

イセーニン BILL OF MATERIALS REV 1.0.1

**HARDWARE BOARD**

VALUE	DESIGNATOR	QUANTITY	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #
560pF	C18, C19, C22, C23, C24	5	5MM LS	CERAMIC CAPACITOR	810-FA28C0G1H56100		
0.1uF	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C20, C25, C26, C27, C28, C29	22	SMT 0805	CERAMIC CAPACITOR	581-08055C104K		
10uF	C17, C21	2	5MM LS	CERAMIC CAPACITOR	810-FG28X5R1E106MR00		
BAT85S	D1, D2	2	DO-35	SCHOTTKY BARRIER RECTIFIER	78-BAT85S-TAP		
74HC595	IC1, IC2, IC3, IC4, IC5, IC6, IC7, IC18	8	DIP16	8-BIT SHIFT REGISTER WITH 3-STATE OUTPUT REGISTER	595-SN74HC595N		
74HC165	IC8, IC9, IC10, IC11	4	DIP16	8-BIT PARALLEL-IN/SERIAL-OUT SHIFT REGISTER	595-CD74HC165E		
SN74LV4051A	IC12, IC13, IC14, IC15	4	DIP16	8-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	595-SN74LV4051AN		
MCP3008	IC16	1	DIP16	8-CHANNEL 10-BIT ADC	579-MCP3008-I/P		
TL431	IC17	1	TO-92	PRECISION PROGRAMMABLE REFERENCE	595-TL431BCLP		
2N3904	Q1, Q2	2	TO-92	NPN TRANSISTOR	637-2N3904		
	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8, LED9, LED10, LED11, LED12, LED13, LED14, LED15, LED16, LED17, LED18, LED19, LED20, LED21, LED22, LED23, LED24, LED25, LED26, LED27, LED28, LED29, LED30, LED31, LED32, LED33, LED34, LED35, LED36, LED37, LED38, LED39, LED40, LED41, LED42, LED43, LED44, LED45, LED46, LED47, LED48, LED49, LED50, LED51, LED52, LED53, LED54, LED55, LED56, LED57, LED60, LED62	59		3MM RED LED	604-WP710A10ID		
0R	R100, R102, R111	3		1/4W 1% RESISTOR	MFR-25FRF52-0R		
100R	R60, R61, R62, R63, R64	5		1/4W 1% RESISTOR	MFR-25FBF52-100R		
300R	R58	1		1/4W 1% RESISTOR	MFR-25FBF52-300R		
330R	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R65, R66, R105, R106	59		1/4W 1% RESISTOR	MFR-25FBF52-330R		
470R	R57	1		1/4W 1% RESISTOR	MFR-25FBF52-470R		
1K	R59, R67, R68	3		1/4W 1% RESISTOR	MFR-25FBF52-1K		
10K	R92	1		1/4W 1% RESISTOR	MFR-25FBF52-10K		
47K	R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R93, R94, R95, R96, R97, R98, R99, R109	31		1/4W 1% RESISTOR	MFR-25FBF52-47K		
10-100K LINEAR	POT1, POT2, POT3, POT4, POT5, POT7, POT8, POT9, POT11, POT14, POT16, POT17, POT18, POT19, POT21, POT22, POT24, POT25, POT27, POT28, POT29, POT30, POT32, POT33	24		SLIDE POTENTIOMETER 30MM TRAVEL	652-PTA30432015B104		
10-100K LINEAR	POT10, POT13	2		SLIDE POTENTIOMETER 30MM TRAVEL CENTER DETENT			
10-100K LINEAR	POT6, POT12, POT15, POT20, POT26, POT31	6		D-SHAFT CENTER-DETENT POTENTIOMETER			
10-100K LINEAR	POT23	1		D-SHAFT POTENTIOMETER			
	ENC	1		11MM LOW PROFILE ENCODER	PEC11L-4220F-S0015		
	OLED	1		0.96" I2C IIC SPI SERIAL 128X64 WHITE OLED DISPLAY	<a href="https://www.ebay.com/itm/303622335179">https://www.ebay.com/itm/303622335179</a>		
	BT1, BT2, BT3, BT4, BT5, BT6, BT7, BT8, BT9, BT10, BT11, BT12, BT13, BT14, BT15, BT16, BT17, BT18, BT19, BT20, BT21, BT22, BT23, BT24, BT25, BT26, BT27, BT29	28	6x6MM	TACT SWITCH	612-TL1105SP	642-MJTP1234A	
	PLD1	1	PLD-24	2.54M PITCH 2X12 FEMALE HEADER	517-929975-01-12-RK		
	R32, R101, R110	3		DO NOT INSTALL			

