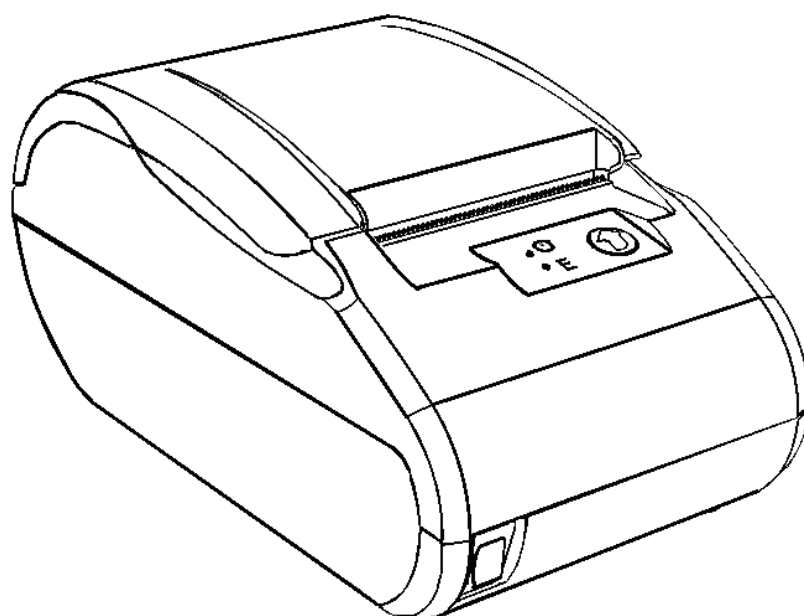


АТОЛ

АТОЛ 11Ф

Контрольно-кассовая
техника



Альбом схем

2016

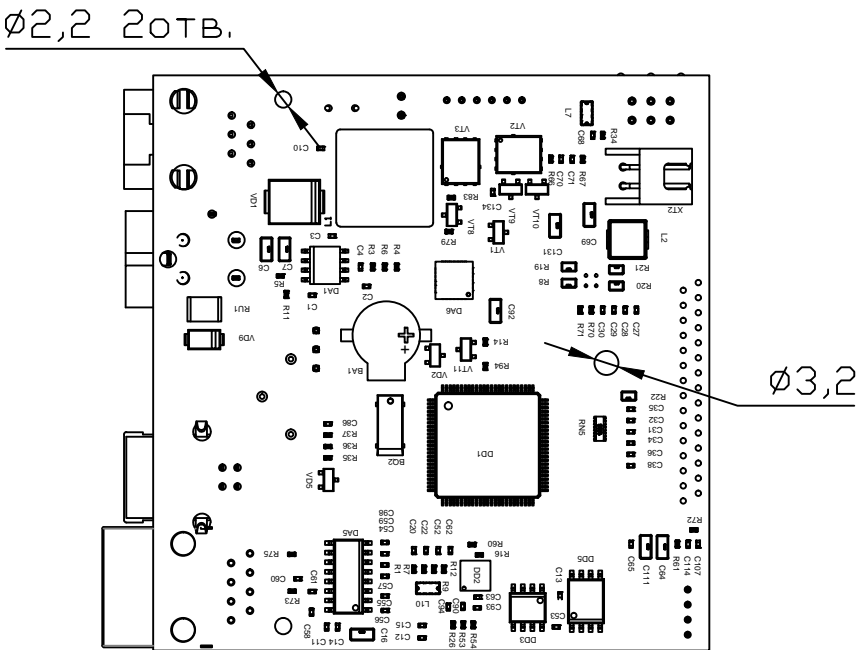
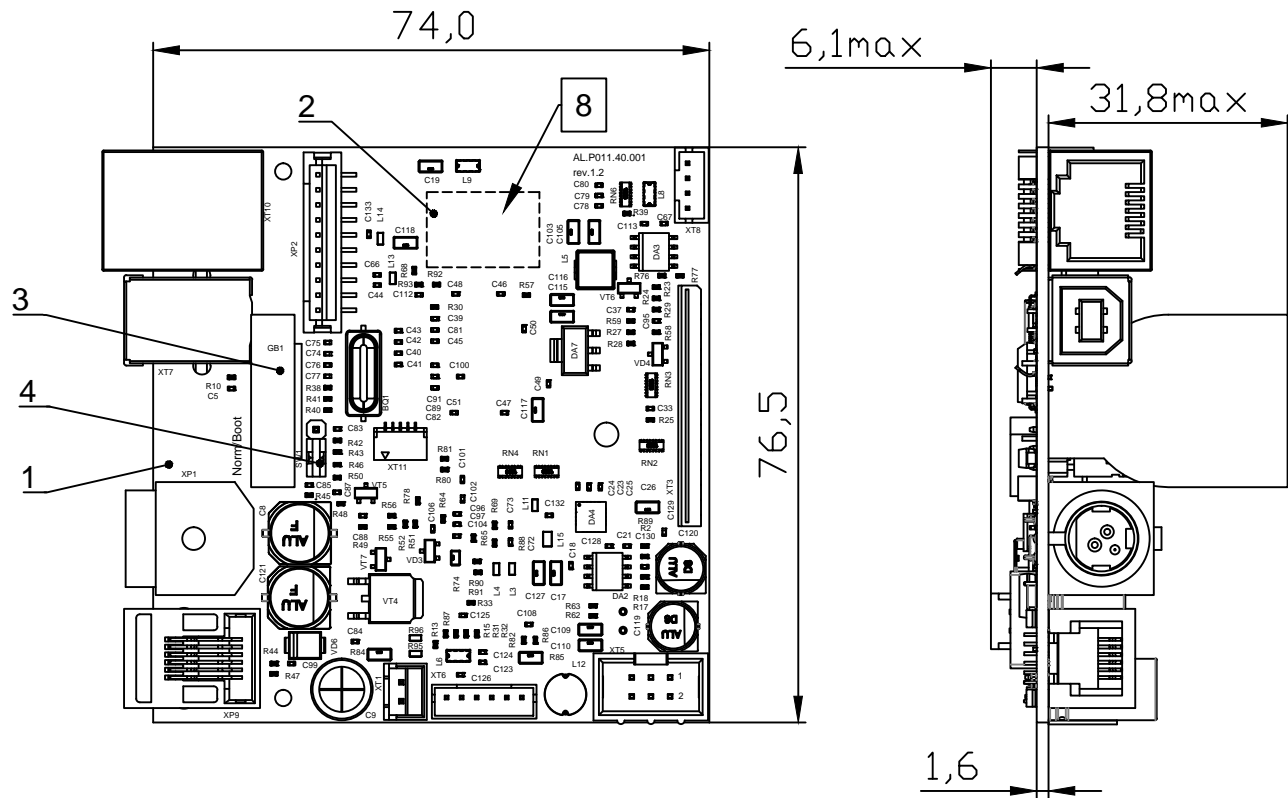
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|---------------|-----------------------|---------------|------------------------|----------------------------------|---|----------------|----------------------|------------------|---|
| Перв. примен. | Формат Size | Зона Zone | Поз. Item | Обозначение Designation | Наименование Name | Кол. Quant. | Примечание Remark | | |
| | | | | Документация (Documentation) | | | | | |
| | A3 | | | AL.P011.40.000AD rev.1.2 | Сборочный чертеж Assembly drawing | | | | |
| | | | | | | | | | |
| | A2 | | | AL.P011.40.000WD rev.1.2 | Схема электрическая принципиальная Electrical scheme | | | | |
| Справ. N° | | | | Детали (Parts) | | | | | |
| | A4 | | 1 | AL.P011.40.001 rev.1.2 | Плата печатная Блока управления PCB Control unit | 1 | | | |
| | | | | | | | | | |
| | | | | Прочие изделия (Other parts) | | | | | |
| | | | 2 | | Этикетка самоклеящаяся 8мм x 16мм Self-adhesive label 8mm x 16mm | 1 | | | |
| | | | 3 | | Батарейка CR2032 Battery CR2032 | 1 | | | |
| | | | 4 | | Джампер MJ-O-6 Jumper MJ-O-6 | 1 | | | |
| | | | | | | | | | |
| | | | | Переменные данные для исполнений | | | | | |
| | | | | | | | | | |
| Погр. и дата | | | | AL.P011.40.000 rev.1.2 | | | | | |
| | | | | | | | | | |
| | | | | Документация (Documentation) | | | | | |
| | A4 | | | AL.P011.40.000BM rev.1.2 | Перечень элементов Bill of materials | | | | |
| Инв. N° дубл. | | | | | | | | | |
| | | | | AL.P011.40.000-01 rev.1.2 | | | | | |
| | | | | | | | | | |
| Взам. инв. N° | | | | Документация (Documentation) | | | | | |
| | A4 | | | AL.P011.40.000-01BM rev.1.2 | Перечень элементов Bill of materials | | | | |
| Погр. и дата | | | | AL.P011.40.000 rev.1.2 | | | | | |
| | Изм. Rev | Лист Sheet | № докум. Document № | Подп. Sign. | Дата Date | Лит. Letter | Масса Mass | Масштаб Scale | |
| Инв. N° подл. | Разраб. Designed | | | | 08.04.16 | A | | 1:1 | |
| | Пров. Checked | | | | | | | | |
| | Т.контр. Tech.ch. | | | | | Лист Sheet | 1 | Листов Sheets | 1 |
| | Н.контр. Inspector | | | | | АТОН | | | |
| | Утв. Approved | | | | | | | | |

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|---------------|--|---------------|--|
| Справ. N° | | Перв. примен. | |
| Инв. N° | | Подп. и дата | |
| Взам. инв. N° | | Инв. N дубл. | |
| Подп. и дата | | Взам. инв. N° | |
| Инв. N° подл. | | Подп. и дата | |

AL.P011.40.000AD rev.1.2



- Размеры для справок.
- Пайку производить с использованием флюса "No-clean" типа R0L0, R0L1, 0RL0.
- Требования к чистоте поверхности платы согласно стандарту IPC-A-610D п.10.4.
- Паяные соединения SMD-компонентов должны соответствовать требованиям стандарта IPC-A-610D п.8.2.1-8.2.14 по 3 классу.
- Паяные соединения выводных компонентов должны соответствовать требованиям стандарта IPC-A-610D п.7.4.5, 7.4.6, 7.5.5 по 2 классу.
- Печатная плата должна соответствовать требованиям стандарта IPC-A-610D п.10.1-10.2.7, 10.2.9, 10.2.3, 10.5 по 3 классу.
- Разъемы и элементы устанавливать вплотную на плату.
- Наклеить этикетку поз.2 с обозначением исполнения электронного модуля в указанное место. Этикетка не должна попадать ни на позиционные обозначения компонентов, выполненных шелкографией, ни на сами компоненты.
- При хранении, транспортировании, до момента установки электронного модуля в изделие, не устанавливать элемент питания поз.3 в отсек GB1.
- Установить джампер поз.4 на разъеме SW1 в положение NORM.

