

# PCB ASSEMBLY SPECIFICATIONS

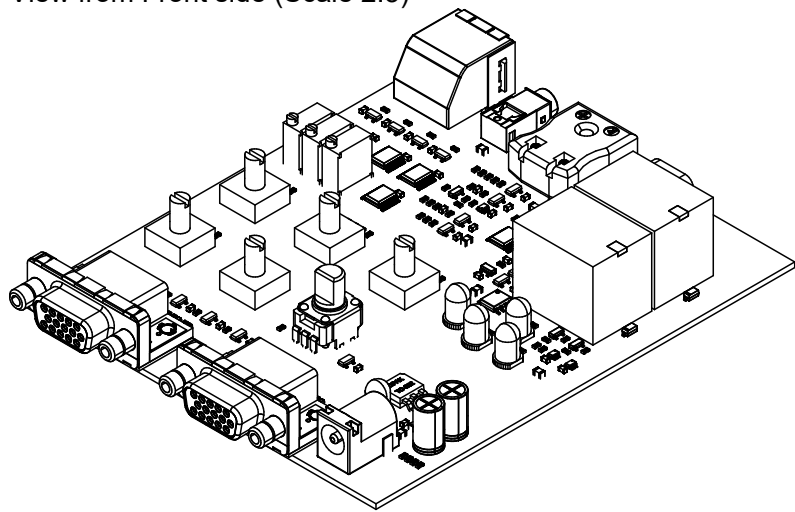
## "LTK-HALL 2019"

### Variant: "[No Variations]"

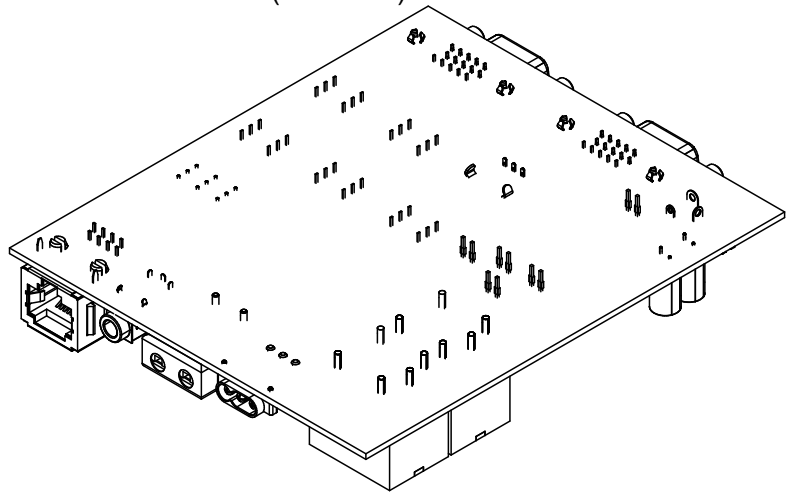
SPECIFICATIONS

NOTE #	NOTE
1	ALL SPECIFICATIONS REFERENCED SHALL BE OF THE LATEST REVISION UNLESS OTHERWISE NOTED
2	SUPPLIER SHALL NOT MODIFY THE DESIGN WITHOUT WRITTEN PERMISSION
4	THE BOM IN THIS DOCUMENT IS PURELY AN AID TO ASSEMBLY OPERATIONS AND MAY NOT HAVE THE MOST UP-TO-DATE DATA OR ALL APPROVED COMPONENT ALTERNATIVE.

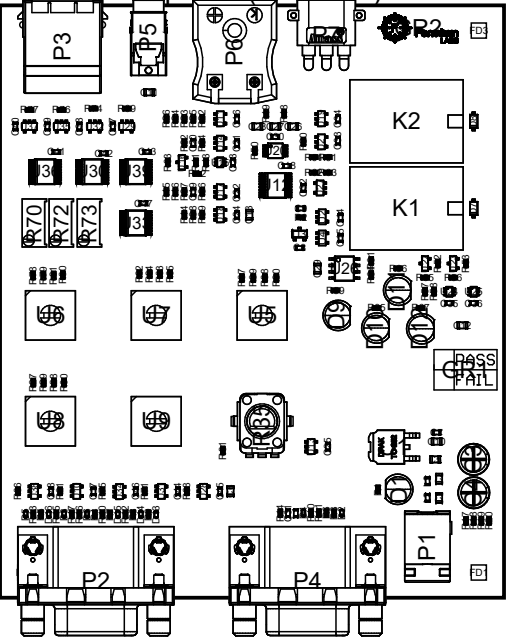
View from Front side (Scale 2:3)



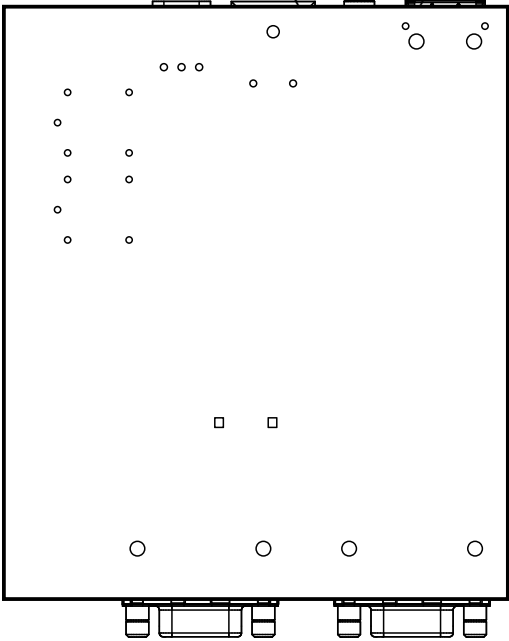
View from Back side (Scale 2:3)

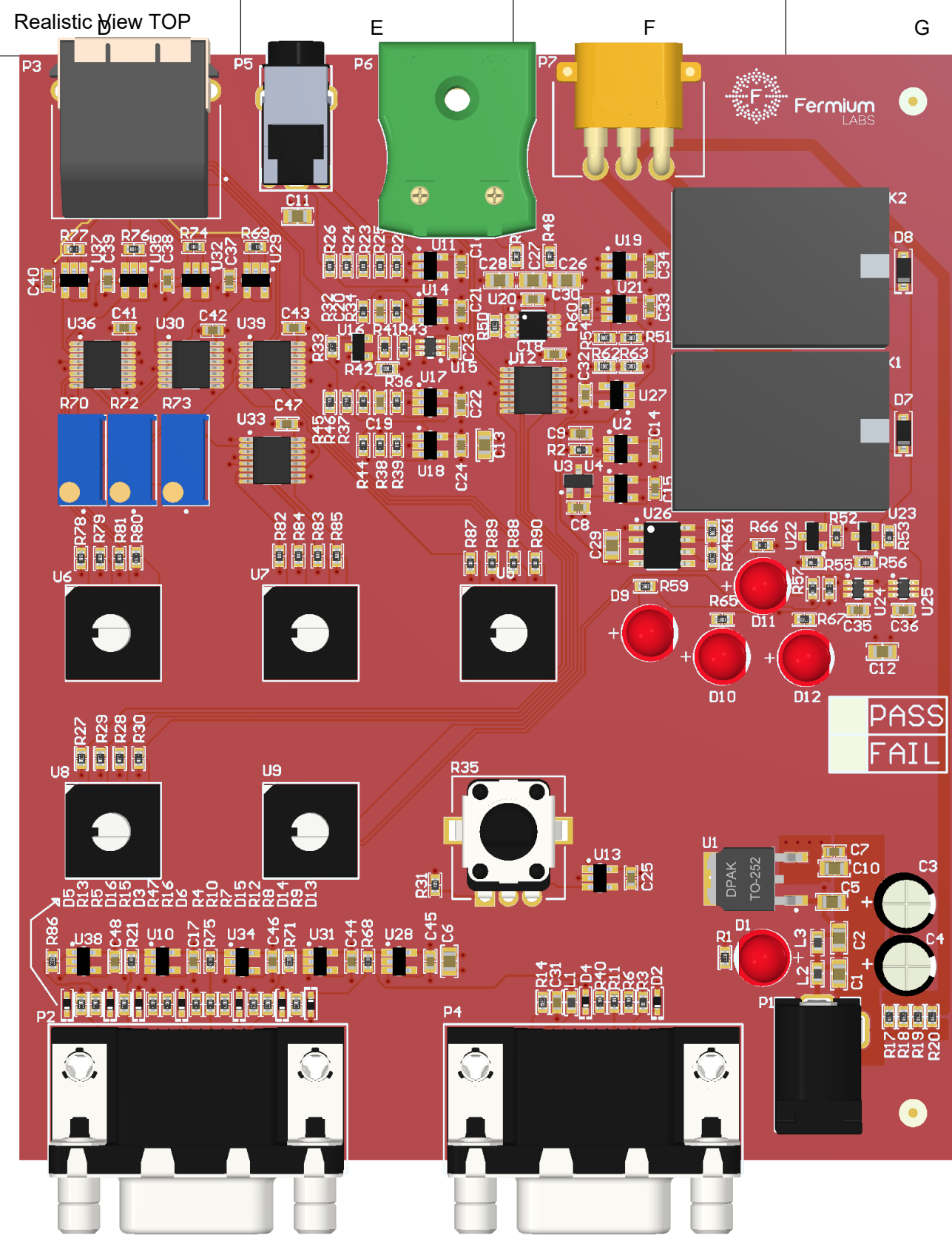


View from Top side (Scale 2:3)