**MAIN BOARD**

VALUE	DESIGNATOR	QUANTITY	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #
15uF	C201, C202, C204	3	5MM DIA / 2MM LS	ELECTROLYTHIC CAPACITOR	598-156PUM035M		
220uF	C169, C180, C182, C187	4	10MM DIA / 5MM LS	NON-POLAR ELECTROLYTHIC CAPACITOR	647-UEP1E221MPD		
22pF	C35, C36, C167, C171, C179, C181	6	5MM LS	CERAMIC CAPACITOR	810-FA28NP01H220JNU6		
47pF	C67, C68, C142, C146	4	5MM LS	CERAMIC CAPACITOR	810-FG28C0G1H470JNT6		
680pF	C10	1	5MM LS	CERAMIC CAPACITOR	594-K681K10X7RF5UH5		
1000pF	C174, C185	2	5MM LS	CERAMIC CAPACITOR	810-FG28C0G1H102JNT6		
0.01uF	C4, C5, C57, C58, C59, C60, C61, C62, C65, C66, C81, C82, C83, C84, C85, C86, C87, C88	18	5MM LS	CERAMIC CAPACITOR	810-FG28X7R1H103KNT0		
0.1uF	C129, C130, C140, C141, C147, C148	6	5MM LS	CERAMIC CAPACITOR	810-FG26C0G1H104JNT0		

