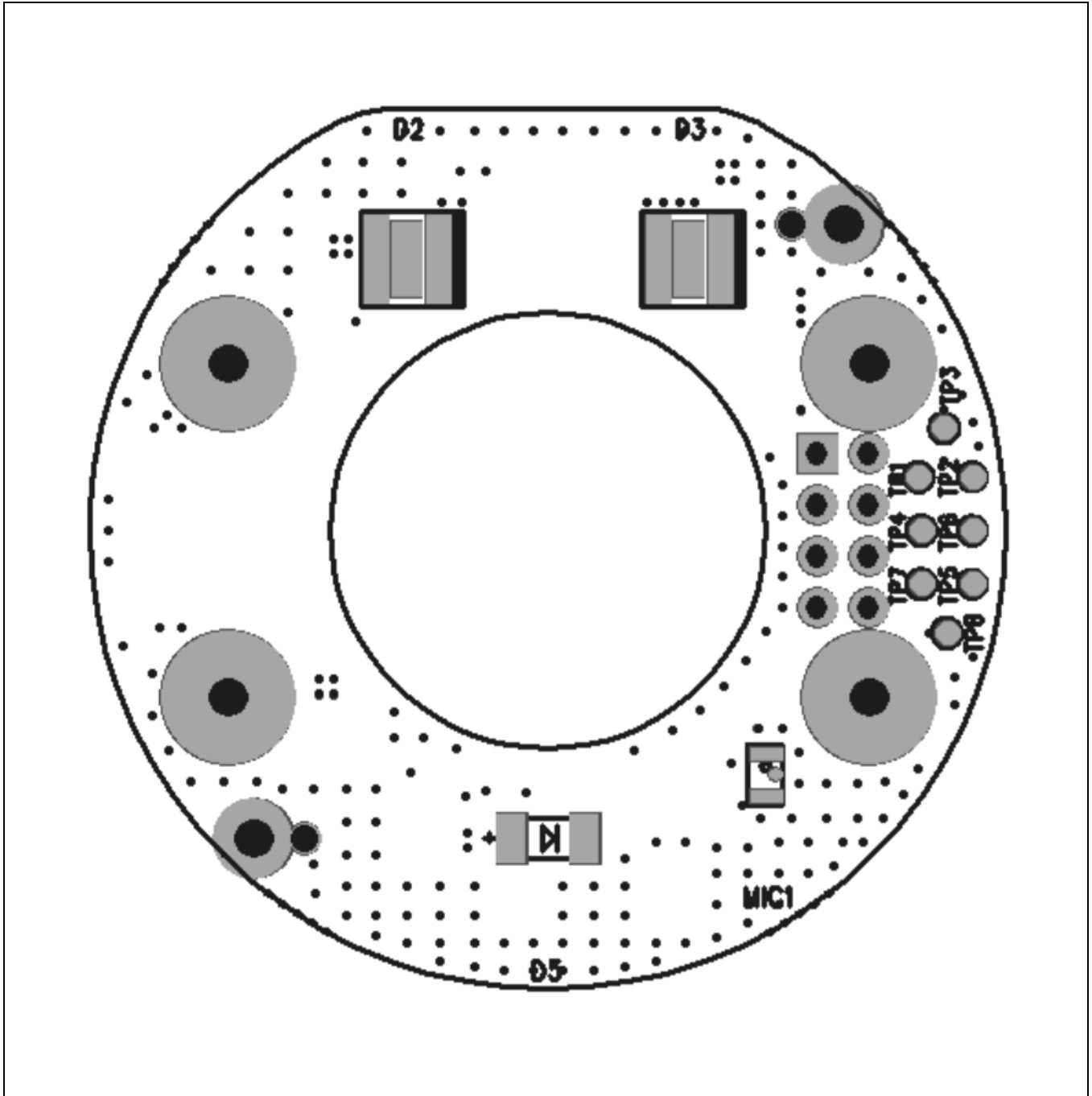
TOP of CAMERA PCB



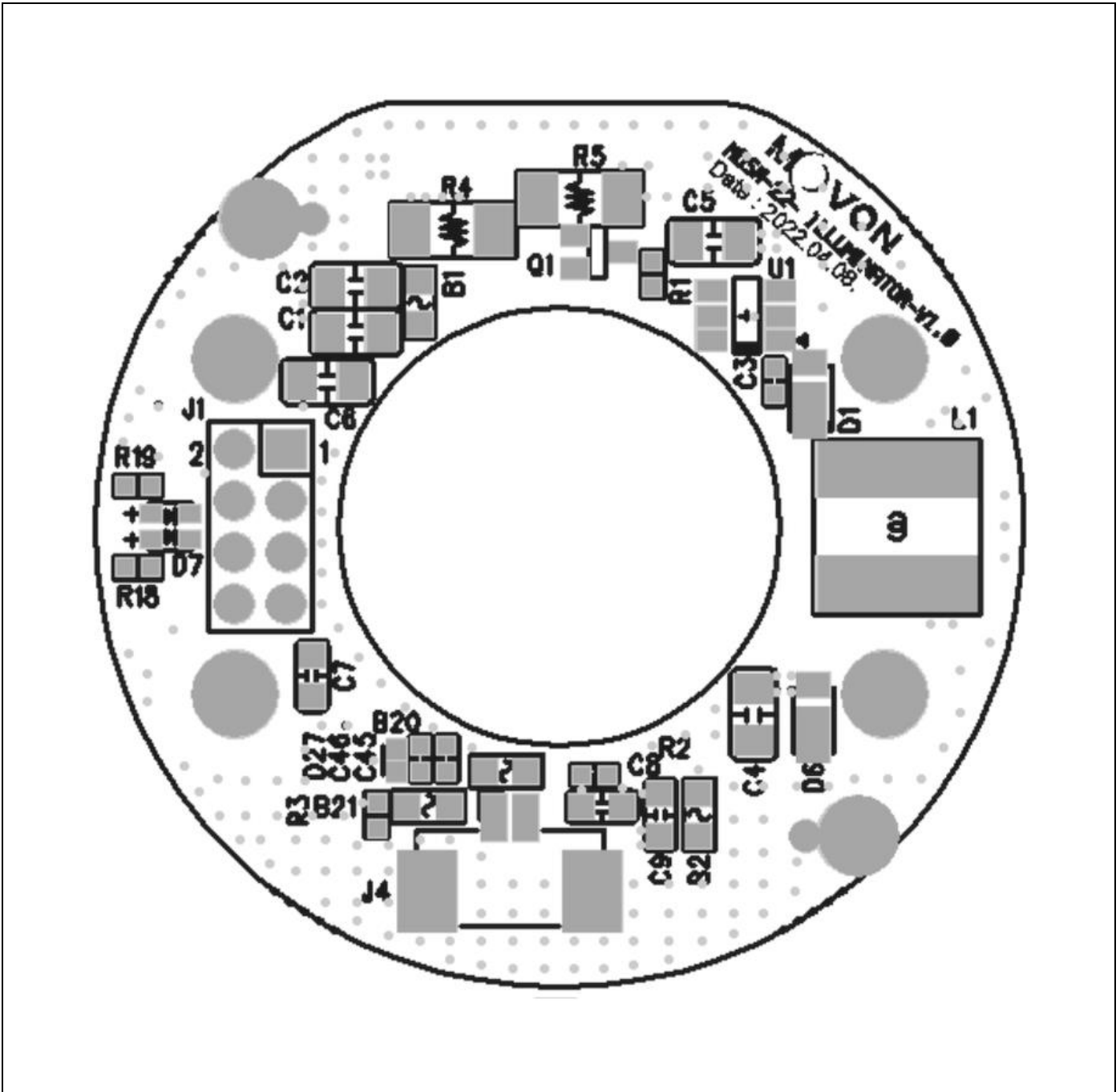
BOTTOM of CAMERA PCB



TOP of ILLUMINATOR PCB

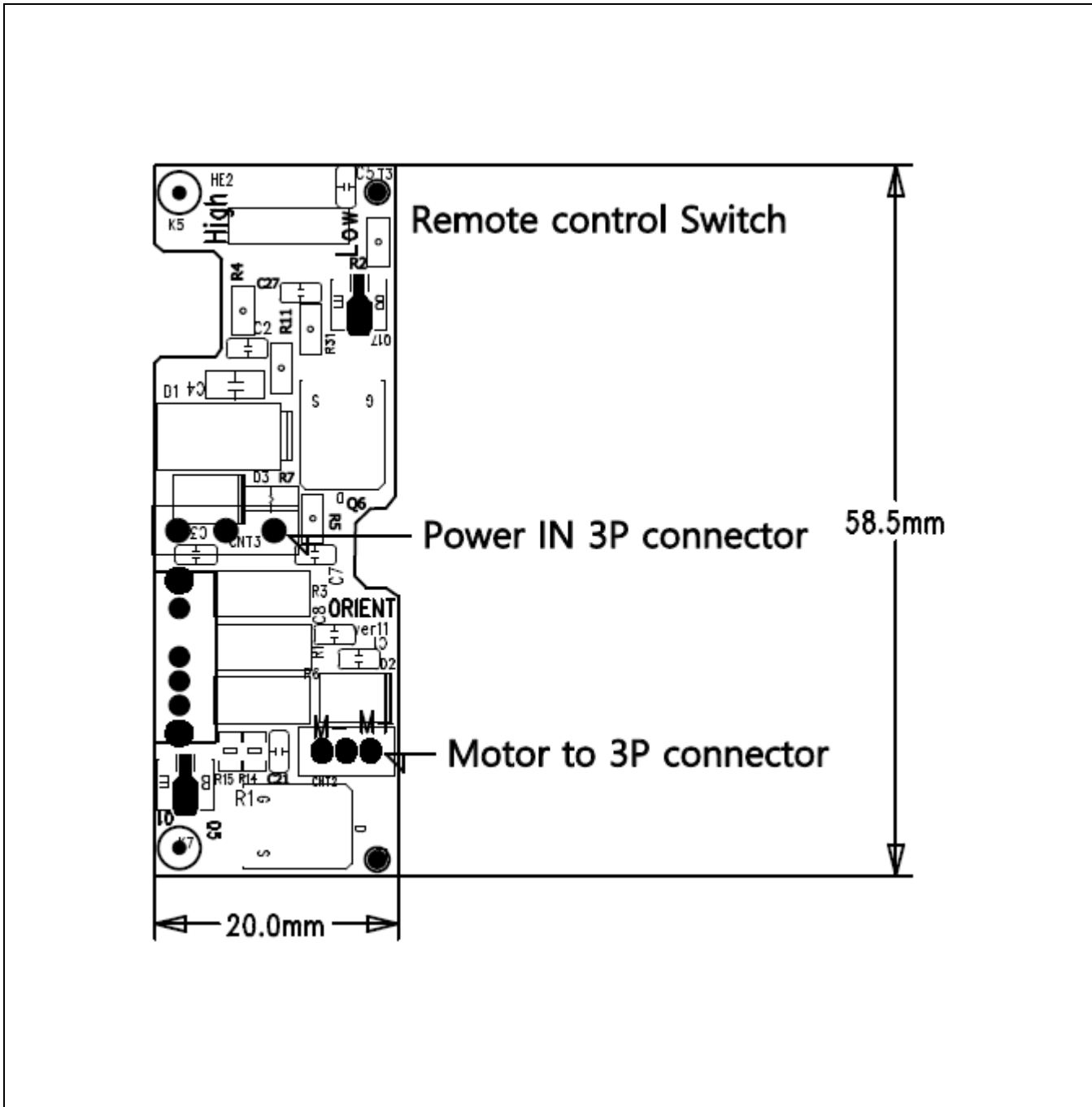


BOTTOM of ILLUMINATOR PCB



#Modification

TOP of Vibrator PCB



Component	Make / Manufacturer	Type / Model	Comment
CPU	Allwinner	A40i	@1008/1152/1200MHz
Memory	Samsung	K4B4G1646E-BCNB	@1066MHz
Image Sensor	SONY	IMX307	
ISP	Techpoint	TP3811	@27MHz
Crystal	Hosonic	E2SB24E00000RE	24Mhz
Crystal	Hosonic	E3FB8E000000E	8Mhz
Crystal	Hosonic	ETST00327000LE	32.768Khz
Crystal	Hosonic	E2SB25E00000UE	25MHz
Crystal	Hosonic	E2SB27E00000RE	27MHz