View from Bottom side (Scale 2:3)





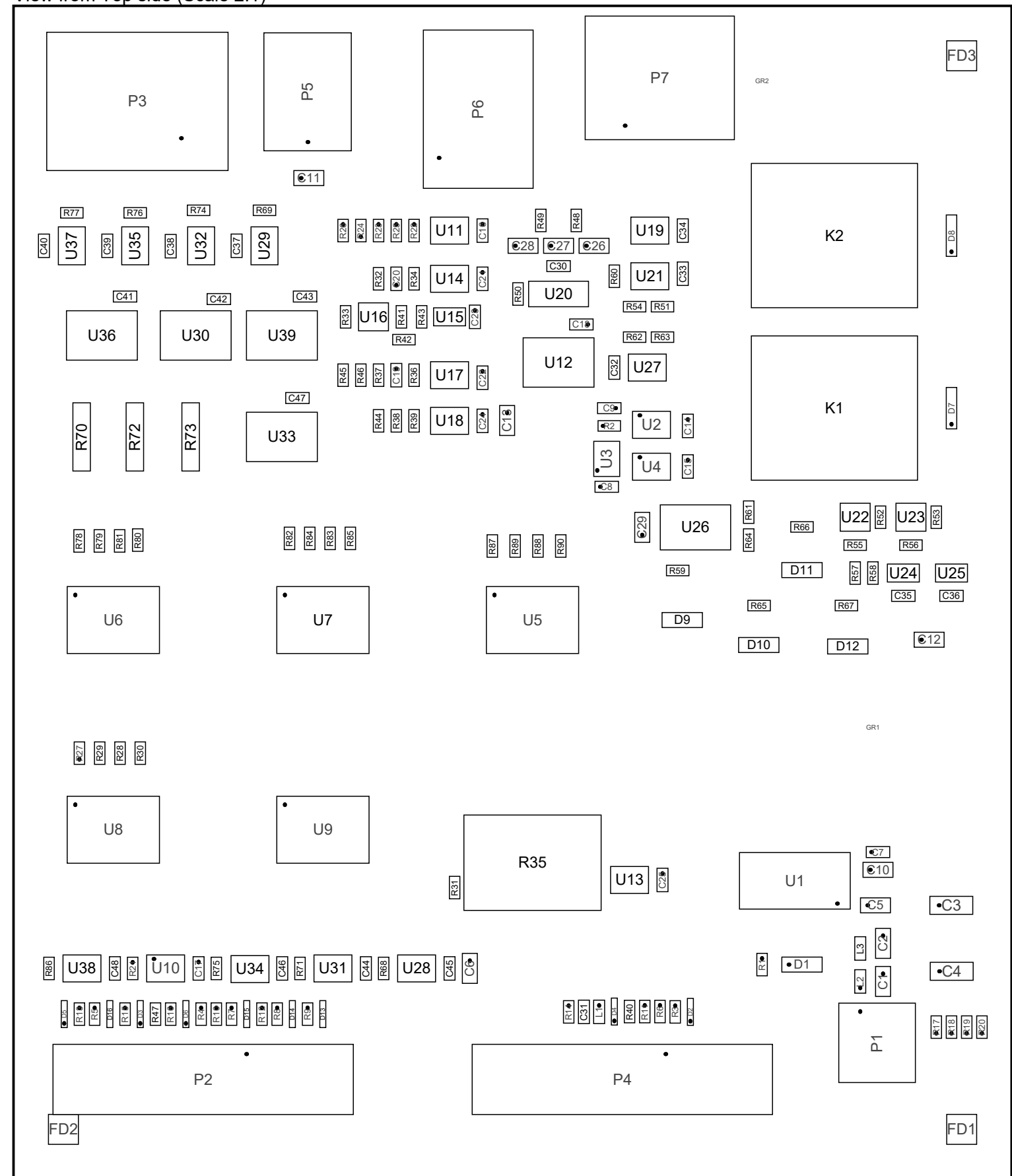
DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

View from Top side (Scale 2:1)



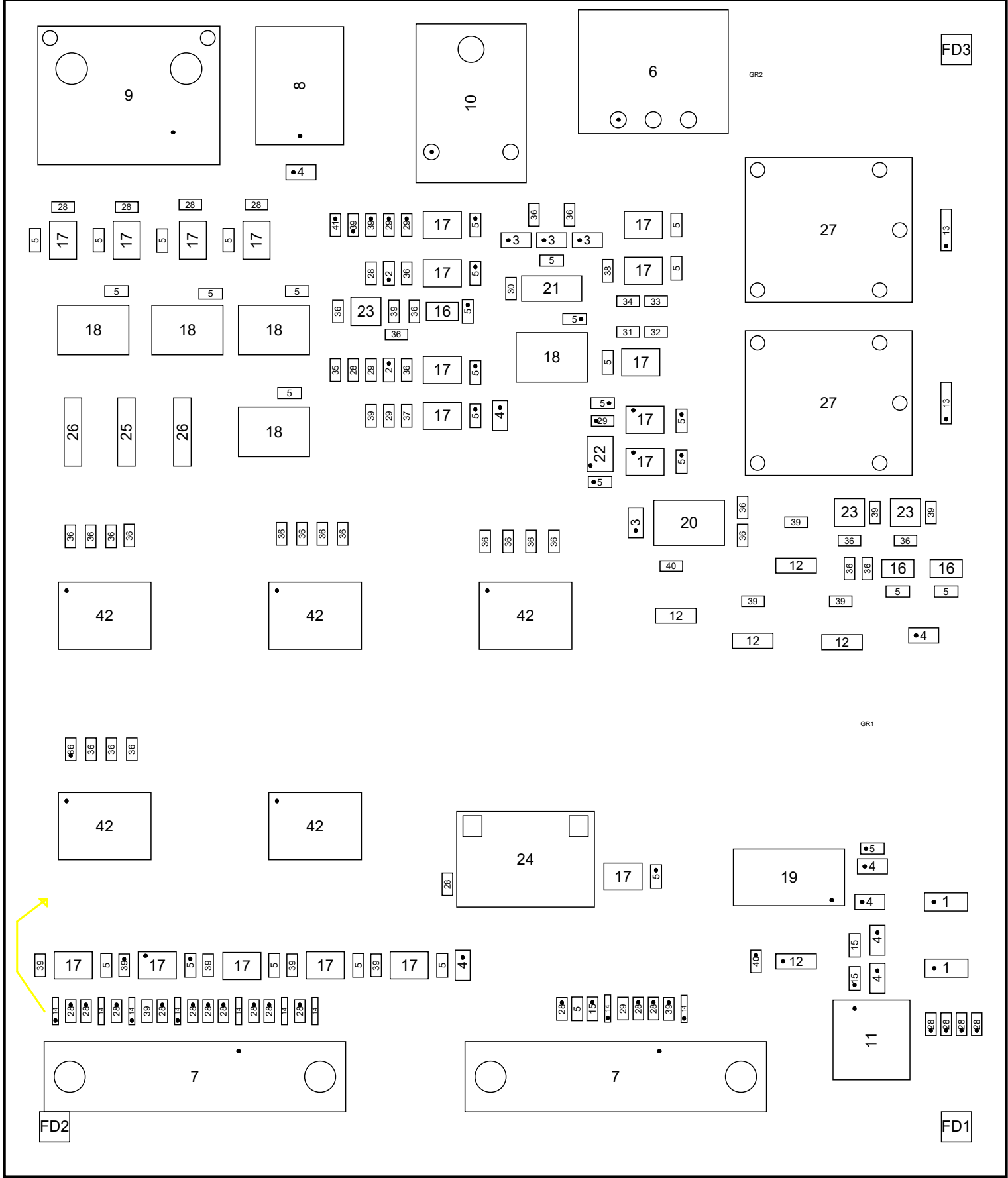
DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