0.1uF	C6, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C26, C27, C28, C32, C33, C34, C37, C38, C39, C40, C41, C42, C43, C44, C45, C47, C49, C51, C55, C56, C63, C69, C71, C73, C75, C79, C80, C90, C91, C93, C103, C105, C107, C111, C113, C122, C123, C131, C132, C133, C135, C138, C143, C144, C153, C155, C158, C168, C172, C175, C177, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C205, C208, C210, C212, C214, C216, C217, C219, C222, C223, C225, C228	88	SMT 0805	CERAMIC CAPACITOR	581-08055C104K		
0.47uF	C95, C96, C97, C98, C99, C100, C101, C102, C104, C108, C109, C110, C115, C116, C117, C118, C119, C120, C121, C124, C126, C128, C149, C150, C159, C161, C162, C165, C166, C200, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C243, C244	42	5MM LS	CERAMIC CAPACITOR	810-FA24X7R1E47400		
1uF	C2, C183, C184, C186, C188	5	5MM LS	CERAMIC CAPACITOR	810-FG28X5R1H105KRT0		
2.2uF	C29, C30, C31	3	5MM LS	CERAMIC CAPACITOR	810-FG26X7R1E225KNT6		
4.7uF	C25, C46, C48, C50, C52, C53, C54, C64, C70, C72, C74, C76, C77, C78, C89, C92, C94, C106, C112, C114, C134, C136, C137, C154, C156, C157, C218, C220, C221, C224, C226, C227	32	5MM LS	CERAMIC CAPACITOR	810-FG24X7R1E475KRT6		
10uF	C170, C173, C176, C178, C206, C207, C209, C211, C213, C215	10	5MM LS	CERAMIC CAPACITOR	810-FG28X5R1E106MR00		
STM32H747IIT6	IC4	1	LQFP-144	DUAL ARM CORTEX-M7 32 BIT MCU	<b>PREINSTALLED</b>		
MAX5134AGTG	IC12, IC13, IC14, IC15	4	TQFN-EP-24	QUAD 16 BIT VOLTAGE-OUTPUT DAC	<b>PREINSTALLED</b>		
MAX5590	IC17, IC26	2	TSSOP28	OCTAL 12 BIT VOLTAGE-OUTPUT DAC	<b>PREINSTALLED</b>		
MAX5592	IC19, IC23, IC40, IC41	4	TSSOP28	OCTAL 10 BIT VOLTAGE-OUTPUT DAC	<b>PREINSTALLED</b>		
TPA152	IC34	1	SOIC8	75-mW STEREO AUDIO POWER AMPLIFIER	<b>PREINSTALLED</b>		
WM8782	IC37	1	SSOP-20	24-BIT 192kHz STEREO ADC	<b>PREINSTALLED</b>		
PIC12F675	NOISE	1	DIP8	NOISE GENERATOR	<b>INCLUDED</b>		
BAT85S	D1, D2	2	DO-35	SCHOTTKY BARRIER RECTIFIER	78-BAT85S-TAP		
TL064	IC1, IC24, IC25	3	DIP14	QUAD OPERATIONAL AMPLIFIER	595-TL064IN		
TL062	IC2, IC21, IC29, IC30, IC31	5	DIP8	DUAL OPERATIONAL AMPLIFIER	595-TL062IP		
TL061	IC18	1	DIP8	OPERATIONAL AMPLIFIER	595-TL061IP		