- Dimensions for reference.
- Soldering performed using flux "No-clean" type R0L0, R0L1, 0RL0.
- Requirements to clean the surface of the PCB according to the standard of IPC-A-610D p.10.4.
- Soldered connection SMD-components must comply with the requirements of the standard IPC-A-610D p.8.2.1-8.2.14 in class 3.
- Soldered connection of terminal components must comply with the requirements of the standard IPC-A-610D p.7.4.5, 7.4.6, 7.5.5 on 2 class.
- PCB must comply with the requirements of the standard IPC-A-610D p.10.1-10.2.7, 10.2.9, 10.2.3, 10.5 in class 3.
- Connectors and elements set close to the PCB.
- Stick a label with the designation of item 2 of the electrical module to the specified location. The label should not enter any reference designators of the components made by silk-screen printing or on the components themselves.
- During storage, transportation, up to the moment of installation of the electronic module in a product, do not install the battery pos.3 compartment GB1.
- Set jumper pos.4 on the connector SW1 in position NORM.

| | | | | | | | | |
|--------------------------|---------------|------------------------|----------------|--------------|--------------------------------------|------------------|------------------|--|
| AL.P011.40.000AD rev.1.2 | | | | | Блок управления Main board | | | |
| Изм. Rev. | Лист Sheet | № докум. Document № | Подп. Sign. | Дата Date | Сборочный чертеж Assembly drawing | | | |
| Разраб. Designed | | | | 08.04.16 | | | | |
| Пров. Checked | | | | | | | | |
| Т.контр. Tech.ch. | | | | | АТОН | | | |
| Н.контр. Inspector | | | | | | | | |
| Утв. Approved | | | | | | | | |
| | | | | | Лит. Letter | Масса Mass | Масштаб Scale | |
| | | | | | A | | 1:1 | |
| | | | | | Лист Sheet | Листов Sheets | 1 | |

| Перв. примен. | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | |
|--------------------|--|--|--------------------|----------|----------------------------|------|------------------|--------|--|
| | | | Конденсаторы | | | | | | |
| | | C4 | | 12pF | NPO 50V ±5% SMD0402 | 1 | | | |
| | | C11, C12, C36, C38, C40, C41, C42, C43, C74, C75 | | 22pF | NPO 50V ±5% SMD0402 | 10 | | | |
| | | C2, C5, C20, C22, C27, C28, C29, C30, C31, C32, C34, C37, C52, C59, C60, C61, C62, C70, C71, C79, C80, C83, C84, C88, C90, C91, C93, C94, C98, C100, C123, C124 | | 330pF | NPO 50V ±5% SMD0402 | 32 | | | |
| Справ. № | | C96 | | 6.8nF | X7R 16V ±10% SMD0402 | 1 | | | |
| | | C1, C97, C107, C108, C113, C128, C129 | | 0.01uF | X7R 16V ±10% SMD0402 | 7 | | | |
| | | C3, C10, C13, C14, C15, C18, C21, C23, C24, C25, C33, C35, C39, C44, C45, C46, C47, C48, C49, C50, C51, C53, C54, C55, C57, C58, C63, C65, C67, C68, C72, C73, C76, C77, C78, C81, C82, C85, C86, C87, C89, C95, C99, C101, C106, C125, C126, C132, C133, C134 | | 0.1uF | X7R 25V ±10% SMD0402 | 50 | | | |
| | | C66, C102, C104, C112 | | 1uF | X7R 16V ±10% SMD0402 | 4 | | | |
| Подп. и дата | | C6, C7, C17, C26, C64, C92, C109, C110, C111, C115, C116, C117, C118, C127 | | 10uF | Y5V 25V ±20% SMD1206 | 14 | | | |
| | | C16, C19, C69, C103, C105, C131 | | 22uF | X5R 6.3V ±10% SMD1206 | 6 | | | |
| Инв. № дубл. | | C119, C120 | VE-221M1CTR-0607DW | 220uF | 16V | 2 | | | |
| | | C8, C121 | VE-221M1VTR-0810DW | 220uF | 35V | 2 | | | |
| | | C9 | | 470uF | 16V, lowESR D=8, H=15, DIP | 1 | | | |
| Взам. инв. № | | C56 | | N/A | X7R 16V ±10% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | |
| | | C114, C130 | | N/A | X7R 25V ±10% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | |
| | | Резисторы и резисторные сборки | | | | | | | |
| Подп. и дата | | R10, R68, R78 | | 0 | ±5% SMD0402 | 3 | | | |
| | | R85 | RL1206FR-070R22L | 0.22 | ±1% SMD1206 | 1 | | | |
| | | AL.P011.40.000 rev.1.2 | | | | | | | |
| Инв. № подл. | | Изм. | Лист | № докум. | Подп. | Дата | | | |
| | | Разраб. | | | | | | | |
| | | Пров. | | | | | | | |
| | | | | | | | | | |
| | | Н. контр. | | | | | | | |
| | | Умб. | | | | | | | |
| Блок управления | | | | | | Лит. | Лист | Листов | |
| Перечень элементов | | | | | | | 1 | 3 | |

| | | Поз. обозначение | | Наименование | | Значение | | Тип/Размер | | Кол. | | Примечание | | | |
|--|------|---|--|---------------------|------|------------------------|--|----------------|--|----------------|--|------------------------------|--|------|--|
| | | R8, R20, R22 | | R0805 | | 1 | | ±5% SMD0805 | | 3 | | | | | |
| | | R19, R21 | | R0805 | | 2 | | ±5% SMD0805 | | 2 | | | | | |
| | | R74 | | R0805 | | 4.7 | | ±5% SMD0805 | | 1 | | | | | |
| | | R35, R36 | | R0402 | | 33 | | ±5% SMD0402 | | 2 | | | | | |
| | | R82, R86 | | R0402 | | 100 | | ±5% SMD0402 | | 2 | | | | | |
| | | R23 | | R0402 | | 220 | | ±5% SMD0402 | | 1 | | | | | |
| | | R1, R7, R9, R12, R26, R27, R28, R31, R53, R54, R66, R67, R87 | | R0402 | | 330 | | ±5% SMD0402 | | 13 | | | | | |
| | | R84 | | R1206 | | 430 | | ±5% SMD1206 | | 1 | | | | | |
| | | R37 | | R0402 | | 1.5K | | ±5% SMD0402 | | 1 | | | | | |
| | | R13, R14, R15, R16, R29, R30, R38, R39, R40, R42, R44, R45, R46, R49, R57, R60, R62, R63, R70, R71, R72, R88, R89, R90, R94 | | R0402 | | 3.3K | | ±5% SMD0402 | | 25 | | | | | |
| | | R6, R52, R55, R64, R65, R77, R81 | | R0402 | | 4.75K | | ±1% SMD0402 | | 7 | | | | | |
| | | R33, R58, R59, R69, R91 | | R0402 | | 10K | | ±5% SMD0402 | | 5 | | | | | |
| | | Подп. и дата | | R17, R25, R51, R56 | | R0402 | | 10.2K | | ±1% SMD0402 | | 4 | | | |
| | | | | R76 | | R0402 | | 16.9K | | ±1% SMD0402 | | 1 | | | |
| R18 | | | | R0402 | | 26.1K | | ±1% SMD0402 | | 1 | | | | | |
| R2, R41, R43, R47, R48, R50, R61, R73, R75, R92 | | | | R0402 | | 33K | | ±5% SMD0402 | | 10 | | | | | |
| Инв. № дудл. | | R3, R4 | | R0402 | | 49.9K | | ±1% SMD0402 | | 2 | | | | | |
| | | R11, R24, R32, R79, R80, R83 | | R0402 | | 51.1K | | ±1% SMD0402 | | 6 | | | | | |
| | | R5 | | R0402 | | 470K | | ±1% SMD0402 | | 1 | | | | | |
| Взам. инв. № | | R34, R93 | | R0402 | | N/A | | ±5% SMD0402 | | 2 | | НЕ УСТАНОВЛИВАТЬ | | | |
| | | R95, R96 | | R0603 | | 0 | | ±5% SMD0603 | | 2 | | R95, R96 НЕ УСТАНОВЛИВАТЬ | | | |
| | | RN6 | | CAY16-331J4-330±5% | | 330 | | ±5% SMD1206 | | 1 | | | | | |
| | | RN1, RN2, RN3, RN4, RN5 | | CAY16-332J4-3.3K±5% | | 3.3K | | ±5% SMD1206 | | 5 | | | | | |
| Подп. и дата | | | | Индуктивности | | | | | | | | | | | |
| | | L15 | | BLM21PG221SN1D | | | | L_0805 | | 1 | | | | | |
| | | L3, L4, L11, L13, L14 | | BLM18EG221SN1 | | | | L_0603 | | 5 | | | | | |
| | | L6, L7, L8, L9, L10 | | BLA31BD601SN4D | | | | 1206-L8 | | 5 | | | | | |
| Инв. № подл. | | L1 | | IHL P5050CEER6R8M01 | | 6.8uH | | | | 1 | | | | | |
| | | | | | | AL.P011.40.000 rev.1.2 | | | | | | | | Лист | |
| | | | | | | | | | | | | | | 2 | |
| Изм. | Лист | № докум. | | Подп. | Дата | | | | | | | | | | |