View from Top side (Scale 2:1)



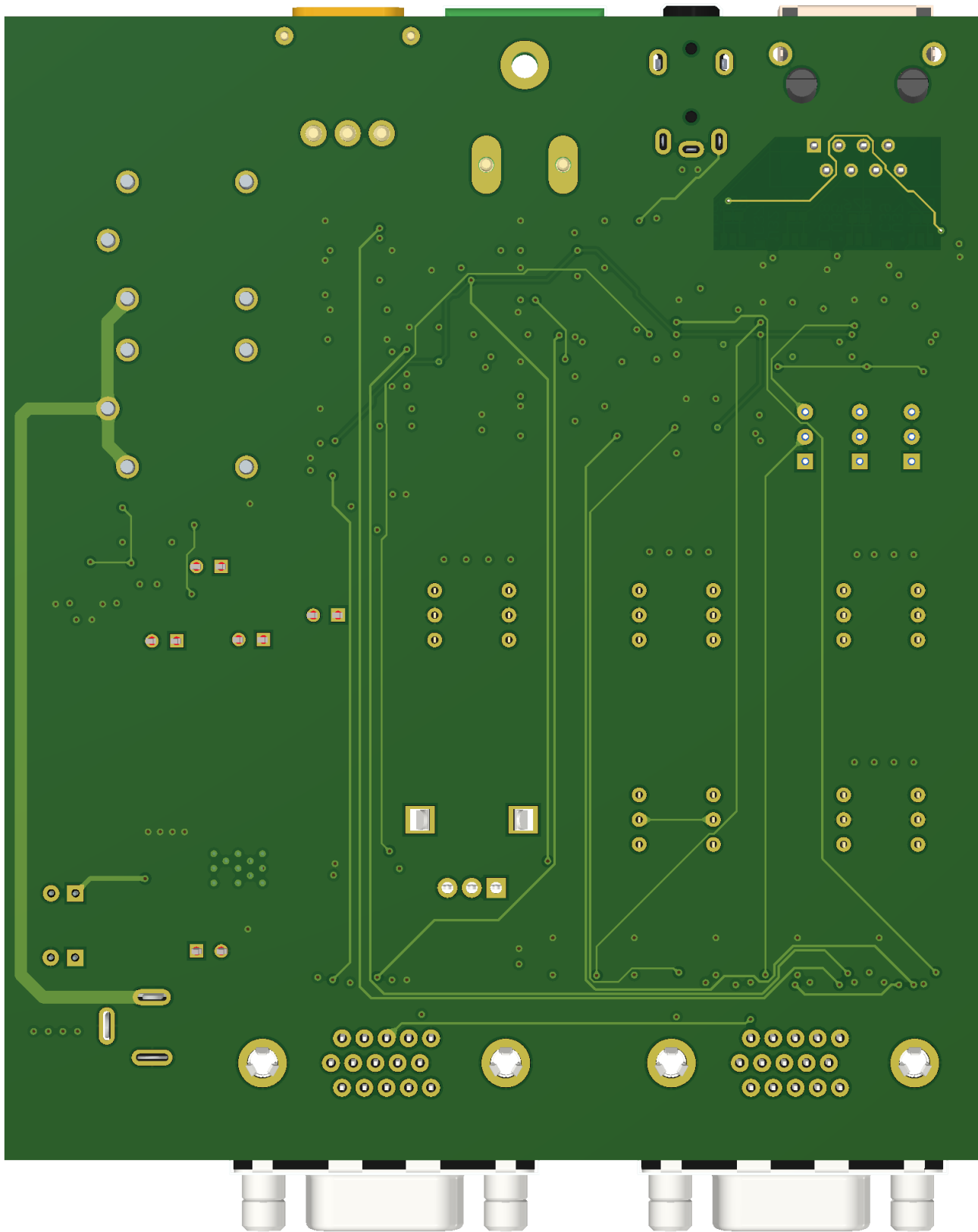
DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

Realistic View BOTTOM



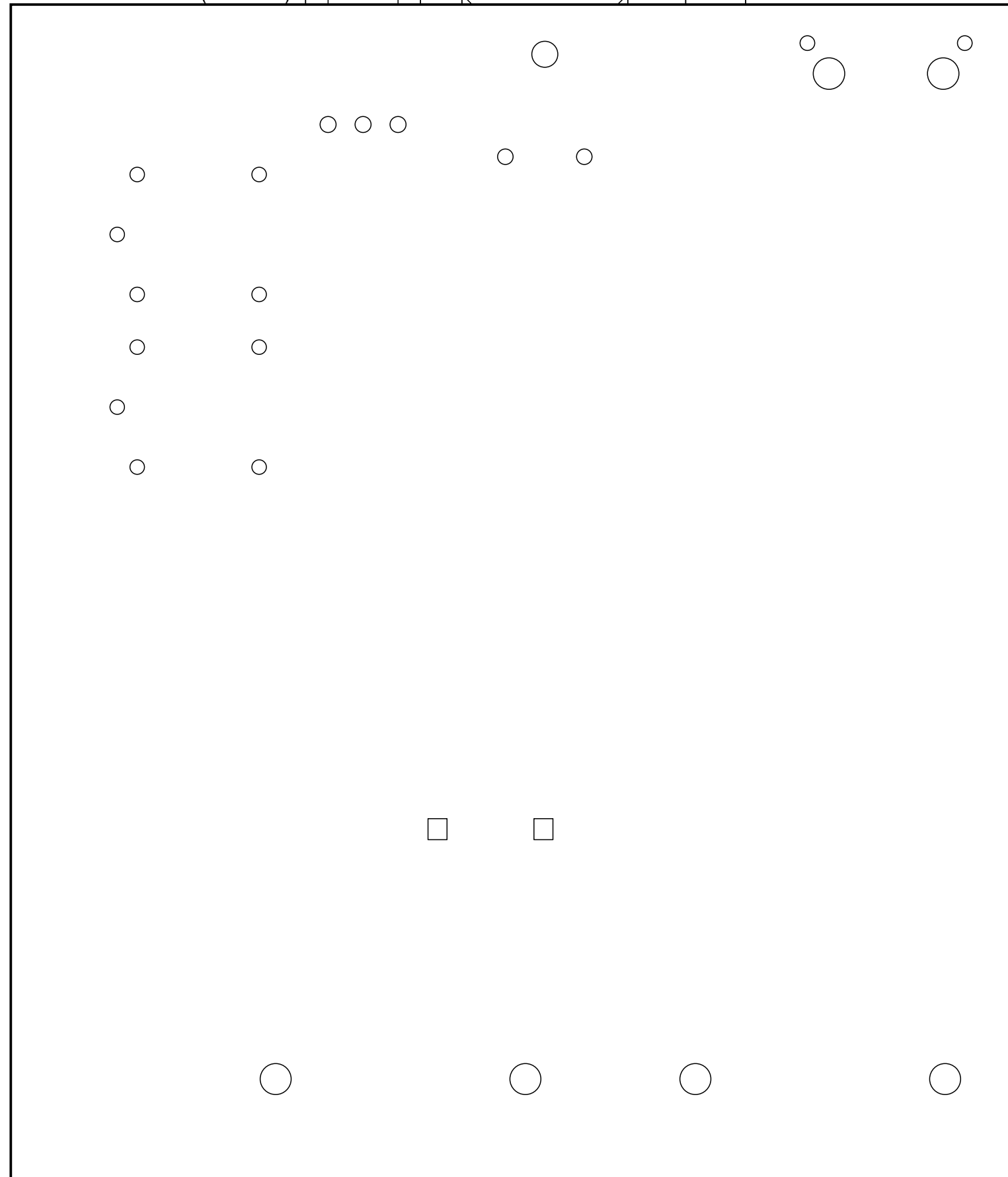
DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

View from Bottom side (Scale 2:1)