DG202	IC3, IC36	2	DIP16	SPST CMOS ANALOG SWITCH	781-DG202BDJ-E3		
SST25VF080B	IC5	1	DIP8	8 MBIT SPI SERIAL FLASH	804-25VF080B5CPAE		
CD4051	IC6, IC7	2	DIP16	ANALOG MULTIPLEXER/DEMUTIPLEXER	595-CD4051BEE4		
CD4050	IC8, IC20	2	DIP16	HEX INVERTING BUFFER AND CONVERTER	595-CD4050BE		
LM311	IC9	1	DIP8	DIFFERENTIAL COMPARATOR	595-LM311P		
CD40109	IC10, IC11	2	DIP16	QUAD LOW TO HIGH VOLTAGE SHIFTER	595-CD40109BE		
LM4040-5.0	IC16	1	TO-92	PRECISION MICROPOWER SHUNT VOLTAGE REFERENCE	LM4040BIZ-5.0/NOPB		
THAT1646	IC32, IC33	2	DIP8	BALANCED LINE DRIVER	887-1646P08-U	595-DRV134PA	
AS2164	IC35	1	DIP16	QUAD VOLTAGE CONTROLLED AMPLIFIER			
8MHz	ZQ1	1	HC-49/US	QUARTZ CRYSTAL	774-ATS08A-E		
	REF+5V	1		3MM RED LED	604-WP710A101D		
22R	R156, R157, R158, R159	4		1/4W 1% RESISTOR	MFR-25FBF52-22R		
100R	R141, R148	2		1/4W 1% RESISTOR	MFR-25FBF52-100R		
249R	R125, R139	2		1/4W 1% RESISTOR	MFR-25FTE52-249R		
1K	R5, R10, R33, R34, R35, R36, R37, R38, R40, R41, R44, R45, R46, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R70, R71, R73, R74, R91, R97, R99, R100, R101, R102, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R160, R161, R162, R163, R164, R165, R166	57		1/4W 1% RESISTOR	MFR-25FBF52-1K		
2K	R39	1		1/4W 1% RESISTOR	MFR-25FBF52-2K		
2K2	R28	1		1/4W 1% RESISTOR	MFR-25FBF52-2K2		
3K3	R155	1		1/4W 1% RESISTOR	MFR-25FBF52-3K3		
4K7	R21, R22	3		1/4W 1% RESISTOR	MFR-25FBF52-4K7		
4K99	R63, R66, R69, R72, R75, R78, R81, R85, R150, R153	10		1/4W 1% RESISTOR	MFR-25FBF52-4K99		
5K1	R64, R67	2		1/4W 1% RESISTOR	MFR-25FBF52-5K1		
6K8	R4	1		1/4W 1% RESISTOR	MFR-25FBF52-6K8		
7K5	R149	1		1/4W 1% RESISTOR	MFR-25FBF52-7K5		
10K	R6, R9, R18, R19, R20, R23, R24, R25, R26, R31, R32, R47, R48, R65, R68, R128, R137, R143, R146, R151, R152, R154	22		1/4W 1% RESISTOR	MFR-25FBF52-10K		
12K	R13	1		1/4W 1% RESISTOR	MFR-25FBF52-12K		
15K	R119, R121, R133, R135	4		1/4W 1% RESISTOR	MFR-25FBF52-15K		
20K	R136, R140, R145, R147	4		1/4W 1% RESISTOR	MFR-25FBF52-20K		
30K	R120, R122, R123, R124, R126, R127, R129, R130, R131, R132, R134, R138, R142, R144	14		1/4W 1% RESISTOR	MFR-25FBF52-30K		
47K	R30, R76	2		1/4W 1% RESISTOR	MFR-25FBF52-47K		