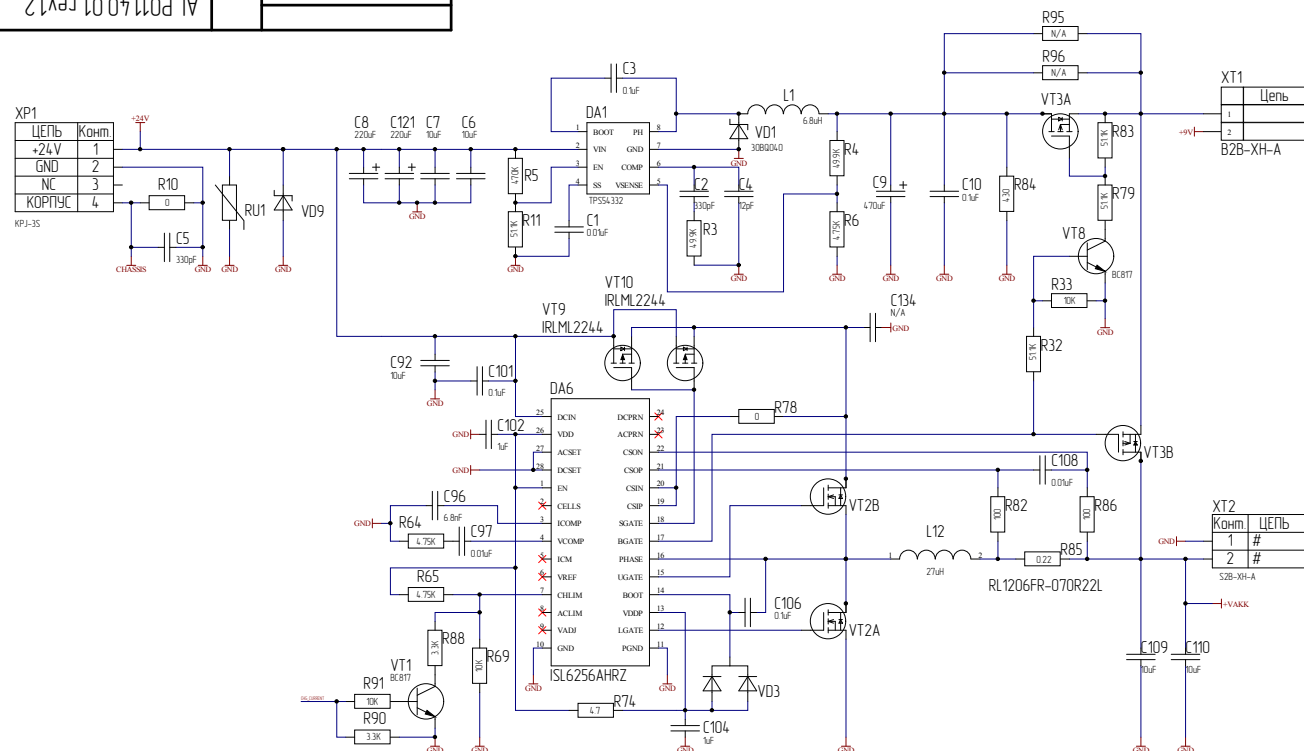
| | | Поз. обозначение | | Наименование | | Значение | | Тип/Размер | | Кол. | | Примечание | | | |
|--------------|----------|-------------------------------|-------------------------|---------------------|------------------|------------------------|--------------------|--------------------|---|------|------------------|------------|--|--|--|
| | | L2, L5 | | IHLP-2020CZ-11 | | 5.6uH | | | | 2 | | | | | |
| | | L12 | | SDR0604-270YL | | 27uH | | 20% SDR0604 | | 1 | | | | | |
| | | | | Диоды и транзисторы | | | | | | | | | | | |
| | | VD1 | | 30BQ040 | | | | DO-214AB (SMC) | | 1 | | | | | |
| | | VD2, VD3 | | BAT54CFILM | | | | SOT23 | | 2 | | | | | |
| | | VD4, VD5 | | PESD5V2S2UT | | | | SOT23 | | 2 | | | | | |
| | | VD6 | | SK14 | | | | DO-214AA (SMB) | | 1 | | | | | |
| | | VD9 | | SMAJ28A | | 28V | | SMA | | 1 | | | | | |
| | | VT1, VT5, VT6, VT7, VT8, VT11 | | BC817 | | | | SOT-23 | | 6 | | | | | |
| | | VT2 | | Si7288DP | | | | PowerPAK SO-8 Dual | | 1 | | | | | |
| | | VT3 | | Si7949DP | | | | PowerPAK SO-8 | | 1 | | | | | |
| | | VT4 | | MJD44H11 | | | | D-PAK (TO-252) | | 1 | | | | | |
| | | VT9, VT10 | | IRLML2244TRPbF | | | | SOT-23 | | 2 | | | | | |
| | | | | Микросхемы | | | | | | | | | | | |
| Подп. и дата | DA1 | | TPS54332DDA | | | | SOIC-8 (Power Pad) | | 1 | | | | | | |
| | DA2, DA3 | | AP3512EMPTR-G1 | | | | PSOP-8 | | 2 | | | | | | |
| | DA4 | | A3906SESTR-T | | | | QFN-20 | | 1 | | | | | | |
| | DA5 | | ADM3232EARNZ | | | | SOIC-16 (Narrow) | | 1 | | | | | | |
| | DA6 | | ISL6256AHRZ | | | | 28 Ld 5x5QFN | | 1 | | | | | | |
| Инф. № аудл. | DA7 | | NCP1117ST50T3G | | | | SOT-223 | | 1 | | | | | | |
| | DD1 | | LPC1768FBD100 | | | | LQFP-100 | | 1 | | | | | | |
| | DD2 | | NC-513 | | | | BGA4X4(Pitch_0.8) | | 1 | | НЕ УСТАНАВЛИВАТЬ | | | | |
| Взам. инф. № | DD3 | | FM25CL64-GA | | | | SOIC-8 | | 1 | | | | | | |
| | DD5 | | MX25L3233FM2I-08G | | | | 200mil 8-SOP | | 1 | | | | | | |
| | | | Разъемы и переключатели | | | | | | | | | | | | |
| Подп. и дата | XP1 | | KPJ-3S | | | | DIP | | 1 | | | | | | |
| | XP2 | | B10B-PH-SM4-TB | | Pitch 2mm; 10pin | | SMD | | 1 | | | | | | |
| | XP9 | | TJ4-6P6C (RJ12) | | | | ThroughHole | | 1 | | | | | | |
| | XT1 | | B2B-XH-A | | 2pin | | THM | | 1 | | | | | | |
| Инф. № подл. | XT2 | | S2B-XH-A | | | | DIP | | 1 | | | | | | |
| | | | | | | AL.P011.40.000 rev.1.2 | | | | | | Лист | | | |
| | | | | | | | | | | | | 3 | | | |
| | Изм. | Лист | № докум. | | Подп. | Дата | | | | | | | | | |

| | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | | | | |
|---------------|--------------|--|--------------------|----------|----------------------------|---------------------------------------|--|--|------|------|--------|------|
| Перв. примен. | | | Конденсаторы | | | | | | | | | |
| | | C4 | | 12pF | NPO 50V ±5% SMD0402 | 1 | | | | | | |
| | | C11, C12, C36, C38, C40, C41, C42, C43, C74, C75 | | 22pF | NPO 50V ±5% SMD0402 | 10 | | | | | | |
| | | C2, C5, C20, C22, C27, C28, C29, C30, C31, C32, C34, C37, C52, C59, C60, C61, C62, C70, C71, C79, C80, C83, C84, C88, C90, C91, C93, C94, C98, C100, C123, C124 | | 330pF | NPO 50V ±5% SMD0402 | 32 | | | | | | |
| Справ. № | | C96 | | 6.8nF | X7R 16V ±10% SMD0402 | 1 | C96 НЕ УСТАНОВЛИВАТЬ | | | | | |
| | | C1, C97, C107, C108, C113, C128, C129 | | 0.01uF | X7R 16V ±10% SMD0402 | 7 | C97, C108 НЕ УСТАНОВЛИВАТЬ | | | | | |
| | | C3, C10, C13, C14, C15, C18, C21, C23, C24, C25, C33, C35, C39, C44, C45, C46, C47, C48, C49, C50, C51, C53, C54, C55, C57, C58, C63, C65, C67, C68, C72, C73, C76, C77, C78, C81, C82, C85, C86, C87, C89, C95, C99, C101, C106, C125, C126, C132, C133, C134 | | 0.1uF | X7R 25V ±10% SMD0402 | 50 | C89, C101, C106, C134 НЕ УСТАНОВЛИВАТЬ | | | | | |
| | | C66, C102, C104, C112 | | 1uF | X7R 16V ±10% SMD0402 | 4 | C102, C104 НЕ УСТАНОВЛИВАТЬ | | | | | |
| Подп. и дата | | C6, C7, C17, C26, C64, C92, C109, C110, C111, C115, C116, C117, C118, C127 | | 10uF | Y5V 25V ±20% SMD1206 | 14 | C92, C109, C110 НЕ УСТАНОВЛИВАТЬ | | | | | |
| | Инв. № дубл. | C16, C19, C69, C103, C105, C131 | | 22uF | X5R 6.3V ±10% SMD1206 | 6 | | | | | | |
| | | C119, C120 | VE-221M1CTR-0607DW | 220uF | 16V | 2 | | | | | | |
| | | C8, C121 | VE-221M1VTR-0810DW | 220uF | 35V | 2 | | | | | | |
| Взам. инв. № | | C9 | | 470uF | 16V, lowESR D=8, H=15, DIP | 1 | | | | | | |
| | | C56 | | N/A | X7R 16V ±10% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | | | |
| | | C114, C130 | | N/A | X7R 25V ±10% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | | | |
| Подп. и дата | | Резисторы и резисторные сборки | | | | | | | | | | |
| | | R10, R68, R78 | | 0 | ±5% SMD0402 | 3 | R78 НЕ УСТАНОВЛИВАТЬ | | | | | |
| | | R85 | RL1206FR-070R22L | 0.22 | ±1% SMD1206 | 1 | R85 НЕ УСТАНОВЛИВАТЬ | | | | | |
| Инв. № подл. | | | | | AL.P011.40.000-01 rev.1.2 | | | | | | | |
| | | | | | | | | | | | | |
| | Изм. | Лист | № докум. | Подп. | | | | | | | | Дата |
| | | Разраб. | | | | Блок управления Перечень элементов | | | Лист | Лист | Листов | |
| | | Пров. | | | | | | | | | 1 | 3 |
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| | | Н. контр. | | | | | | | | | | |
| | | Умб. | | | | | | | | | | |

| | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | |
|--------------|--|---|---------------------|----------|---------------------------|------|--------------------------------|--|------|
| | | R8, R20, R22 | R0805 | 1 | ±5% SMD0805 | 3 | | | |
| | | R19, R21 | R0805 | 2 | ±5% SMD0805 | 2 | | | |
| | | R74 | R0805 | 4.7 | ±5% SMD0805 | 1 | R74 НЕ УСТАНОВЛИВАТЬ | | |
| | | R35, R36 | R0402 | 33 | ±5% SMD0402 | 2 | | | |
| | | R82, R86 | R0402 | 100 | ±5% SMD0402 | 2 | R82, R86 НЕ УСТАНОВЛИВАТЬ | | |
| | | R23 | R0402 | 220 | ±5% SMD0402 | 1 | | | |
| | | R1, R7, R9, R12, R26, R27, R28, R31, R53, R54, R66, R67, R87 | R0402 | 330 | ±5% SMD0402 | 13 | | | |
| | | R84 | R1206 | 430 | ±5% SMD1206 | 1 | R84 НЕ УСТАНОВЛИВАТЬ | | |
| | | R37 | R0402 | 1.5K | ±5% SMD0402 | 1 | | | |
| | | R13, R14, R15, R16, R29, R30, R38, R39, R40, R42, R44, R45, R46, R49, R57, R60, R62, R63, R70, R71, R72, R88, R89, R90, R94 | R0402 | 3.3K | ±5% SMD0402 | 25 | R88, R90 НЕ УСТАНОВЛИВАТЬ | | |
| | | R6, R52, R55, R64, R65, R77, R81 | R0402 | 4.75K | ±1% SMD0402 | 7 | R52, R64, R65 НЕ УСТАНОВЛИВАТЬ | | |
| | | R33, R58, R59, R69, R91 | R0402 | 10K | ±5% SMD0402 | 5 | R33, R69, R91 НЕ УСТАНОВЛИВАТЬ | | |
| Подп. и дата | | R17, R25, R51, R56 | R0402 | 10.2K | ±1% SMD0402 | 4 | R51 НЕ УСТАНОВЛИВАТЬ | | |
| | | R76 | R0402 | 16.9K | ±1% SMD0402 | 1 | | | |
| | | R18 | R0402 | 26.1K | ±1% SMD0402 | 1 | | | |
| | | R2, R41, R43, R47, R48, R50, R61, R73, R75, R92 | R0402 | 33K | ±5% SMD0402 | 10 | | | |
| Инф. № дубл. | | R3, R4 | R0402 | 49.9K | ±1% SMD0402 | 2 | | | |
| | | R11, R24, R32, R79, R80, R83 | R0402 | 51.1K | ±1% SMD0402 | 6 | R32, R79, R83 НЕ УСТАНОВЛИВАТЬ | | |
| | | R5 | R0402 | 470K | ±1% SMD0402 | 1 | | | |
| | | R34, R93 | R0402 | N/A | ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | |
| Взам. инв. № | | R95, R96 | R0603 | 0 | ±5% SMD0603 | 2 | | | |
| | | RN6 | СAY16-331J4-330±5% | 330 | ±5% SMD1206 | 1 | | | |
| | | RN1, RN2, RN3, RN4, RN5 | СAY16-332J4-3.3K±5% | 3.3K | ±5% SMD1206 | 5 | | | |
| | | Индуктивности | | | | | | | |
| Подп. и дата | | L15 | BLM21PG221SN1D | | L_0805 | 1 | | | |
| | | L3, L4, L11, L13, L14 | BLM18EG221SN1 | | L_0603 | 5 | | | |
| | | L6, L7, L8, L9, L10 | BLA31BD601SN4D | | 1206-L8 | 5 | | | |
| | | L1 | IHLP5050CEER6R8M01 | 6.8uH | | 1 | | | |
| Инф. № подл. | | | | | AL.P011.40.000-01 rev.1.2 | | | | Лист |
| | | | | | | | | | 2 |
| | | Изм. | Лист | № докум. | Подп. | Дата | | | |

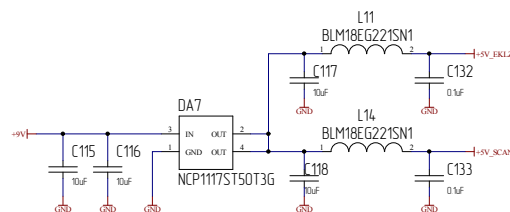
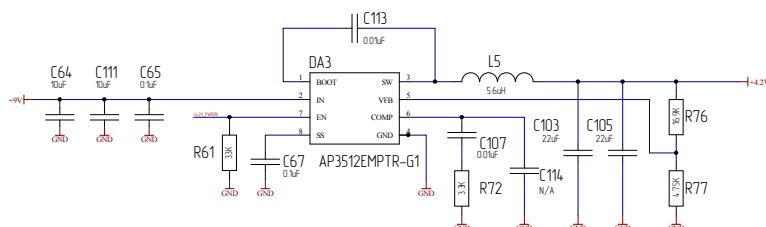
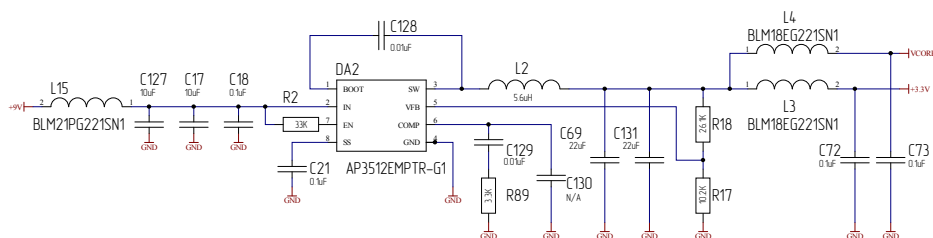
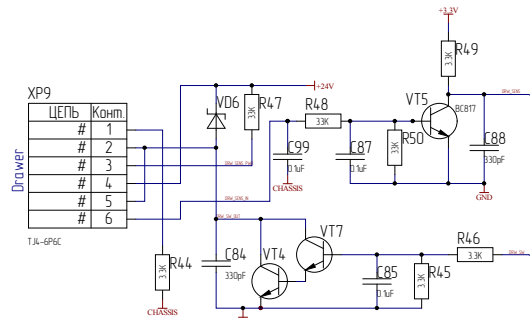
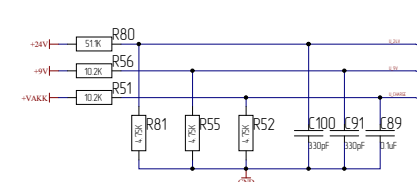
| Поз. обозначение | | | Наименование | | | Значение | | | Тип/Размер | | | Кол. | | | Примечание | | | | | |
|------------------|--|--|-------------------------------|--|--|---------------------------|--|--|------------------|--|--|--------------------|--|--|----------------------|------|--|----------------------------|--|--|
| | | | L2, L5 | | | IHLР-2020CZ-11 | | | 5.6uH | | | | | | 2 | | | | | |
| | | | L12 | | | SDR0604-270YL | | | 27uH | | | 20% SDR0604 | | | 1 | | | L12 НЕ УСТАНОВЛИВАТЬ | | |
| | | | | | | Диоды и транзисторы | | | | | | | | | | | | | | |
| | | | VD1 | | | 30BQ040 | | | | | | DO-214AB (SMC) | | | 1 | | | | | |
| | | | VD2, VD3 | | | BAT54CFILM | | | | | | SOT23 | | | 2 | | | VD3 НЕ УСТАНОВЛИВАТЬ | | |
| | | | VD4, VD5 | | | PESD5V2S2UT | | | | | | SOT23 | | | 2 | | | | | |
| | | | VD6 | | | SK14 | | | | | | DO-214AA (SMB) | | | 1 | | | | | |
| | | | VD9 | | | SMAJ28A | | | 28V | | | SMA | | | 1 | | | | | |
| | | | VT1, VT5, VT6, VT7, VT8, VT11 | | | BC817 | | | | | | SOT-23 | | | 6 | | | VT1, VT8 НЕ УСТАНОВЛИВАТЬ | | |
| | | | VT2 | | | Si7288DP | | | | | | PowerPAK SO-8 Dual | | | 1 | | | VT2 НЕ УСТАНОВЛИВАТЬ | | |
| | | | VT3 | | | Si7949DP | | | | | | PowerPAK SO-8 | | | 1 | | | VT3 НЕ УСТАНОВЛИВАТЬ | | |
| | | | VT4 | | | MJD44H11 | | | | | | D-PAK (TO-252) | | | 1 | | | | | |
| | | | VT9, VT10 | | | IRLML2244TRPbF | | | | | | SOT-23 | | | 2 | | | VT9, VT10 НЕ УСТАНОВЛИВАТЬ | | |
| | | | | | | Микросхемы | | | | | | | | | | | | | | |
| | | | Подп. и дата | | | DA1 | | | TPS54332DDA | | | | | | SOIC-8 (Power Pad) | | | 1 | | |
| DA2, DA3 | | | | | | AP3512EMPTR-G1 | | | | | | PSOP-8 | | | 2 | | | | | |
| DA4 | | | | | | A3906SESTR-T | | | | | | QFN-20 | | | 1 | | | | | |
| DA5 | | | | | | ADM3232EARNZ | | | | | | SOIC-16 (Narrow) | | | 1 | | | | | |
| DA6 | | | | | | ISL6256AHRZ | | | | | | 28 Ld 5x5QFN | | | 1 | | | DA6 НЕ УСТАНОВЛИВАТЬ | | |
| DA7 | | | | | | NCP1117ST50T3G | | | | | | SOT-223 | | | 1 | | | | | |
| DD1 | | | | | | LPC1768FBD100 | | | | | | LQFP-100 | | | 1 | | | | | |
| DD2 | | | | | | NC-513 | | | | | | BGA4X4(Pitch_0.8) | | | 1 | | | НЕ УСТАНОВЛИВАТЬ | | |
| DD3 | | | | | | FM25CL64-GA | | | | | | SOIC-8 | | | 1 | | | | | |
| DD5 | | | | | | MX25L3233FM2I-08G | | | | | | 200mil 8-SOP | | | 1 | | | | | |
| | | | | | | Разъемы и переключатели | | | | | | | | | | | | | | |
| XP1 | | | | | | KPJ-3S | | | | | | DIP | | | 1 | | | | | |
| XP2 | | | | | | B10B-PH-SM4-TB | | | Pitch 2mm; 10pin | | | SMD | | | 1 | | | | | |
| XP9 | | | | | | TJ4-6P6C (RJ12) | | | | | | ThroughHole | | | 1 | | | | | |
| XT1 | | | | | | B2B-XH-A | | | 2pin | | | THM | | | 1 | | | | | |
| XT2 | | | S2B-XH-A | | | | | | DIP | | | 1 | | | XT2 НЕ УСТАНОВЛИВАТЬ | | | | | |
| Инф. № подл. | | | | | | AL.P011.40.000-01 rev.1.2 | | | | | | | | | | Лист | | | | |
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| Изм. | | | Лист | | | № докум. | | | Подп. | | | Дата | | | | | | | | |