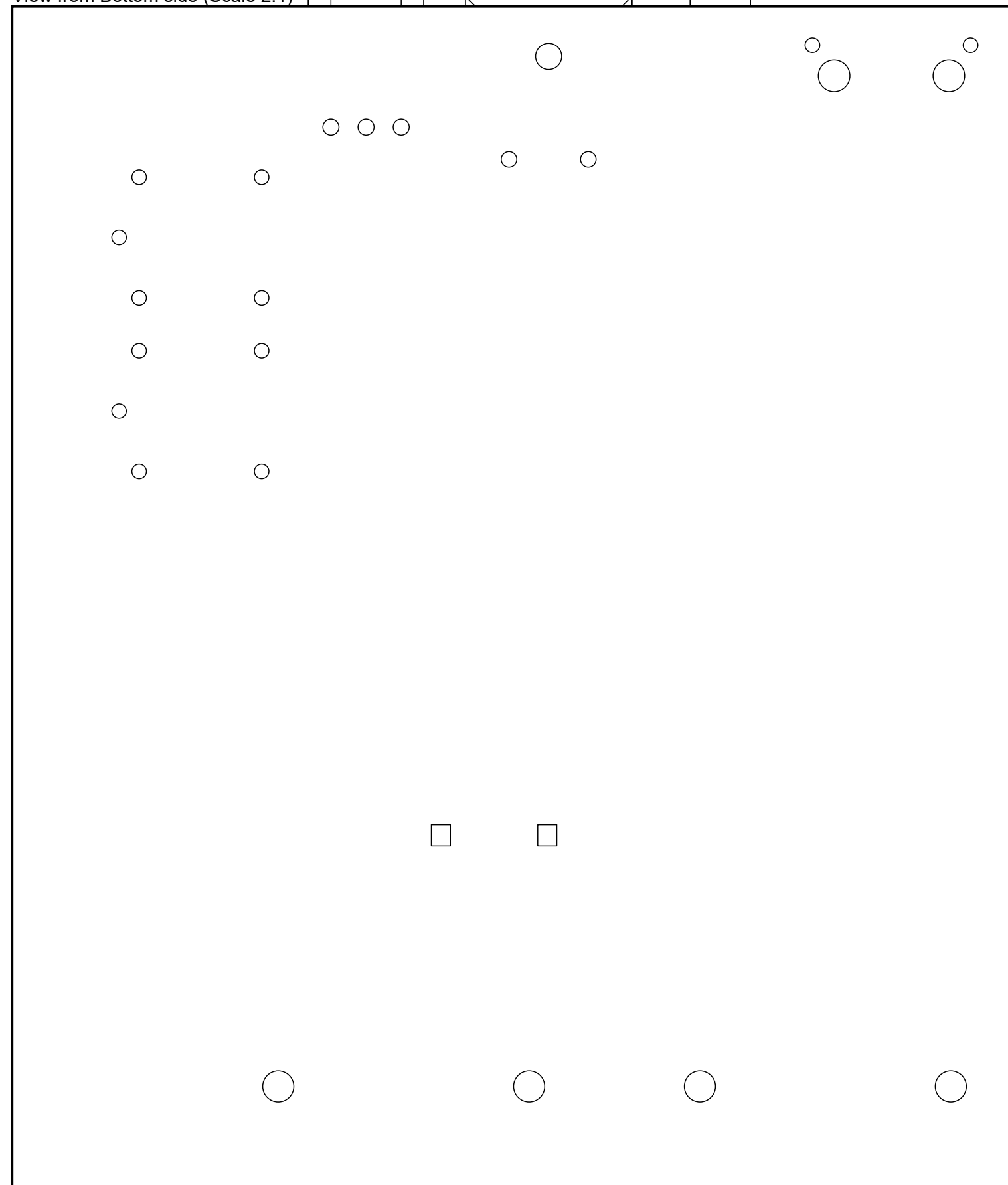
## DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

View from Bottom side (Scale 2:1)



## DIODE ORIENTATION

Name	ANODE
Short name	A
Pin number	2
Silkscreen	thin line
assembly view	no dot



Name	CATHODE
Short name	K
Pin number	1
Silkscreen	thick line / dot
assembly view	dot

A

B

C

D

E

F

G

H

1

2

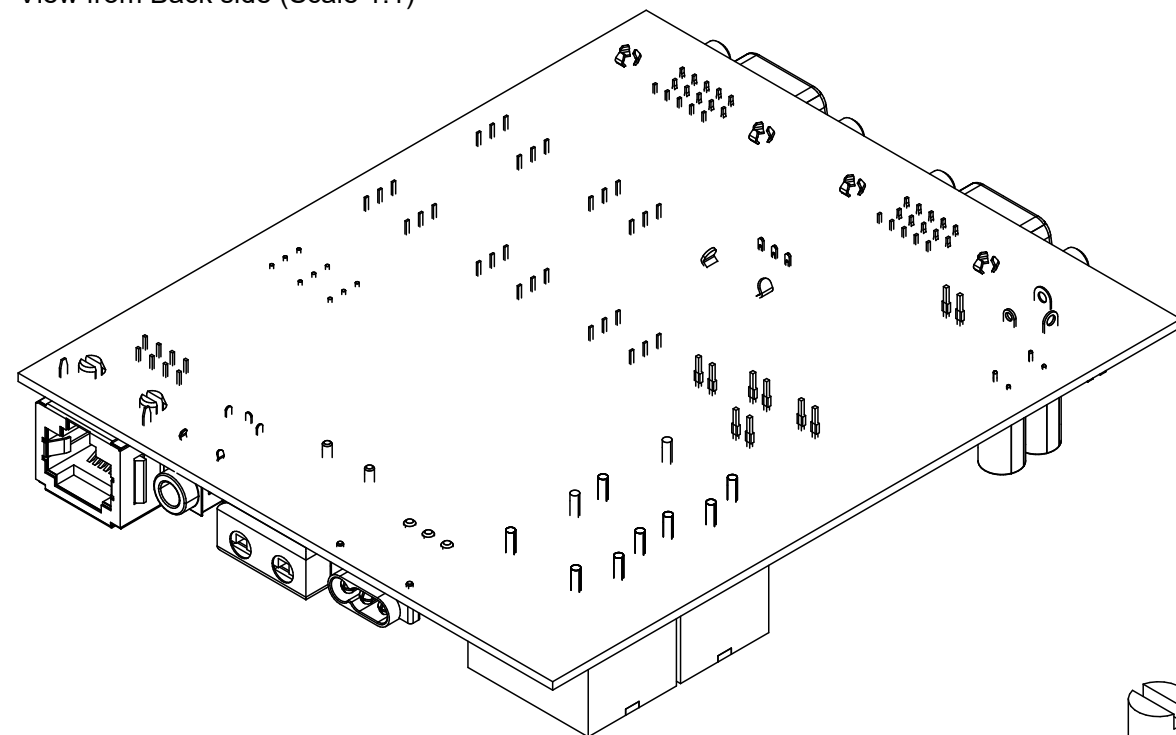
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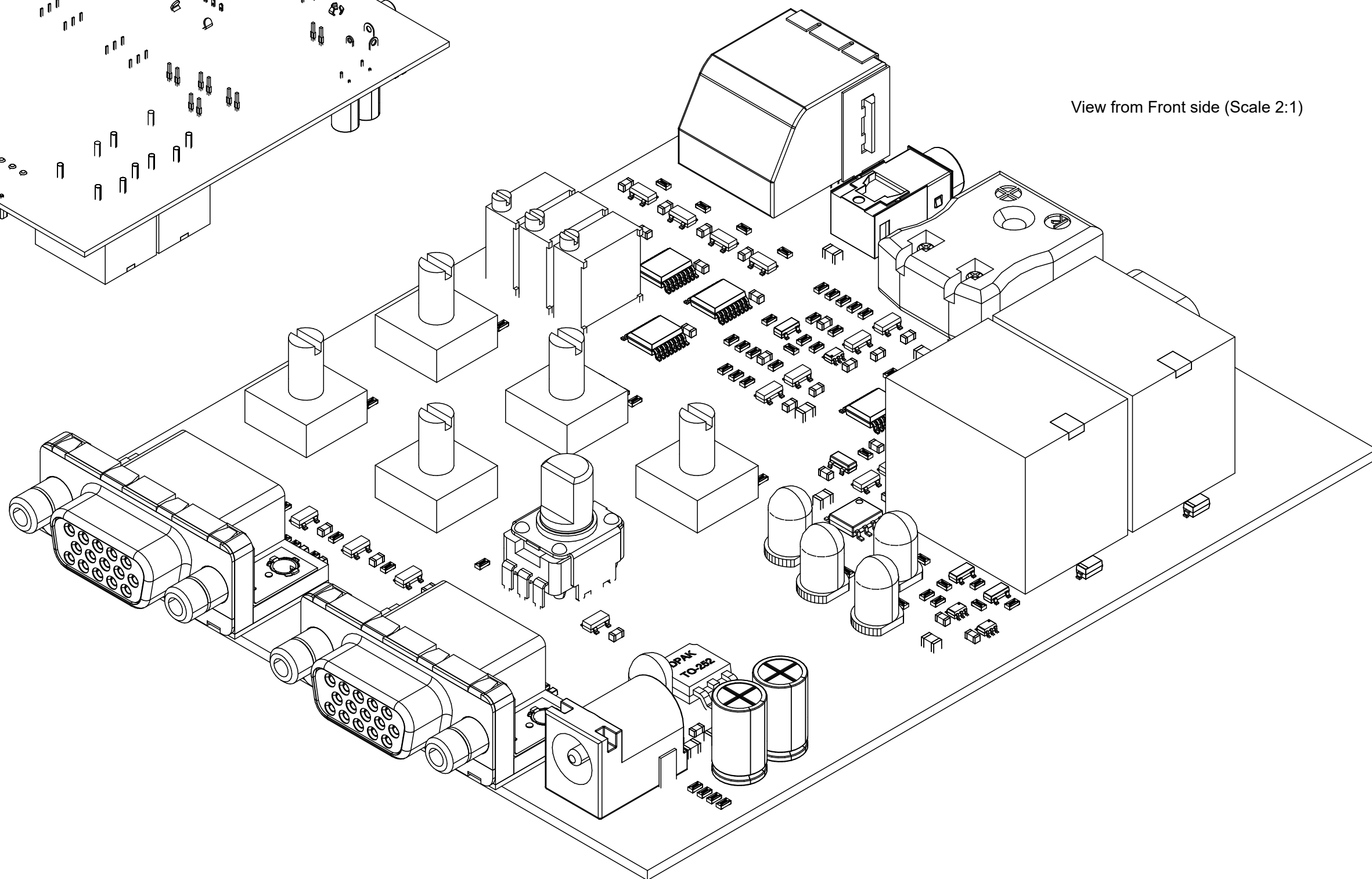
5