100K	R27, R87, R88, R89, R90, R93, R94, R95, R96	9		1/4W 1% RESISTOR	MFR-25FBF52-100K		
220K	R14	1		1/4W 1% RESISTOR	MFR-25FBF52-220K		
330K	R103, R104, R105	3		1/4W 1% RESISTOR	MFR-25FBF52-330K		
1M	R2, R8, R29	3		1/4W 1% RESISTOR	MFR-25FBF52-1M		
4M7	R1, R3	2		1/4W 1% RESISTOR	MFR-25FBF52-4M7		
	BREAKOUT	1	IDC-16	16 PIN IDC MALE HEADER	571-1761681-6		
	STLINK	1	IDC-20	20 PIN IDC MALE HEADER	571-1761681-7		
	HEADPHONES	1		1/4" STEREO JACK	502-112BX		
	POWER, VOICE1, VOICE2, VOICE3, VOICE4, VOICE5, VOICE6, VOICE7, VOICE8	9	EDAC-44	44PIN EDGE CONNECTOR	<a href="https://www.ebay.com/itm/294297918605">https://www.ebay.com/itm/294297918605</a>	587-307-044	
	PLD1	1	PLD-24	2.54M PITCH 2X12 MALE HEADER	649-77313-124-24LF		
	BT1	1	6x6MM	TACT SWITCH	MJTP1230		
	C1, C3, C7, C8, C9, R7, R11, R12, R15, R16, R17	10		DO NOT INSTALL			

**VOICE BOARD**

VALUE	DESIGNATOR	QTY (1x)	QTY (8x)	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #
1uF	C28, C36	2	16	5MM DIA / 2MM LS	NON-POLAR ELECTROLYTHIC CAPACITOR	232-100NA1MEFC5X11		
10uF	C60, C61, C62, C63, C64	5	40	5MM DIA / 2MM LS	ELECTROLYTHIC CAPACITOR	710-860160672009		
10pF	C35	1	8	5MM LS	CERAMIC CAPACITOR	810-FG28C0G1H100DNT0		
22pF	C52, C56	2	16	5MM LS	CERAMIC CAPACITOR	810-FA28NP01H220JNU6		
100pF	C27, C46	2	16	5MM LS	CERAMIC CAPACITOR	810-FG28C0G2E101JNT6		
240pF	C31, C32, C33, C34	4	32	5MM LS	CERAMIC CAPACITOR	80-C318C241K3G5TA		
560pF	C24, C53, C54, C58	4	32	5MM LS	CERAMIC CAPACITOR	810-FA28C0G1H56100		
680pF	C29	1	8	5MM LS	CERAMIC CAPACITOR	594-K681K10X7RF5UH5		
3900pF	C9, C26	2	16	5MM LS	C0G CERAMIC CAPACITOR	810-FA28C0G1H39200		
0.01uF	C3, C18, C23, C47	4	32	5MM LS	CERAMIC CAPACITOR	810-FG28X7R1H103KNT0		
0.1uF	C1, C2, C5, C6, C7, C8, C13, C14, C15, C16, C17, C19, C20, C21, C22, C25, C30, C38, C39, C40, C43, C48, C49, C50, C51, C59, C65, C66, C67, C68	30	240	SMT 0805	CERAMIC CAPACITOR	581-08055C104K		
10uF	C4	1	8	5MM LS	CERAMIC CAPACITOR	810-FG28X5R1E106MR00		
470nF	C37	1	8	5MM LS	FILM CAPACITOR	80-SBDC3470DQ10J		
SSI2131	IC1, IC7	2	16	SOIC16	FATKEYS™ VOLTAGE CONTROLLED OSCILLATOR			
CD4052	IC2, IC8	2	16	DIP16	CMOS 8-CHANNEL ANALOG MULTIPLEXER/DULTIPLEXER	595-CD4052BE		
TL064	IC3, IC10, IC11	3	24	DIP14	QUAD OPERATIONAL AMPLIFIER	595-TL064IN		
TL062	IC15, IC18	2	16	DIP8	DUAL OPERATIONAL AMPLIFIER	595-TL062IP		
DG202	IC9	1	8	DIP16	SPST CMOS ANALOG SWITCH	781-DG202BDJ-E3		
AS662	IC12, IC19	2	16	SOIC16	DUAL OTA WITH BUFFERS			
AS3109	IC14	1	8	DIP16	VOLTAGE CONTROLLED FILTER			
AS2164	IC16	1	8	DIP16	QUAD VOLTAGE CONTROLLED AMPLIFIER			
LM4040-2.5	IC17	1	8	TO-92	PRECISION MICROPOWER SHUNT VOLTAGE REFERENCE	926-LM4040BIZ25NOPB		
2N3904	Q1, Q2	2	16	TO-92	NPN TRANSISTOR	637-2N3904		
2N3906	Q4, Q5, Q6	3	24	TO-92	PNP TRANSISTOR	637-2N3906		
J201	Q3	1	8	TO-92	N-CHANNEL JFET	106-J201		
267R	R1, R25	2	16		1/4W 1% RESISTOR	MFR-25FBF52-267R		
330R	R15, R27	2	16		1/4W 1% RESISTOR	MFR-25FBF52-330R		
390R	R44	1	8		1/4W 1% RESISTOR	MFR-25FBF52-390R		
470R	R63, R64	2	16		1/4W 1% RESISTOR	MFR-25FBF52-470R		
499R	R92, R100, R103, R106	4	32		1/4W 1% RESISTOR	MFR-25FBF52-499R		
560R	R66, R67, R68, R69	4	32		1/4W 1% RESISTOR	MFR-25FBF52-560R		
1K	R33	1	8		1/4W 1% RESISTOR	MFR-25FBF52-1K		
1K5	R77, R78	2	16		1/4W 1% RESISTOR	MFR-25FBF52-1K5		
2K	R86	1	8		1/4W 1% RESISTOR	MFR-25FBF52-2K		
2K2	R39, R42, R43, R108	4	32		1/4W 1% RESISTOR	MFR-25FBF52-2K2		
3K3	R14, R52	2	16		1/4W 1% RESISTOR	MFR-25FBF52-3K3		
4K3	R9, R32	2	16		1/4W 1% RESISTOR	MFR-25FBF52-4K3		
4K7	R26	1	8		1/4W 1% RESISTOR	MFR-25FBF52-4K7		
7K5	R34, R41, R87	3	24		1/4W 1% RESISTOR	MFR-25FBF52-7K5		
9K1	R50	1	8		1/4W 1% RESISTOR	MFR-25FBF52-9K1		
10K	R16, R17, R21, R22, R23, R36, R37, R40, R49, R51, R53, R75	12	96		1/4W 1% RESISTOR	MFR-25FBF52-10K		