| Поз. обозначение | | Наименование | | Значение | | Тип/Размер | | Кол. | | Примечание | | |
|---------------------------|------|----------------------|--|-----------------|------|----------------------|--|------|--|------------------|--|------|
| XT3 | | 30FMN-BTRK-A | | Pitch 1mm | | ThrouthHole | | 1 | | | | |
| XT5 | | BH-06 | | | | THM | | 1 | | | | |
| XT6 | | B6B-PH-K-S | | Pitch 2mm | | THM | | 1 | | | | |
| XT7 | | USBB-1J | | | | DIP | | 1 | | | | |
| XT8 | | B4B-PH-K-S | | | | THM | | 1 | | | | |
| XT10 | | TJ4-8P8C (RJ45) | | | | ThroughHole | | 1 | | | | |
| XT11 | | SM05B-SRSS-TB | | Pitch 1mm | | SMD | | 1 | | НЕ УСТАНОВЛИВАТЬ | | |
| SW1 | | PLS-3 | | | | THM | | 1 | | | | |
| | | Кварцевые резонаторы | | | | | | | | | | |
| BQ1 | | HC49SM | | 12 MHz | | ±50ppm_20pF SMD | | 1 | | | | |
| BQ2 | | CM200S | | 32768 Hz | | ±20ppm_12.5pF SMD | | 1 | | | | |
| | | Прочее | | | | | | | | | | |
| BA1 | | XCMT09F | | | | SMD | | 1 | | | | |
| GB1 | | BS-05 | | | | ThrouthHole | | 1 | | | | |
| RU1 | | B72580V0200K062 | | Vrms=20; Vdc=26 | | CN1812K20G | | 1 | | | | |
| Подп. и дата | | | | | | | | | | | | |
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| AL.P011.40.000-01 rev.1.2 | | | | | | | | | | | | Лист |
| | | | | | | | | | | | | 4 |
| Изм. | Лист | № докум. | | Подп. | Дата | | | | | | | |



ВЫХОДЯТЕЛЬ ПИТАНИЯ

АККУМУЛЯТОР

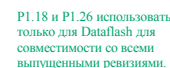


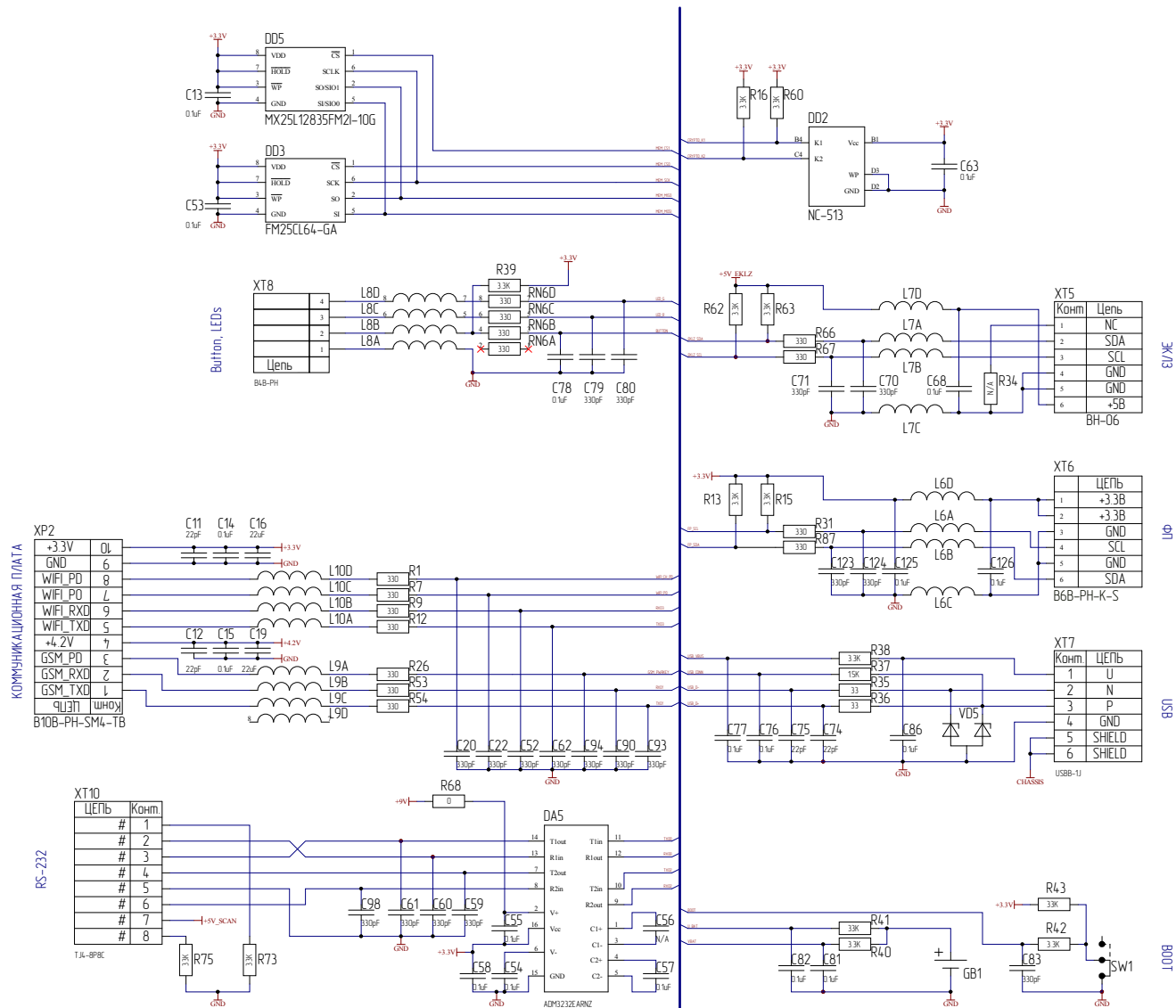
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| Изм. | Лист | № докум. | Подп. | Дата |
| Разр. | | | | |
| Проб. | | | | |
| Т. контр. | | | | |
| Н. контр. | | | | |
| Умб. | | | | |