6

View from Back side (Scale 1:1)



View from Front side (Scale 2:1)



A

B

C

D

E

F

G

H

1

2

3

4

5

6



	A	B	C	D	E	F	G	H																																																																																																																																																																																																																																																																																																														
1	<div>Bill Of Materials</div> <table><tr><th>Line #</th><th>Description</th><th>Designator</th><th>Quantity</th><th>Manufacturer Part Number 1</th><th>Part Number</th><th>Layer</th></tr><tr><td>1</td><td>CAP THT ELEC 220uF 25V 20%</td><td>C3, C4</td><td>2</td><td>25PK220MEFC-6.3*11</td><td>1a28df19-6d3e-4a71-836c-f22920f8e8ab</td><td></td></tr><tr><td>2</td><td>CAP SMD MLCC 10nF 50V 0603 X7R</td><td>C19, C20</td><td>2</td><td>CC0603KRX7R9BB103</td><td>84e1ebe1-2230-4987-8231-c47d83fa5f7f</td><td></td></tr><tr><td>3</td><td>CAP SMD MLCC 10uF 25V 0805 X5R</td><td>C26, C27, C28, C29</td><td>4</td><td>CL21A106KAYNNNE</td><td>1ffbe5a9-0884-4740-bdad-20a6a98400e6</td><td></td></tr><tr><td>4</td><td>CAP SMD MLCC 22uF 25V 0805 X5R</td><td>C1, C2, C5, C6, C10, C11, C12, C13</td><td>8</td><td>CL21A106KAYNNNE</td><td>4e18e584-a077-4dfe-b9da-5e528e787323</td><td></td></tr><tr><td>5</td><td>CAP SMD MLCC 100nF 25V 0603 X7R</td><td>C7, C8, C9, C14, C15, C16, C17, C18, C21, C22, C23, C24, C25, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48</td><td>32</td><td>CL10B104KA8NNNC</td><td>02841f84-ac15-41b5-9e17-915f8f067828</td><td></td></tr><tr><td>6</td><td>CONN DC 3 POLE 15A PCB MALE</td><td>P7</td><td>1</td><td>MR30PW-M</td><td>8565bfd1-7a71-455a-a363-4ce9dda60de6</td><td></td></tr><tr><td>7</td><td>CONN D-SUB HD 15POLES BLACK THT</td><td>P2, P4</td><td>2</td><td>ICD15S13E4GV00LF</td><td>af155709-b835-40ac-b9b5-4a44b0fd2777</td><td></td></tr><tr><td>8</td><td>CONN JACK 3.5MM 4POLE THT</td><td>P5</td><td>1</td><td>FC68125</td><td>3e3c57e9-f1b8-4c12-8bb1-97da9eb9c220</td><td></td></tr><tr><td>9</td><td>CONN RJ45 SHIELDED</td><td>P3</td><td>1</td><td>5555153-1</td><td>f401b84a-9695-45b1-951e-00bef0039069</td><td></td></tr><tr><td>10</td><td>CONN THERMOCOUPLE K-TYPE THT</td><td>P6</td><td>1</td><td>IM-K-PCB</td><td>44088476-53fa-4578-a611-1fd63affe7b4</td><td></td></tr><tr><td>11</td><td>CONN THT DC JACK 0.5A 30VDC 5Kcycles</td><td>P1</td><td>1</td><td>DC-005A-20A</td><td>b53db51a-1725-412b-9039-fa7a45c7c438</td><td></td></tr><tr><td>12</td><td>DIODE LED THT 5MM RED 200mcd</td><td>D1, D9, D10, D11, D12</td><td>5</td><td>333-2SURD/S530-A3-L</td><td>c65ae3d2-9539-4634-8979-616a331b7494</td><td></td></tr><tr><td>13</td><td>DIODE SMD 100V 150mA 1.5Vf SOD-123 4148</td><td>D7, D8</td><td>2</td><td>1N4148W-TP</td><td>5e920700-75df-48e3-84dd-8f9f777caed8</td><td></td></tr><tr><td>14</td><td>DIODE SMD TVS 5V BIDIRECTIONAL SOD-523</td><td>D2, D3, D4, D5, D6, D13, D14, D15, D16</td><td>9</td><td>PESD5V0S1BBN</td><td>daa58212-38e2-4326-a156-8e48058c46f1</td><td></td></tr><tr><td>15</td><td>FER SMD CHIP 0603 800mA 1K@100MHz 300mOhm</td><td>L1, L2, L3</td><td>3</td><td>MPZ1608S102ATA00</td><td>a4b2e015-bf25-47b8-954c-a5b040744a3a</td><td></td></tr><tr><td>16</td><td>IC LOGIC PORT CONFIGURABLE AND, OR, NAND, NOR, XOR, BUFFER, NOT 8ns 74XX58 SC-70</td><td>U15, U24, U25</td><td>3</td><td>NC7SZ58P6X</td><td>22da43c7-1950-42f4-bc93-10d9cca79b4d</td><td></td></tr><tr><td>17</td><td>IC OPAMP 65uV 1pA RRIO 5V 80mA SOT-23-5</td><td>U2, U4, U10, U11, U13, U14, U17, U18, U19, U21, U27, U28, U29, U31, U32, U34, U35, U37, U38</td><td>19</td><td>AD8605ARTZ</td><td>5610e9ea-bca8-49b2-8e5f-11409231f6a4</td><td></td></tr><tr><td>18</td><td>IC PGA G0-4094 SPI-PARALLEL 5V RRIO SSOP-16</td><td>U12, U30, U33, U36, U39</td><td>5</td><td>LTC6915CGN#PBF</td><td>59fe82cd-fd18-4813-9f52-e2e78a460aff</td><td></td></tr><tr><td>19</td><td>IC SMD LINEAR VOLTAGE REGULATOR 5V 500mA DPAK/TO-252</td><td>U1</td><td>1</td><td>L78M05ABDT-TR</td><td>446536aa-1bdd-4764-8cae-49f4e0c126ff</td><td></td></tr><tr><td>20</td><td>IC SMD TIMER NE555 SOIC-8</td><td>U26</td><td>1</td><td>NE555DR</td><td>d16ab88a-2543-469a-8940-7b800b633548</td><td></td></tr><tr><td>21</td><td>IC THERMOCOUPLE AMPLIFIER MSOP-8</td><td>U20</td><td>1</td><td>AD8495ARMZ-R7</td><td>8cc7f909-42c7-4251-909a-43740f41a1ca</td><td></td></tr><tr><td>22</td><td>IC VOLTAGE REF SERIES 2.5V 75ppm 0.2% SOT-23</td><td>U3</td><td>1</td><td>REF3025AIDBZR</td><td>0de0df07-6dfd-42d8-9fe7-171c27772811</td><td></td></tr><tr><td>23</td><td>MOSFET N-CHANNEL LOGIC LEVEL 300mA 3ohm 60V ESD-PROT 2N7002K SOT-23</td><td>U16, U22, U23</td><td>3</td><td>2N7002KT1G</td><td>3a318f0a-3b94-47d9-91d5-8fc0a2f410e8</td><td></td></tr><tr><td>24</td><td>POT 10K 20% SHAFT 6mmx7.4mm LIN</td><td>R35</td><td>1</td><td>RK09K1130A6S</td><td>3df905ea-1e80-4add-859d-a36edd7f106c</td><td></td></tr><tr><td>25</td><td>POT TRIMMER LINEAR 10K 25TURNS VERT THT</td><td>R72</td><td>1</td><td>3296W-1-103LF</td><td>613f65ed-4d8d-44d0-9fe5-67eff78392c9</td><td></td></tr><tr><td>26</td><td>POT TRIMMER LINEAR 50K 25TURNS VERT THT</td><td>R70, R73</td><td>2</td><td>3296W-1-503LF</td><td>90164141-8820-4471-9a6f-9a984ce9068c</td><td></td></tr><tr><td>27</td><td>RELAY SPDT 10A 250VAC 12VDC SUBMINIATURE</td><td>K1, K2</td><td>2</td><td>G5LE-14-DC12</td><td>daf6f3cd-58c4-4886-bcb7-b7b47a76ae08</td><td></td></tr><tr><td>28</td><td>RES SMD 0 OHM 5% 1/10W 0603</td><td>R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R31, R32, R46, R69, R74, R76, R77</td><td>24</td><td>RC0603JR-070RL</td><td>6ae227f9-847f-4766-8522-e11a83531204</td><td></td></tr><tr><td>29</td><td>RES SMD 1K OHM 1% 1/10W 0603</td><td>R2, R22, R25, R37, R38, R40</td><td>6</td><td>RC0603FR-071KL</td><td>a678220f-9e9d-4863-a833-9993504f723c</td><td></td></tr><tr><td>30</td><td>RES SMD 1M OHM 1% 1/10W 0603</td><td>R50</td><td>1</td><td>RC0603FR-071ML</td><td>99181d84-3ebc-4ea4-8625-26dc8592276c</td><td></td></tr><tr><td>31</td><td>RES SMD 1.2K OHM 1% 1/10W 0603</td><td>R62</td><td>1</td><td>RC0603FR-071K2L</td><td>2f6201d5-48c6-41ab-ab40-2cc6255291b8</td><td></td></tr><tr><td>32</td><td>RES SMD 1.5K OHM 1% 1/10W 0603</td><td>R63</td><td>1</td><td>RC0603FR-071K5L</td><td>d098bc01-c90d-4b51-91ee-1d9d1ccd8970</td><td></td></tr><tr><td>33</td><td>RES SMD 3.3K OHM 1% 1/10W 0603</td><td>R51</td><td>1</td><td>RC0603FR-073K3L</td><td>c685e076-af25-4fed-81c8-3eb7c43f01b8</td><td></td></tr><tr><td>34</td><td>RES SMD 5.6K OHM 1% 1/10W 0603</td><td>R54</td><td>1</td><td>RC0603FR-075K6L</td><td>afc45e5f-a770-4ee7-b734-99356076b47f</td><td></td></tr><tr><td>35</td><td>RES SMD 10 OHM 0.1% 1/16W 25ppm 0603</td><td>R45</td><td>1</td><td>TC0325B100JT5E</td><td>f0166db1-b7e4-4c18-9511-2907615c1c51</td><td></td></tr><tr><td>36</td><td>RES SMD 10K OHM 1% 1/10W 0603</td><td>R27, R28, R29, R30, R33, R34, R36, R42, R43, R48, R49, R55, R56, R57, R58, R61, R64, R78, R79, R80, R81, R82, R83, R84, R85, R87, R88, R89, R90</td><td>29</td><td>RC0603FR-0710KL</td><td>93242766-ba1d-462d-b58f-ce1dfc4129c8</td><td></td></tr><tr><td>37</td><td>RES SMD 24K OHM 1% 1/10W 0603</td><td>R39</td><td>1</td><td>RC0603FR-0724KL</td><td>89bb9559-07ab-4a9e-ba67-95cb66f30425</td><td></td></tr><tr><td>38</td><td>RES SMD 39K OHM 1% 1/10W 0603</td><td>R60</td><td>1</td><td>RC0603FR-0739KL</td><td>10a824dc-98f1-41df-91f2-219e0508d035</td><td></td></tr><tr><td>39</td><td>RES SMD 100 OHM 1% 1/10W 0603</td><td>R3, R21, R23, R24, R41, R44, R47, R52, R53, R65, R66, R67, R68, R71, R75, R86</td><td>16</td><td>RC0603FR-07100RL</td><td>0a6c4b74-f837-4563-b154-6e196d753525</td><td></td></tr><tr><td>40</td><td>RES SMD 330 OHM 1% 1/10W 0603</td><td>R1, R59</td><td>2</td><td>RC0603FR-07330RL</td><td>e8555d7b-eeda-4727-b2e1-550cdc03d819</td><td></td></tr><tr><td>41</td><td>RES SMD 499 OHM 1% 1/10W 