12K	R79	1	8		1/4W 1% RESISTOR	MFR-25FBF52-12K		
16K	R84	1	8		1/4W 1% RESISTOR	MFR-25FBF52-16K		
22K	R5, R29, R81	3	24		1/4W 1% RESISTOR	MFR-25FBF52-22K		
24K	R35	1	8		1/4W 1% RESISTOR	MFR-25FBF52-24K		
24K3	R3, R28	2	16		1/4W 1% RESISTOR	MFR-25FBF52-24K3		
24K9	R47, R48	2	16		1/4W 1% RESISTOR	MFR-25FBF52-24K9		
30K	R18, R19, R20, R45, R46, R88, R90, R95, R97, R101, R102, R104, R105, R107	14	112		1/4W 1% RESISTOR	MFR-25FBF52-30K		
33K	R65	1	8		1/4W 1% RESISTOR	MFR-25FBF52-33K		
42K2	R83	1	8		1/4W 1% RESISTOR	MFR-25FBF52-42K2		
47K	R2, R13, R24	3	24		1/4W 1% RESISTOR	MFR-25FBF52-47K		
54K9	R85	1	8		1/4W 1% RESISTOR	MFR-25FRF52-54K9		
68K	R55, R56, R57, R58, R59, R60, R61	7	56		1/4W 1% RESISTOR	MFR-25FBF52-68K		
91K	R8	1	8		1/4W 1% RESISTOR	MFR-25FRF52-91K		
100K	R71, R72, R73, R74, R76	5	40		1/4W 1% RESISTOR	MFR-25FBF52-100K		
121K	R38	1	8		1/4W 1% RESISTOR	MFR-25FBF52-121K		
130K	R82	1	8		1/4W 1% RESISTOR	MFR-25FBF52-130K		
150K	R4, R54, R62, R70	4	32		1/4W 1% RESISTOR	MFR-25FBF52-150K		
267K	R7, R31	2	16		1/4W 1% RESISTOR	MFR-25FBF52-267K		
499K	R6, R30	2	16		1/4W 1% RESISTOR	MFR-25FBF52-499K		
1M	R80	1	8		1/4W 1% RESISTOR	MFR-25FBF52-1M		
3M3	R10	1	8		1/4W 1% RESISTOR	MFR-25FBF52-3M3		
4M7	R12	1	8		1/4W 1% RESISTOR	MFR-25FBF52-4M7		
1K	PTC	1	8		TEMPCO RESISTOR	660-LT1/4LT52R102J39		
10K	TR1	1	8	3296X	ANGLED MULTITURN TRIMMER	296X-1-103RLF		
100K	TR2	1	8	3296X	ANGLED MULTITURN TRIMMER	296X-1-104RLF		
<b>PSU BOARD</b>								
VALUE	DESIGNATOR	QUANTITY	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #	
15uF	C3, C8, C9, C10, C13	5	5MM DIA / 2MM LS	ELECTROLYTHIC CAPACITOR	598-156PUM035M			
100uF	C1, C2, C4, C5, C7	5	8MM DIA / 3.5MM LS	ELECTROLYTHIC CAPACITOR	710-860240474005			
0.01uF	C6	1	5MM LS	CERAMIC CAPACITOR	810-FG28X7R1H103KNT0			
0.1uF	C11, C12, C14, C15, C16, C17, C18	7	5MM LS	CERAMIC CAPACITOR	810-FG26C0G1H104JNT0			
	IC1	1	DIP6	+15V/-15V DC-DC CONVERTER	490-PDQ30-Q24-D15-D	THN 30-2423WI	THN 30-2423WIR	
	IC2	1	SIP-3	+5V DC-DC CONVERTER	495-TSRN-1-2450	919-R-78E5.0-1.0		
	IC3	1	DIP8	+3.3V 1-A STEP-DOWN VOLTAGE REGULATOR	926-LM2675N-33/NOPB			
	IC4	1	TO-220	-5V LINEAR VOLTAGE REGULATOR	511-L7905CV			
	IC5	1	TO-220	+10V LINEAR VOLTAGE REGULATOR	755-BA17810CP-E2			
	IC7	1	TO-220	+5V LINEAR VOLTAGE REGULATOR	755-BA17805CP-E2			
TL431	IC6	1	TO-92	PRECISION PROGRAMMABLE REFERENCE	595-TL431BCLP			
1uH	L1	1	RL622	INDUCTOR	652-RL622-1R0K-RC			
47uH	L2	1	RL622	INDUCTOR	652-RL622-470K-RC			
1N5817	Z1	1	DO-35	LOW DROP POWER SCHOTTKY RECTIFIER	511-1N5817			
	LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8	8		3MM RED LED	604-WP710A10ID			
0R	R9	1		1/4W 1% RESISTOR	MFR-25FRF52-0R			
130R	R6, R7	2		1/4W 1% RESISTOR	MFR-25FBF52-130R			
220R	R8	1		1/4W 1% RESISTOR	MFR-25FBF52-220R			
300R	R3, R4, R5, R10	4		1/4W 1% RESISTOR	MFR-25FBF52-300R			
1K	R1, R2	2		1/4W 1% RESISTOR	MFR-25FBF52-1K			
	POWER	1	MTA-156	2 PIN HEADER	5716404452			
	FUSE	1		FUSE HOLDER	534-4527			
		1		FUSE HOLDER COVER	534-4527C			
		1		1A FUSE	576-0218001.MXBP			