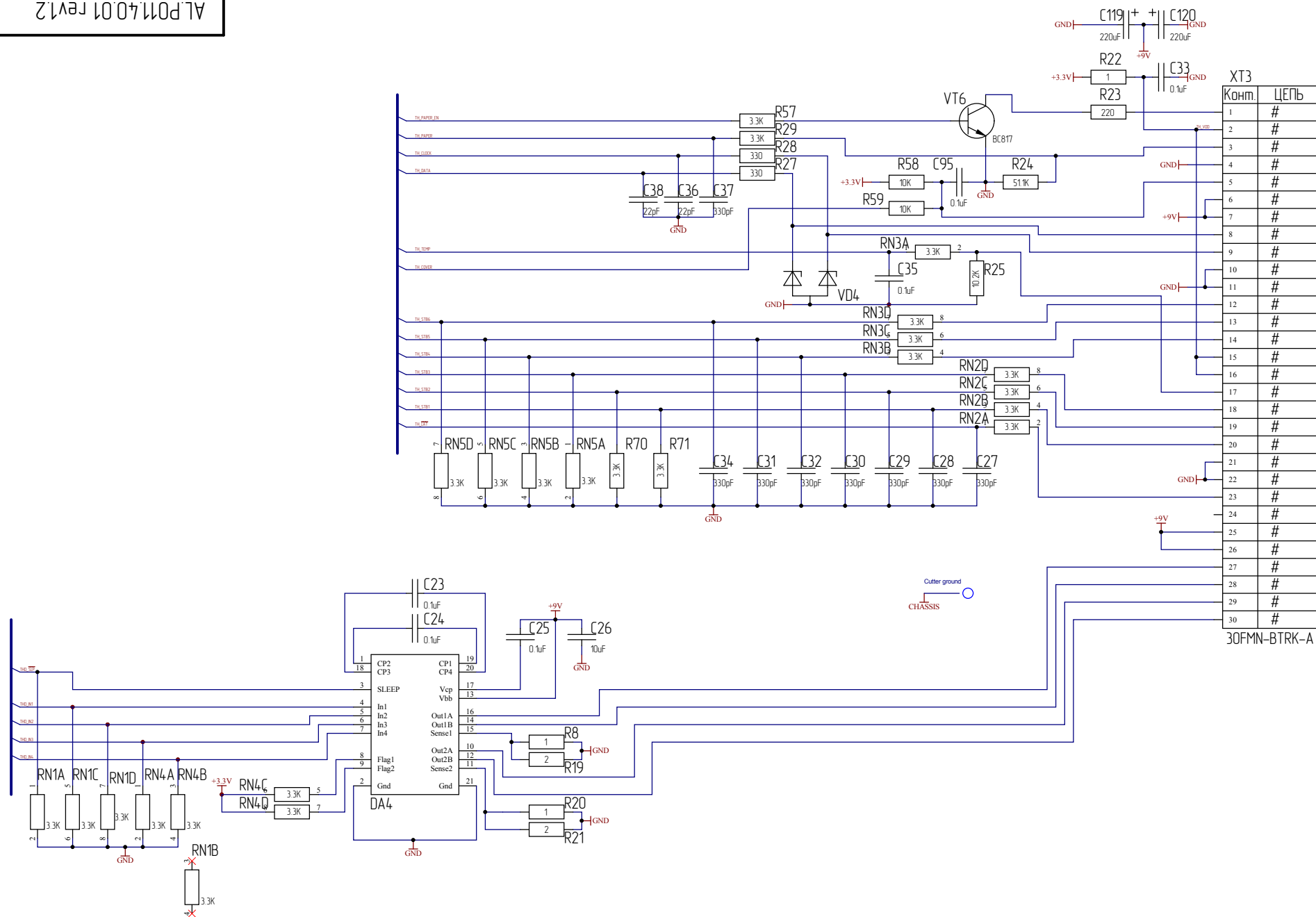
AL.P011.40.01 rev1.2

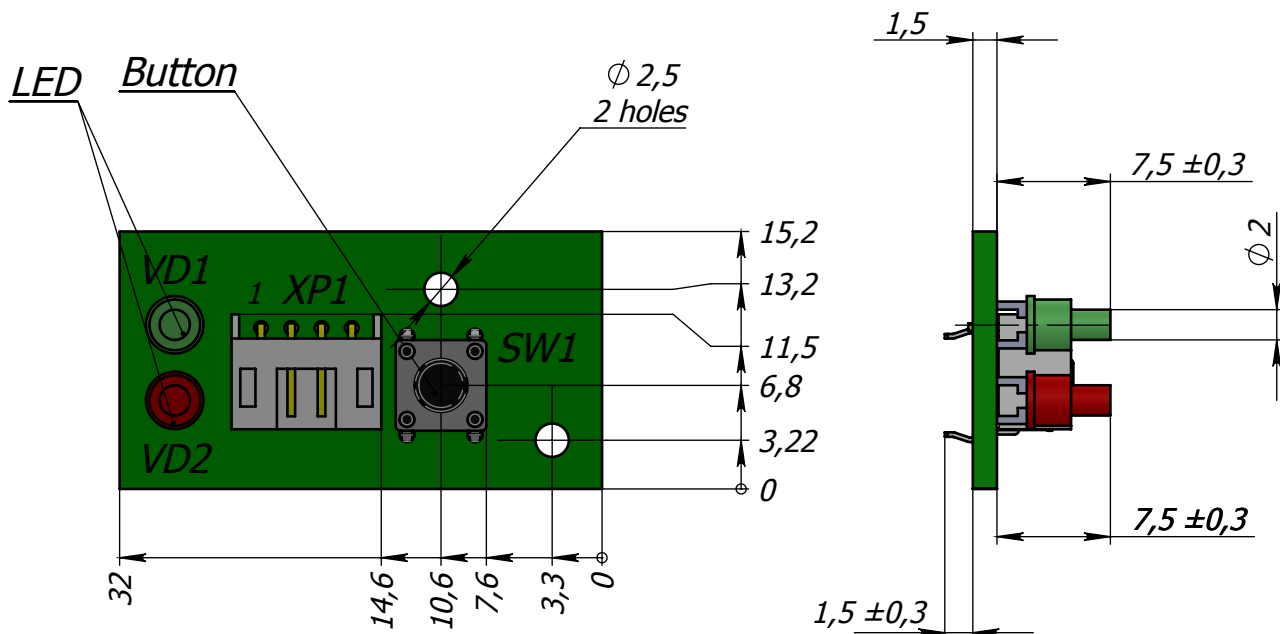
Main board
Electrical Connection Diagram

| | |
|------|---------|
| Лист | Масштаб |
| 1 | 1:1 |
| Лист | Листов |

Sheet







1. Use "No-clean" flux (type ROL0, ROL1, ORL0) for soldering.
2. The board surface condition requirements according to IPC-A-610-D specification pt. 10.4.
3. The board should meet IPC-A-610-D specification requirements (pts 10.1-10.2.7, 10.2.9, 10.3, 10.5 by class 3).
4. Mount the connector flush with the board.
5. Cut off a technological bridge on outline of PCB, if they are.

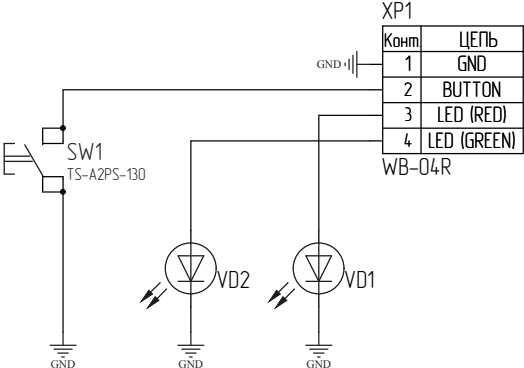
AT037.01.02AD rev.1.3

Indication board

| Лит. | Масса | Масштаб |
|--------|----------|---------|
| | | 2:1 |
| Лист 1 | Листов 1 | |

ATOL

[illegible]



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| Изм. | Лист | № докум. | Подп. | Дата |
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| Т. контр. | | | | |
| И. контр. | | | | |
| Утв. | | | | |

АТ037.01.02

Плата индикации

Electrical Connection Diagram

| Лист | Масса | Масштаб |
|--------|----------|---------|
| 1 | | 1:1 |
| Лист 1 | Листов 1 | |

Копировал

Формат А3

| | | | | | | | | | | | | |
|---------------|--|-----------------------|---------------|------------------------|--|---|---|----------------------|----------------|---------------|------------------|---|
| Перв. примен. | | Формат Size | Зона Zone | Поз. Item | Обозначение Designation | Наименование Name | Кол. Quant. | Примечание Remark | | | | |
| | | | | | Документация (Documentation) | | | | | | | |
| | | A3 | | | AL.P010.42.000AD rev.1.3 | Сборочный чертеж Assembly drawing | | | | | | |
| | | A2 | | | AL.P010.42.000WD rev.1.3 | Схема электрическая принципиальная Electrical scheme | | | | | | |
| | | | | | | | | | | | | |
| | | | | | Детали (Parts) | | | | | | | |
| Справ. N° | | A4 | | 1 | AL.P010.42.001 rev.1.3 | Плата печатная коммуникационная Communication PCB | 1 | | | | | |
| | | | | | | | | | | | | |
| | | | | | Прочие изделия (Other parts) | | | | | | | |
| | | | | 2 | | Этикетка самоклеящаяся 7мм x 20мм Self-adhesive label 7mm x 20mm | 1 | | | | | |
| | | | | 3 | | Этикетка с указанием серийного номера Label with serial number | 1 | | | | | |
| | | | | | | | | | | | | |
| Погр. и дата | | | | | Переменные данные для исполнений (Variable data for modifications) | | | | | | | |
| | | | | | AL.P010.42.000-01 rev.1.3 | | | | | | | |
| | | | | | Документация (Documentation) | | | | | | | |
| | | A4 | | | AL.P010.42.000-01BM rev.1.3 | Перечень элементов Bill of materials | | | | | | |
| | | | | | | | | | | | | |
| | | | | | AL.P010.42.000-02 rev.1.3 | | | | | | | |
| | | | | | Документация (Documentation) | | | | | | | |
| | | A4 | | | AL.P010.42.000-02BM rev.1.3 | Перечень элементов Bill of materials | | | | | | |
| | | | | | | | | | | | | |
| | | | | | AL.P010.42.000-03 rev.1.3 | | | | | | | |
| | | | | | Документация (Documentation) | | | | | | | |
| | | A4 | | | AL.P010.42.000-03BM rev.1.3 | Перечень элементов Bill of materials | | | | | | |
| Погр. и дата | | | | | | | AL.P010.42.000 rev.1.3 | | | | | |
| | | Изм Rev | Лист Sheet | № докум. Document № | Подп. Sign. | Дата Date | Плата коммуникации Communication board | | Лит. Letter | Масса Mass | Масштаб Scale | |
| | | Разраб. Designed | | | | 01.03.16 | | | A | | 1:1 | |
| | | Пров. Checked | | | | | | | | | | |
| | | Т.контр. Tech.ch. | | | | | | | Лист Sheet | 1 | Листов Sheets | 1 |
| | | Н.контр. Inspector | | | | | | | ATON | | | |
| | | Утв. Approved | | | | | | | | | | |
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Инв. N° подл.

Погр. и дата

Взам. инв. N°

Инв. N дубл.

Подп. и дата

Справ. N°

Перв. примен.

AL.P010.42.000AD rev.1.3

1

8

XP2

C6

C7

VD1

VT2

C4

DD1

C3

C2

C1

GND

TXD

DBG

RXD

XP1

RF2

C5

R1

RXD

TXD

VT1

R2

Ø3,3

2omB. (2hol.)

1,7max

6,0max

1,5

2

10

30,0

29,0

34,1

50,8

56,0

1. Размеры для справок.

2. Пайку производить с использованием флюса "No-clean" типа R0L0, R0L1, 0RL0.

3. Требования к чистоте поверхности платы согласно стандарту IPC-A-610D п.10.4.

4. Паяные соединения SMD-компонентов должны соответствовать требованиям стандарта IPC-A-610D п.8.2.1-8.2.14 по 3 классу.

5. Паяные соединения выводных компонентов должны соответствовать требованиям стандарта IPC-A-610D п.7.4.5, 7.4.6, 7.5.5 по 2 классу.

6. Печатная плата поз.1 должна соответствовать требованиям стандарта IPC-A-610D п.10.1-10.2.7, 10.2.9, 10.2.3, 10.5 по 3 классу.

7. Разъемы и элементы устанавливать вплотную на плату поз. 1.

8. Разъем RF2 устанавливать сигнальным выводом к микросхеме DD1. На печатной плате поз.1 шелкографией показан ключ (скос), обозначающий ориентацию сигнального вывода при монтаже. Ключ (скос) на корпусе разъема RF2 может не соответствовать ключу (скосу) на шелкографии.

9. Откусить технологические перемычки по контуру платы поз. 1, если они есть.

10. Наклеить этикетку поз.2 с обозначением исполнения электронного модуля в указанное место. Не допускается установка этикетки поз.2 на реперные знаки, контактные площадки и шелкографию компонентов.

11. Наклеить этикетку с указанием серийного номера поз. 3. Не допускается установка этикетки поз.3 на реперные знаки, контактные площадки и шелкографию компонентов.

1. Dimensions for reference.

2. Soldering performed using flux "No-clean" type R0L0, R0L1, 0RL0.

3. Requirements to clean the surface of the PCB according to the standard of IPC-A-610D p.10.4.

4. Soldered connection SMD-components must comply with the requirements of the standard IPC-A-610D p.8.2.1-8.2.14 in class 3.

5. Soldered connection of terminal components must comply with the requirements of the standard IPC-A-610D p.7.4.5, 7.4.6, 7.5.5 on 2 class.

6. PCB pos.1 must comply with the requirements of the standard IPC-A-610D p.10.1-10.2.7, 10.2.9, 10.2.3, 10.5 in class 3.

7. Connectors and elements set close to the PCB pos.1.

8. Install RF2 connector by the signal output to the microcircuit DD1. On the PCB silkscreen pos.1 shows the key (bevel), indicating the orientation of the signal output during installation. Key (bevel) on the body of RF2 may not meet the key (bevel) on the silkscreen printing.

9. Cut off a technological jumper on outline of PCB pos.1, if they are.

10. Stick a label pos.2 with the designation of the electrical module to the specified location. Not allowed to place a label pos.2 on fiducials, pads and silkscreen of components.

11. Stick a label with serial number pos. 3. Not allowed to place a label pos.3 on fiducials, pads and silkscreen of components.

AL.P010.42.000AD rev.1.3

Плата коммуникации

Communication board

Сборочный чертеж

Assembly drawing

Лум.