0603</td><td>R26</td><td>1</td><td>RC0603FR-07499RL</td><td>3a10051a-dd65-4121-b0b9-1b40351a1843</td><td></td></tr><tr><td>42</td><td>SWITCH ROTARY HEX/BCD 16 POSITIONS</td><td>U5, U6, U7, U8, U9</td><td>5</td><td>A6R-162RS</td><td>bbf157ad-cd7a-4e82-97e3-d6a037590888</td><td></td></tr></table>								Line #	Description	Designator	Quantity	Manufacturer Part Number 1	Part Number	Layer	1	CAP THT ELEC 220uF 25V 20%	C3, C4	2	25PK220MEFC-6.3*11	1a28df19-6d3e-4a71-836c-f22920f8e8ab		2	CAP SMD MLCC 10nF 50V 0603 X7R	C19, C20	2	CC0603KRX7R9BB103	84e1ebe1-2230-4987-8231-c47d83fa5f7f		3	CAP SMD MLCC 10uF 25V 0805 X5R	C26, C27, C28, C29	4	CL21A106KAYNNNE	1ffbe5a9-0884-4740-bdad-20a6a98400e6		4	CAP SMD MLCC 22uF 25V 0805 X5R	C1, C2, C5, C6, C10, C11, C12, C13	8	CL21A106KAYNNNE	4e18e584-a077-4dfe-b9da-5e528e787323		5	CAP SMD MLCC 100nF 25V 0603 X7R	C7, C8, C9, C14, C15, C16, C17, C18, C21, C22, C23, C24, C25, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48	32	CL10B104KA8NNNC	02841f84-ac15-41b5-9e17-915f8f067828		6	CONN DC 3 POLE 15A PCB MALE	P7	1	MR30PW-M	8565bfd1-7a71-455a-a363-4ce9dda60de6		7	CONN D-SUB HD 15POLES BLACK THT	P2, P4	2	ICD15S13E4GV00LF	af155709-b835-40ac-b9b5-4a44b0fd2777		8	CONN JACK 3.5MM 4POLE THT	P5	1	FC68125	3e3c57e9-f1b8-4c12-8bb1-97da9eb9c220		9	CONN RJ45 SHIELDED	P3	1	5555153-1	f401b84a-9695-45b1-951e-00bef0039069		10	CONN THERMOCOUPLE K-TYPE THT	P6	1	IM-K-PCB	44088476-53fa-4578-a611-1fd63affe7b4		11	CONN THT DC JACK 0.5A 30VDC 5Kcycles	P1	1	DC-005A-20A	b53db51a-1725-412b-9039-fa7a45c7c438		12	DIODE LED THT 5MM RED 200mcd	D1, D9, D10, D11, D12	5	333-2SURD/S530-A3-L	c65ae3d2-9539-4634-8979-616a331b7494		13	DIODE SMD 100V 150mA 1.5Vf SOD-123 4148	D7, D8	2	1N4148W-TP	5e920700-75df-48e3-84dd-8f9f777caed8		14	DIODE SMD TVS 5V BIDIRECTIONAL SOD-523	D2, D3, D4, D5, D6, D13, D14, D15, D16	9	PESD5V0S1BBN	daa58212-38e2-4326-a156-8e48058c46f1		15	FER SMD CHIP 0603 800mA 1K@100MHz 300mOhm	L1, L2, L3	3	MPZ1608S102ATA00	a4b2e015-bf25-47b8-954c-a5b040744a3a		16	IC LOGIC PORT CONFIGURABLE AND, OR, NAND, NOR, XOR, BUFFER, NOT 8ns 74XX58 SC-70	U15, U24, U25	3	NC7SZ58P6X	22da43c7-1950-42f4-bc93-10d9cca79b4d		17	IC OPAMP 65uV 1pA RRIO 5V 80mA SOT-23-5	U2, U4, U10, U11, U13, U14, U17, U18, U19, U21, U27, U28, U29, U31, U32, U34, U35, U37, U38	19	AD8605ARTZ	5610e9ea-bca8-49b2-8e5f-11409231f6a4		18	IC PGA G0-4094 SPI-PARALLEL 5V RRIO SSOP-16	U12, U30, U33, U36, U39	5	LTC6915CGN#PBF	59fe82cd-fd18-4813-9f52-e2e78a460aff		19	IC SMD LINEAR VOLTAGE REGULATOR 5V 500mA DPAK/TO-252	U1	1	L78M05ABDT-TR	446536aa-1bdd-4764-8cae-49f4e0c126ff		20	IC SMD TIMER NE555 SOIC-8	U26	1	NE555DR	d16ab88a-2543-469a-8940-7b800b633548		21	IC THERMOCOUPLE AMPLIFIER MSOP-8	U20	1	AD8495ARMZ-R7	8cc7f909-42c7-4251-909a-43740f41a1ca		22	IC VOLTAGE REF SERIES 2.5V 75ppm 0.2% SOT-23	U3	1	REF3025AIDBZR	0de0df07-6dfd-42d8-9fe7-171c27772811		23	MOSFET N-CHANNEL LOGIC LEVEL 300mA 3ohm 60V ESD-PROT 2N7002K SOT-23	U16, U22, U23	3	2N7002KT1G	3a318f0a-3b94-47d9-91d5-8fc0a2f410e8		24	POT 10K 20% SHAFT 6mmx7.4mm LIN	R35	1	RK09K1130A6S	3df905ea-1e80-4add-859d-a36edd7f106c		25	POT TRIMMER LINEAR 10K 25TURNS VERT THT	R72	1	3296W-1-103LF	613f65ed-4d8d-44d0-9fe5-67eff78392c9		26	POT TRIMMER LINEAR 50K 25TURNS VERT THT	R70, R73	2	3296W-1-503LF	90164141-8820-4471-9a6f-9a984ce9068c		27	RELAY SPDT 10A 250VAC 12VDC SUBMINIATURE	K1, K2	2	G5LE-14-DC12	daf6f3cd-58c4-4886-bcb7-b7b47a76ae08		28	RES SMD 0 OHM 5% 1/10W 0603	R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R31, R32, R46, R69, R74, R76, R77	24	RC0603JR-070RL	6ae227f9-847f-4766-8522-e11a83531204		29	RES SMD 1K OHM 1% 1/10W 0603	R2, R22, R25, R37, R38, R40	6	RC0603FR-071KL	a678220f-9e9d-4863-a833-9993504f723c		30	RES SMD 1M OHM 1% 1/10W 0603	R50	1	RC0603FR-071ML	99181d84-3ebc-4ea4-8625-26dc8592276c		31	RES SMD 1.2K OHM 1% 1/10W 0603	R62	1	RC0603FR-071K2L	2f6201d5-48c6-41ab-ab40-2cc6255291b8		32	RES SMD 1.5K OHM 1% 1/10W 0603	R63	1	RC0603FR-071K5L	d098bc01-c90d-4b51-91ee-1d9d1ccd8970		33	RES SMD 3.3K OHM 1% 1/10W 0603	R51	1	RC0603FR-073K3L	c685e076-af25-4fed-81c8-3eb7c43f01b8		34	RES SMD 5.6K OHM 1% 1/10W 0603	R54	1	RC0603FR-075K6L	afc45e5f-a770-4ee7-b734-99356076b47f		35	RES SMD 10 OHM 0.1% 1/16W 25ppm 0603	R45	1	TC0325B100JT5E	f0166db1-b7e4-4c18-9511-2907615c1c51		36	RES SMD 10K OHM 1% 1/10W 0603	R27, R28, R29, R30, R33, R34, R36, R42, R43, R48, R49, R55, R56, R57, R58, R61, R64, R78, R79, R80, R81, R82, R83, R84, R85, R87, R88, R89, R90	29	RC0603FR-0710KL	93242766-ba1d-462d-b58f-ce1dfc4129c8		37	RES SMD 24K OHM 1% 1/10W 0603	R39	1	RC0603FR-0724KL	89bb9559-07ab-4a9e-ba67-95cb66f30425		38	RES SMD 39K OHM 1% 1/10W 0603	R60	1	RC0603FR-0739KL	10a824dc-98f1-41df-91f2-219e0508d035		39	RES SMD 100 OHM 1% 1/10W 0603	R3, R21, R23, R24, R41, R44, R47, R52, R53, R65, R66, R67, R68, R71, R75, R86	16	RC0603FR-07100RL	0a6c4b74-f837-4563-b154-6e196d753525		40	RES SMD 330 OHM 1% 1/10W 0603	R1, R59	2	RC0603FR-07330RL	e8555d7b-eeda-4727-b2e1-550cdc03d819		41	RES SMD 499 OHM 1% 1/10W 0603	R26	1	RC0603FR-07499RL	3a10051a-dd65-4121-b0b9-1b40351a1843		42	SWITCH ROTARY HEX/BCD 16 POSITIONS	U5, U6, U7, U8, U9	5	A6R-162RS	bbf157ad-cd7a-4e82-97e3-d6a037590888		1
Line #	Description	Designator	Quantity	Manufacturer Part Number 1	Part Number	Layer																																																																																																																																																																																																																																																																																																																
1	CAP THT ELEC 220uF 25V 20%	C3, C4	2	25PK220MEFC-6.3*11	1a28df19-6d3e-4a71-836c-f22920f8e8ab																																																																																																																																																																																																																																																																																																																	
2	CAP SMD MLCC 10nF 50V 0603 X7R	C19, C20	2	CC0603KRX7R9BB103	84e1ebe1-2230-4987-8231-c47d83fa5f7f																																																																																																																																																																																																																																																																																																																	
3	CAP SMD MLCC 10uF 25V 0805 X5R	C26, C27, C28, C29	4	CL21A106KAYNNNE	1ffbe5a9-0884-4740-bdad-20a6a98400e6																																																																																																																																																																																																																																																																																																																	
4	CAP SMD MLCC 22uF 25V 0805 X5R	C1, C2, C5, C6, C10, C11, C12, C13	8	CL21A106KAYNNNE	4e18e584-a077-4dfe-b9da-5e528e787323																																																																																																																																																																																																																																																																																																																	
5	CAP SMD MLCC 100nF 25V 0603 X7R	C7, C8, C9, C14, C15, C16, C17, C18, C21, C22, C23, C24, C25, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48	32	CL10B104KA8NNNC	02841f84-ac15-41b5-9e17-915f8f067828																																																																																																																																																																																																																																																																																																																	
6	CONN DC 3 POLE 15A PCB MALE	P7	1	MR30PW-M	8565bfd1-7a71-455a-a363-4ce9dda60de6																																																																																																																																																																																																																																																																																																																	