BREAKOUT BOARD							
VALUE	DESIGNATOR	QUANTITY	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #
0.01uF	C7	1	5MM LS	CERAMIC CAPACITOR	810-FG28X7R1H103KNT0		
0.1uF	C1, C2, C3, C4, C6	5	SMT 0805	CERAMIC CAPACITOR	581-08055C104K		
4.7uF	C5	1	5MM LS	CERAMIC CAPACITOR	810-FG24X7R1E475KRT6		
6N139	IC1	1	DIP8	LOW INPUT CURRENT HIGH GAIN OPTOCOUPLER	630-6N139		
FOD817	IC2	1	DIP4	PHOTOTRANSISTOR OPTOCOUPLER	512-FOD817		
74HCT14	IC3	1	DIP14	HEX INVERTER WITH SCHMITT-TRIGGER INPUTS	595-CD74HCT14E		
ADuM3160	IC4	1	SO-16	FULL/LOW SPEED 2.5 kV USB DIGITAL ISOLATOR	584-ADUM3160BRWZ		
1N4148	D1	1	DO-35	SMALL SIGNAL DIODE	512-1N4148		
	MIDI	1		3MM RED LED	604-WP710A10ID		
22R	R7, R9	2		1/4W 1% RESISTOR	MFR-25FBF52-22R		
100R	R13, R17	2		1/4W 1% RESISTOR	MFR-25FBF52-100R		
220R	R5, R10, R11, R16	4		1/4W 1% RESISTOR	MFR-25FBF52-220R		
270R	R12	1		1/4W 1% RESISTOR	MFR-25FBF52-270R		
330R	R14	1		1/4W 1% RESISTOR	MFR-25FBF52-330R		
680R	R1, R2, R3, R4	4		1/4W 1% RESISTOR	MFR-25FBF52-680R		
1K	R15	1		1/4W 1% RESISTOR	MFR-25FBF52-1K		
10K	R8	1		1/4W 1% RESISTOR	MFR-25FBF52-10K		
	MIDI IN, MIDI OUT, MIDI THRU	3		5 PIN DIN CONNECTOR	502-57PC5F		
	J1, J2	2		ANGLED 1/4" JACK	502-RN112BPC		
	DC	1		2.1MM DC JACK	502-RAPC722X		
	USB	1		USB JACK	538-67068-9000		
	POWER	1	MTA-156	2 PIN HEADER	5716404452		
	BREAKOUT	1		16 PIN IDC MALE HEADER	571-1761681-6		
MISC							
VALUE	DESIGNATOR	QUANTITY	FOOTPRINT	NOTE	MOUSER PART #	ALT PART #	ALT PART #
		1		POWER SWITCH	611-DM22J12S205Q		
		1		12V WALL WART	552-PSAA30R-120-R		
		1		AC INPUT CLIPS	552-RPBAG-AB01B-H		
		1		HEAT SHRINK TUBE	5174-13161		
		2		MTA-156 2 PIN FEMALE HEADER	571-3-640427-2		
		2		MTA-156 2 PIN DUST COVER	571-640551-2		
		29		DIP8 SOCKETS	571-1-2199298-2		
		28		DIP14 SOCKETS	571-1-2199298-3		
		66		DIP16 SOCKETS	571-1-2199298-4		
		1		ST LINK PROGRAMMER	511-ST-LINK/V2		
		1		FRONT PANEL			
		1		ENCLOSURE			
		1		SCREEN LENS			
		2		RACK EARS			
		4		M4x8MM BLACK PAN HEAD SCREW			
		6		M3x6MM BLACK PAN HEAD SCREW			
		5		M3x10MM SILVER PAN HEAD SCREW			
		5		M3 NUT			
		11		M2.5x6MM BLACK PAN HEAD SCREW			
		11		M2.5x6MM SILVER PAN HEAD SCREW			
		11		M2.5 MF 9MM STANDOFF			
		11		M2.5 FF 12MM STANDOFF			
		1		L-SHAPED BRACKET			
		1		6-32 BLACK PAN HEAD SCREW			
		1		16 PIN RIBBON CABLE	<a href="http://www.ebay.com/itm/384959022382">http://www.ebay.com/itm/384959022382</a>		
		1		20 AWG WIRE	<a href="http://www.ebay.com/itm/371367212983">http://www.ebay.com/itm/371367212983</a>		
05LK08104BLACK		26		BLACK SLIDER CAP			

DRN110-006BLACK		7	BLACK SMALL SKIRT KNOB	COMING SOON AT THONK.CO.UK		
C111ORANGE		6	ORANGE POINTER CAP			
C110ORANGE		1	ORANGE BLANK CAP			
		27	BLACK SWITCH CAP	612-1R-BK		
		1	GRAY SWITCH CAP	612-1R-LGR		
			EPOXY GLUE			

**UPDATES LOG**

1.0.1 - 23.09.2022  
R103, R104, R105 - 330K  
R128, R137, R143, R146 - 10K

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