Letter

Масса

Mass

Масштаб

Scale

A

2:1

Лист

Sheet

Листов

Sheets

1

АТОН

Изм

Лист

Rev

Sheet

№ докум.

Document №

Подп.

Sign.

Дата

Date

Разраб.

Designed

Пров.

Checked

Т.контр.

Tech.ch.

Н.контр.

Inspector

Утв.

Approved

01.03.16

Копировал

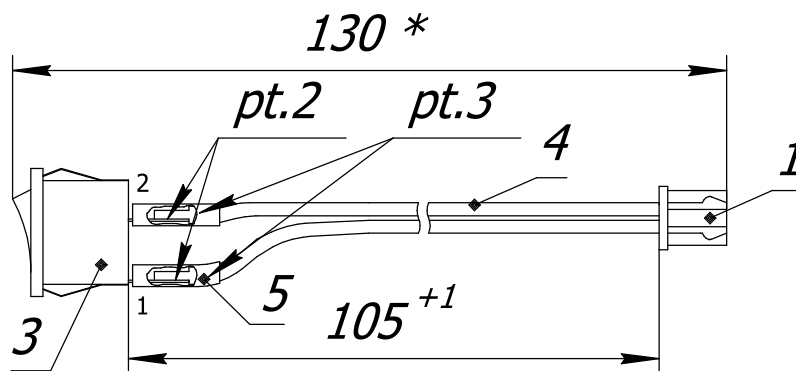
Формат А3

22

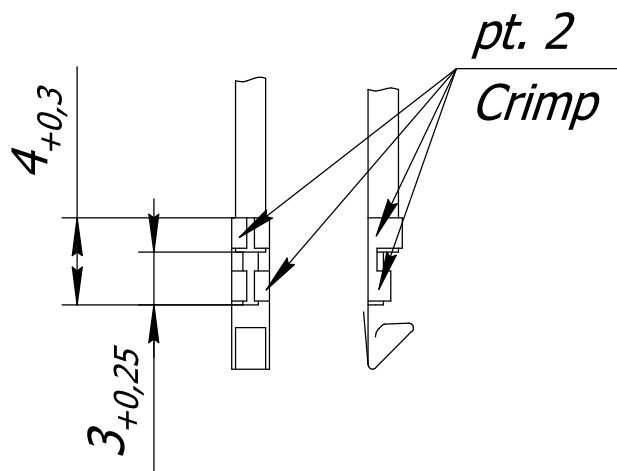
| Перв. примен. | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | | | | | |
|---------------|------|---------------------------------------|--------------------------------|--------------|-----------------------|----------|--------------------------|---|---|---|--|--|--|
| Справ. № | | | Конденсаторы | | | | | | | | | | |
| | | C1, C7 | | 15pF | NPO 50V ±5% SMD0402 | 2 | | | | | | | |
| | | C2 | | 0.01uF | X7R 16V ±10% SMD0402 | 1 | | | | | | | |
| | | C3, C6, C11, C13, C14, C15 | | 0.1uF | X7R 16V ±10% SMD0402 | 6 | | | | | | | |
| | | C4 | TPSD477K006R0200 | 470uF | 6.3V CASE D | 1 | | | | | | | |
| | | C5 | | 2.2uF | X5R 6.3V ±10% SMD0402 | 1 | | | | | | | |
| | | C8 | | 5.6pF | NPO 50V ±5% SMD0402 | 1 | | | | | | | |
| | | C9, C10 | | 10pF | NPO 50V ±5% SMD0402 | 2 | | | | | | | |
| | | C12 | | 1uF | X7R 16V ±10% SMD0402 | 1 | | | | | | | |
| | | C16 | | 10uF | X5R 16V ±10% SMD1206 | 1 | | | | | | | |
| | | | Резисторы и резисторные сборки | | | | | | | | | | |
| | | R1, R2 | | 4.7K | ±5% SMD0402 | 2 | | | | | | | |
| | | R3, R4 | | NA | ±5% SMD0402 | 2 | НЕ УСТАНАВЛИВАТЬ | | | | | | |
| | | R5, R6, R9, R13 | | 100 | ±5% SMD0402 | 4 | | | | | | | |
| | | R7 | | 12K | ±5% SMD0402 | 1 | | | | | | | |
| | | R8, R10, R11, R12, R14, R15, R16, R22 | | 10K | ±5% SMD0402 | 8 | | | | | | | |
| | | R17, R18, R19, R20, R21 | | 200 | ±5% SMD0402 | 5 | | | | | | | |
| | | Инв. № дубл. | | | Индуктивности | | | | | | | | |
| | | | | L1, L2 | BLA31BD601SN4D | | SMD1206 | 2 | | | | | |
| | | | | L3 | BLM18PG121SN1D | | SMD0603 | 1 | | | | | |
| Взам. инв. № | | | | | Диоды и транзисторы | | | | | | | | |
| | | | | VD1 | SMF05C | | SOT363-6N | 1 | | | | | |
| | | | | VT1, VT2 | PDTCT14ET | NPN | SOT-23 | 2 | | | | | |
| | | | | Подп. и дата | | | Микросхемы | | | | | | |
| | | | | | | DD1 | M66 | firmware version M66FAR01A07BT or above | | 1 | | | |
| | | | | | | DD2 | Esp8266EX | | QFN32 | 1 | | | |
| | | | | | | DD3 | W25Q80BVSNIQ | | SO-8 150mil | 1 | | | |
| | | Инв. № подл. | | | | | AL.P010.42.000-01 rev.13 | | | | | | |
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| Изм. | Лист | | | | | № докум. | Подп. | Дата | Модуль коммуникации Перечень элементов | | | | |
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| Перв. примен. | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | | |
|---------------|------|----------------------------|--------------------------------|---|-----------------------|---------------------|-------------------------------------|------|------------------|--------|
| Справ. № | | | Конденсаторы | | | | | | | |
| | | C1, C7 | | 15pF | NPO 50V ±5% SMD0402 | 2 | | | | |
| | | C2 | | 0.01uF | X7R 16V ±10% SMD0402 | 1 | | | | |
| | | C3, C6, C11, C13, C14, C15 | | 0.1uF | X7R 16V ±10% SMD0402 | 6 | C11, C13, C14, C15 НЕ УСТАНОВЛИВАТЬ | | | |
| | | C4 | TPSD477K006R0200 | 470uF | 6.3V CASE D | 1 | | | | |
| | | C5 | | 2.2uF | X5R 6.3V ±10% SMD0402 | 1 | | | | |
| | | C8 | | 5.6pF | NPO 50V ±5% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C9, C10 | | 10pF | NPO 50V ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C12 | | 1uF | X7R 16V ±10% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C16 | | 10uF | X5R 16V ±10% SMD1206 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | | Резисторы и резисторные сборки | | | | | | | |
| | | R1, R2 | | 4.7K | ±5% SMD0402 | 2 | | | | |
| | | R3, R4 | | NA | ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | R5, R6, R9, R13 | | 100 | ±5% SMD0402 | 4 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | R7 | | 12K | ±5% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | Подп. и дата | | R8, R10, R11, R12, R14, R15, R16, R22 | | 10K | ±5% SMD0402 | 8 | НЕ УСТАНОВЛИВАТЬ | |
| Инв. № дубл. | | R17, R18, R19, R20, R21 | | 200 | ±5% SMD0402 | 5 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | | Индуктивности | | | | | | | |
| | | L1, L2 | BLA31BD601SN4D | | SMD1206 | 2 | L1 НЕ УСТАНОВЛИВАТЬ | | | |
| | | L3 | BLM18PG121SN1D | | SMD0603 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| Взам. инв. № | | | Диоды и транзисторы | | | | | | | |
| | | VD1 | SMF05C | | SOT363-6N | 1 | | | | |
| | | VT1, VT2 | PDTCT14ET | NPN | SOT-23 | 2 | | | | |
| Подп. и дата | | | Микросхемы | | | | | | | |
| | | DD1 | M66 | firmware version M66FAR01A07BT or above | | 1 | | | | |
| | | DD2 | Esp8266EX | | QFN32 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | DD3 | W25Q80BVSNI6 | | SO-8 150mil | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
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| Изм. | Лист | № докум. | Подп. | Дата | | | | | | |
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| | | Поз. обозначение | Наименование | Значение | Тип/Размер | Кол. | Примечание | | | |
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| Перв. примен. | | | Конденсаторы | | | | | | | |
| | | C1, C7 | | 15pF | NPO 50V ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C2 | | 0.01uF | X7R 16V ±10% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C3, C6, C11, C13, C14, C15 | | 0.1uF | X7R 16V ±10% SMD0402 | 6 | C3, C6 НЕ УСТАНОВЛИВАТЬ | | | |
| | | C4 | TPSD477K006R0200 | 470uF | 6.3V CASE D | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | C5 | | 2.2uF | X5R 6.3V ±10% SMD0402 | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| Справ. № | | C8 | | 5.6pF | NPO 50V ±5% SMD0402 | 1 | | | | |
| | | C9, C10 | | 10pF | NPO 50V ±5% SMD0402 | 2 | | | | |
| | | C12 | | 1uF | X7R 16V ±10% SMD0402 | 1 | | | | |
| | | C16 | | 10uF | X5R 16V ±10% SMD1206 | 1 | | | | |
| | | | Резисторы и резисторные сборки | | | | | | | |
| | | R1, R2 | | 4.7K | ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | R3, R4 | | NA | ±5% SMD0402 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | R5, R6, R9, R13 | | 100 | ±5% SMD0402 | 4 | | | | |
| | | R7 | | 12K | ±5% SMD0402 | 1 | | | | |
| | | R8, R10, R11, R12, R14, R15, R16, R22 | | 10K | ±5% SMD0402 | 8 | | | | |
| Подп. и дата | | R17, R18, R19, R20, R21 | | 200 | ±5% SMD0402 | 5 | | | | |
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| | | L1, L2 | BLA31BD601SN4D | | SMD1206 | 2 | L2 НЕ УСТАНОВЛИВАТЬ | | | |
| | | L3 | BLM18PG121SN1D | | SMD0603 | 1 | | | | |
| | | | Диоды и транзисторы | | | | | | | |
| | | VD1 | SMF05C | | SOT363-6N | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| Взам. инв. № | | VT1, VT2 | PDTCT14ET | NPN | SOT-23 | 2 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | | Микросхемы | | | | | | | |
| | | DD1 | M66 | firmware version M66FAR01A07BT or above | | 1 | НЕ УСТАНОВЛИВАТЬ | | | |
| | | DD2 | Esp8266EX | | QFN32 | 1 | | | | |
| Подп. и дата | | DD3 | W25Q80BVSNIQ | | SO-8 150mil | 1 | | | | |
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*Crimping the wire
in the contact 2*