7	CONN D-SUB HD 15POLES BLACK THT	P2, P4	2	ICD15S13E4GV00LF	af155709-b835-40ac-b9b5-4a44b0fd2777																																																																																																																																																																																																																																																																																																																	
8	CONN JACK 3.5MM 4POLE THT	P5	1	FC68125	3e3c57e9-f1b8-4c12-8bb1-97da9eb9c220																																																																																																																																																																																																																																																																																																																	
9	CONN RJ45 SHIELDED	P3	1	5555153-1	f401b84a-9695-45b1-951e-00bef0039069																																																																																																																																																																																																																																																																																																																	
10	CONN THERMOCOUPLE K-TYPE THT	P6	1	IM-K-PCB	44088476-53fa-4578-a611-1fd63affe7b4																																																																																																																																																																																																																																																																																																																	
11	CONN THT DC JACK 0.5A 30VDC 5Kcycles	P1	1	DC-005A-20A	b53db51a-1725-412b-9039-fa7a45c7c438																																																																																																																																																																																																																																																																																																																	
12	DIODE LED THT 5MM RED 200mcd	D1, D9, D10, D11, D12	5	333-2SURD/S530-A3-L	c65ae3d2-9539-4634-8979-616a331b7494																																																																																																																																																																																																																																																																																																																	
13	DIODE SMD 100V 150mA 1.5Vf SOD-123 4148	D7, D8	2	1N4148W-TP	5e920700-75df-48e3-84dd-8f9f777caed8																																																																																																																																																																																																																																																																																																																	
14	DIODE SMD TVS 5V BIDIRECTIONAL SOD-523	D2, D3, D4, D5, D6, D13, D14, D15, D16	9	PESD5V0S1BBN	daa58212-38e2-4326-a156-8e48058c46f1																																																																																																																																																																																																																																																																																																																	
15	FER SMD CHIP 0603 800mA 1K@100MHz 300mOhm	L1, L2, L3	3	MPZ1608S102ATA00	a4b2e015-bf25-47b8-954c-a5b040744a3a																																																																																																																																																																																																																																																																																																																	
16	IC LOGIC PORT CONFIGURABLE AND, OR, NAND, NOR, XOR, BUFFER, NOT 8ns 74XX58 SC-70	U15, U24, U25	3	NC7SZ58P6X	22da43c7-1950-42f4-bc93-10d9cca79b4d																																																																																																																																																																																																																																																																																																																	
17	IC OPAMP 65uV 1pA RRIO 5V 80mA SOT-23-5	U2, U4, U10, U11, U13, U14, U17, U18, U19, U21, U27, U28, U29, U31, U32, U34, U35, U37, U38	19	AD8605ARTZ	5610e9ea-bca8-49b2-8e5f-11409231f6a4																																																																																																																																																																																																																																																																																																																	
18	IC PGA G0-4094 SPI-PARALLEL 5V RRIO SSOP-16	U12, U30, U33, U36, U39	5	LTC6915CGN#PBF	59fe82cd-fd18-4813-9f52-e2e78a460aff																																																																																																																																																																																																																																																																																																																	
19	IC SMD LINEAR VOLTAGE REGULATOR 5V 500mA DPAK/TO-252	U1	1	L78M05ABDT-TR	446536aa-1bdd-4764-8cae-49f4e0c126ff																																																																																																																																																																																																																																																																																																																	
20	IC SMD TIMER NE555 SOIC-8	U26	1	NE555DR	d16ab88a-2543-469a-8940-7b800b633548																																																																																																																																																																																																																																																																																																																	
21	IC THERMOCOUPLE AMPLIFIER MSOP-8	U20	1	AD8495ARMZ-R7	8cc7f909-42c7-4251-909a-43740f41a1ca																																																																																																																																																																																																																																																																																																																	
22	IC VOLTAGE REF SERIES 2.5V 75ppm 0.2% SOT-23	U3	1	REF3025AIDBZR	0de0df07-6dfd-42d8-9fe7-171c27772811																																																																																																																																																																																																																																																																																																																	
23	MOSFET N-CHANNEL LOGIC LEVEL 300mA 3ohm 60V ESD-PROT 2N7002K SOT-23	U16, U22, U23	3	2N7002KT1G	3a318f0a-3b94-47d9-91d5-8fc0a2f410e8																																																																																																																																																																																																																																																																																																																	
24	POT 10K 20% SHAFT 6mmx7.4mm LIN	R35	1	RK09K1130A6S	3df905ea-1e80-4add-859d-a36edd7f106c																																																																																																																																																																																																																																																																																																																	
25	POT TRIMMER LINEAR 10K 25TURNS VERT THT	R72	1	3296W-1-103LF	613f65ed-4d8d-44d0-9fe5-67eff78392c9																																																																																																																																																																																																																																																																																																																	