1. *Dimension for information.
2. Sold and crimp the wires according to IPC/WHMA-A-620A specifications "Requirements and acceptance for cable and wire harness assemblies".
3. Warm up the heat-shrinking tube uniformly by all it's length till full shrinking.

| | | | | | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-------|-------|------|------|--------------------|--|--|--|--|--|-------|--|--|------|--|-------------|--|---|--|
| Original # | Sign. & date | | | | | | ATO37.02.01. ASM | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | Chn. | Sheet | Doc.# | Sign | Date | Power switch-cable | | | | | | | | | | | | | | |
| | | Design. | | | | | | | | | | | Char. | | | Mass | | Scale | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | Check. | | | | | Assembly Drawing | | | | | | | | | | | | | | |
| | | Supervis. | | | | | | | | | | | Sheet | | | 1 | | Sheets num. | | 2 | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | Control. | | | | | | | | | | | | | | | | | | | |
| | | Approv. | | | | | | | | | | | | | | | | | | | |

[illegible]

1. *Dimension for information.
2. Solder and crimp the wires according to IPC/WHMA-A-620A specifications "Requirements and acceptance for cable and wire harness assemblies".

| Size | Zone | Item | Index | Name | Num. | Note |
|------|------|------|-----------------------|-----------------------------|------|-----------|
| | | | | | | |
| | | | | <u>Documentation</u> | | |
| | | | | | | |
| A3 | | | AT037.02.02.ASM | Assembly drawing | 1 | |
| | | | | | | |
| | | | | <u>Standard parts</u> | | |
| | | | | | | |
| | | 1 | PHR4 by JST catalogue | Connector body | 1 | pitch 2mm |
| | | 2 | SPH002T | Contacts for the PHR4 conn. | 8 | |
| | | 3 | | AWG 26 wire | 8 | l=98mm |
| | | | | | | |
| | | | | | | |

| | | | | | | | | | | | | |
|-----------|-------|-------|------|------|--|--|--|--|-------|------|---------------|--|
| | | | | | AT037.02.02.ASM | | | | | | | |
| Chn. | Sheet | Doc.# | Sign | Date | Indication cable Assembly Drawing | | | | Char. | Mass | Scale | |
| | | | | | | | | | | | | |
| Design. | | | | | | | | | | | | |
| Check. | | | | | | | | | | | | |
| Supervis. | | | | | | | | | Sheet | 1 | Sheets num. 1 | |
| Control. | | | | | | | | | | | | |
| Approv. | | | | | | | | | | | | |

| | | |
|---------------|---|--|
| Перв. примен. | AL.P010.61.000 | |
| | <div><div><div><div><div><div>XS1</div><div>10</div><div>9</div><div>8</div><div>7</div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div></div><div><div>10</div><div>9</div><div>8</div><div>7</div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div></div></div><div><div>L ±5</div></div><div><div>XS2</div><div>10</div><div>9</div><div>8</div><div>7</div><div>6</div><div>5</div><div>4</div><div>3</div><div>2</div><div>1</div></div></div><div><div>1</div><div>2</div></div><div><div>3</div></div><div><div>1</div><div>2</div></div></div></div> | |
| Справ. № | <div><div>Таблица соединений (Connections table)</div><div><div><div>XS1</div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div></div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div><div>9</div><div>10</div></div></div><div><div>XS2</div></div></div> | |

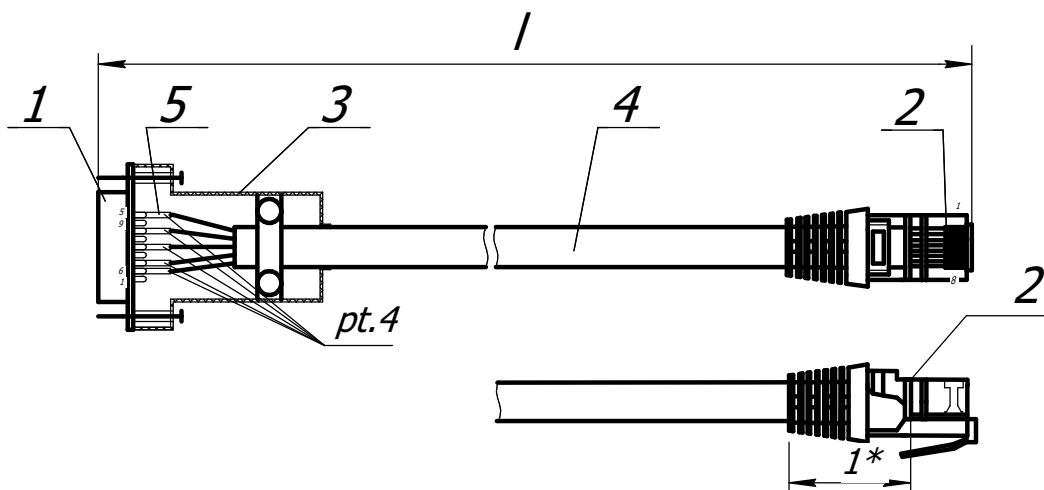
| | | | | | |
|--|--|--|--|--|--|
| <div><div>1. Электромонтаж проводов поз.3 вести по таблице соединений.</div><div>2. Нумерация контактов разъемов поз.1 показана на рис.1.</div><div>3. Обжать концы проводов поз.3 в контакты поз.2 разъемов поз.1. Использовать инструменты, рекомендованные производителем разъемов.</div><div>4. Обжимать провода согласно IPC/WHMA-A-620A стандарту "Requirements and acceptance for cable and wire harness assemblies".</div></div> | | | | | |
| <div><div>1. Connections - see Connections table.</div><div>2. Pin number of connectors pos.1 - see pic.1.</div><div>3. Crimp the endings of wires pos.3 in the contacts pos.2 of connectors pos.1. Use recommended by the connector vendor tools.</div><div>4. Crimp the wires according to IPC/WHMA-A-620A specifications "Requirements and acceptance for cable and wire harness assemblies".</div></div> | | | | | |

| | |
|-------------------------------------|--------------|
| Децимальный номер Decimal number | L,мм L,mm |
| AL.P010.61.000 | 100 |
| AL.P010.61.000-01 | 200 |

| Формат Size | Зона Zone | Поз. Item | Обозначение Designation | Наименование Name | Кол. Quant | Примечание Remark |
|----------------|--------------|--------------|-----------------------------|--|---------------|----------------------|
| | | | Прочие изделия (Other part) | | | |
| | | 1 | XS1, XS2 | Разъем PHR-10; Производитель JST Housing PHR-10; Manufacturer JST | 2 | |
| | | 2 | | Контакты SPH-002T-P0.5S для разъема PHR-10 Contacts SPH-002T-P0.5S for housing PHR-10 | 20 | |
| | | | | | | |
| | | | Материалы (Materials) | | | |
| | | 3 | | Провод UL1007 28AWG 300V Wire UL1007 28AWG 300V | 10 | 10 x Lmm 10 x Lmm |

| | | | | | | | | |
|-------------------------|---------------|------------------------|--------------------|--------------|--|--|--|--|
| Изм. Rev. | Лист Sheet | № докум. Document № | Подп. Signature | Дата Date | AL.P010.61.000 | | | |
| Разраб. Designed | | | | 20.01.2016 | Кабель модуля коммуникации Cable communication module | | | |
| Пров. Checked | | | | | | | | |
| Т. контр. Tech.Check | | | | | Лит. Letter | | | |
| Н. контр. Inspector | | | | | | | | |
| Утв. Approved | | | | | Лист Sheet | | | |
| | | | | | Листов Sheets | | | |
| | | | | | 1 | | | |
| | | | | | АТОН | | | |

| Wire's# | From | | To | |
|---------|-------|---------|-------|---------|
| | Item | Contact | Item | Contact |
| 1 | | | | |
| 2 | item1 | 3 | item2 | 2 |
| 3 | item1 | 2 | item2 | 3 |
| 4 | item1 | 6 | item2 | 4 |
| 5 | item1 | 5 | item2 | 5 |
| 6 | item1 | 4 | item2 | 6 |
| 7 | | | | |
| 8 | | | | |



1. Crimp the (Item#4) cable wires which lead to the (Item#1) connector without scraping.
2. Put the heat-shrinking tubes on the endings of cable wires which lead to the (Item#1) connector.
3. Solder the (Item#4) cable wires in to (Item#1) connector.
4. Cover points where the (Item#1) connector contacts soldered to cable wires with heat-shrinking tubes. Warm up to 100-150°C the heat-shrinking tubes uniformly by all their length till full squeezing.
5. Cut the unused wires by line of external cable in relation from (Item#1) connector's side.
6. Install (Item#1) connector in to the (Item#3) connector body.
7. Fill the (Item#3) connector with rubber or polymer based compound by Dimension 1*.

| Size | Zone | Item | Index | Name | Num. | Note |
|------|------|------|------------------------|---------------------------|------|---------------|
| | | | | <u>Documentation</u> | | |
| A3 | | | AT037.02.05rev.1.2.ASM | Interface Cable | 1 | |
| | | | | <u>Standard parts</u> | | |
| | | 1 | | DB-9F receptacle | 1 | by |
| | | | | | | www.platan.ru |
| | | | | | | catalogue |
| | | 2 | | TPR8P8C (Rj45) connector | 1 | by |
| | | | | | | www.platan.ru |
| | | | | | | catalogue |
| | | 3 | | DN-9C D-SUB 9 pin housing | 1 | by |
| | | | | | | www.platan.ru |
| | | | | | | catalogue |
| | | | | <u>Materials</u> | | |
| | | 4 | | LACU5014-305FTPHarness | 1 | l=1.8m |
| | | 5 | | Heat-shrinking tube 3mm | | l=10mm |

AT037.02.05rev.1.2. ASM

| Chr. | Sheet | Doc.# | Sign | Date | Interface cable | | | Char. | Mass | Scale |
|-----------|-------|-------|------|------|------------------|--|--|-------|------|---------------|
| Design. | | | | | Assembly Drawing | | | | | |
| Check. | | | | | | | | | | |
| Supervis. | | | | | | | | Sheet | 1 | Sheets num. 1 |
| Control. | | | | | | | | | | |
| Approv. | | | | | | | | | | |

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Альбом схем

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от 05.08.2016