26	POT TRIMMER LINEAR 50K 25TURNS VERT THT	R70, R73	2	3296W-1-503LF	90164141-8820-4471-9a6f-9a984ce9068c																																																																																																																																																																																																																																																																																																																	
27	RELAY SPDT 10A 250VAC 12VDC SUBMINIATURE	K1, K2	2	G5LE-14-DC12	daf6f3cd-58c4-4886-bcb7-b7b47a76ae08																																																																																																																																																																																																																																																																																																																	
28	RES SMD 0 OHM 5% 1/10W 0603	R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R31, R32, R46, R69, R74, R76, R77	24	RC0603JR-070RL	6ae227f9-847f-4766-8522-e11a83531204																																																																																																																																																																																																																																																																																																																	
29	RES SMD 1K OHM 1% 1/10W 0603	R2, R22, R25, R37, R38, R40	6	RC0603FR-071KL	a678220f-9e9d-4863-a833-9993504f723c																																																																																																																																																																																																																																																																																																																	
30	RES SMD 1M OHM 1% 1/10W 0603	R50	1	RC0603FR-071ML	99181d84-3ebc-4ea4-8625-26dc8592276c																																																																																																																																																																																																																																																																																																																	
31	RES SMD 1.2K OHM 1% 1/10W 0603	R62	1	RC0603FR-071K2L	2f6201d5-48c6-41ab-ab40-2cc6255291b8																																																																																																																																																																																																																																																																																																																	
32	RES SMD 1.5K OHM 1% 1/10W 0603	R63	1	RC0603FR-071K5L	d098bc01-c90d-4b51-91ee-1d9d1ccd8970																																																																																																																																																																																																																																																																																																																	
33	RES SMD 3.3K OHM 1% 1/10W 0603	R51	1	RC0603FR-073K3L	c685e076-af25-4fed-81c8-3eb7c43f01b8																																																																																																																																																																																																																																																																																																																	
34	RES SMD 5.6K OHM 1% 1/10W 0603	R54	1	RC0603FR-075K6L	afc45e5f-a770-4ee7-b734-99356076b47f																																																																																																																																																																																																																																																																																																																	
35	RES SMD 10 OHM 0.1% 1/16W 25ppm 0603	R45	1	TC0325B100JT5E	f0166db1-b7e4-4c18-9511-2907615c1c51																																																																																																																																																																																																																																																																																																																	
36	RES SMD 10K OHM 1% 1/10W 0603	R27, R28, R29, R30, R33, R34, R36, R42, R43, R48, R49, R55, R56, R57, R58, R61, R64, R78, R79, R80, R81, R82, R83, R84, R85, R87, R88, R89, R90	29	RC0603FR-0710KL	93242766-ba1d-462d-b58f-ce1dfc4129c8																																																																																																																																																																																																																																																																																																																	
37	RES SMD 24K OHM 1% 1/10W 0603	R39	1	RC0603FR-0724KL	89bb9559-07ab-4a9e-ba67-95cb66f30425																																																																																																																																																																																																																																																																																																																	
38	RES SMD 39K OHM 1% 1/10W 0603	R60	1	RC0603FR-0739KL	10a824dc-98f1-41df-91f2-219e0508d035																																																																																																																																																																																																																																																																																																																	
39	RES SMD 100 OHM 1% 1/10W 0603	R3, R21, R23, R24, R41, R44, R47, R52, R53, R65, R66, R67, R68, R71, R75, R86	16	RC0603FR-07100RL	0a6c4b74-f837-4563-b154-6e196d753525																																																																																																																																																																																																																																																																																																																	
40	RES SMD 330 OHM 1% 1/10W 0603	R1, R59	2	RC0603FR-07330RL	e8555d7b-eeda-4727-b2e1-550cdc03d819																																																																																																																																																																																																																																																																																																																	
41	RES SMD 499 OHM 1% 1/10W 0603	R26	1	RC0603FR-07499RL	3a10051a-dd65-4121-b0b9-1b40351a1843																																																																																																																																																																																																																																																																																																																	
42	SWITCH ROTARY HEX/BCD 16 POSITIONS	U5, U6, U7, U8, U9	5	A6R-162RS	bbf157ad-cd7a-4e82-97e3-d6a037590888																																																																																																																																																																																																																																																																																																																	
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6	<div>BOM FOR REFERENCE ONLY</div> <div>ALWAYS REFER TO THE LATEST EXCEL BOM PROVIDED</div> <div>Please consider LCSC (□□□□) as our first supplier</div>								6																																																																																																																																																																																																																																																																																																													
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