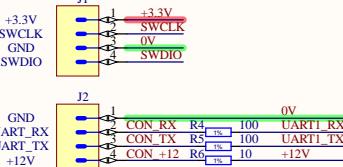
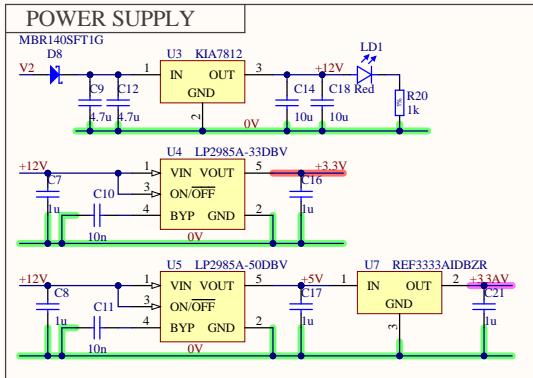
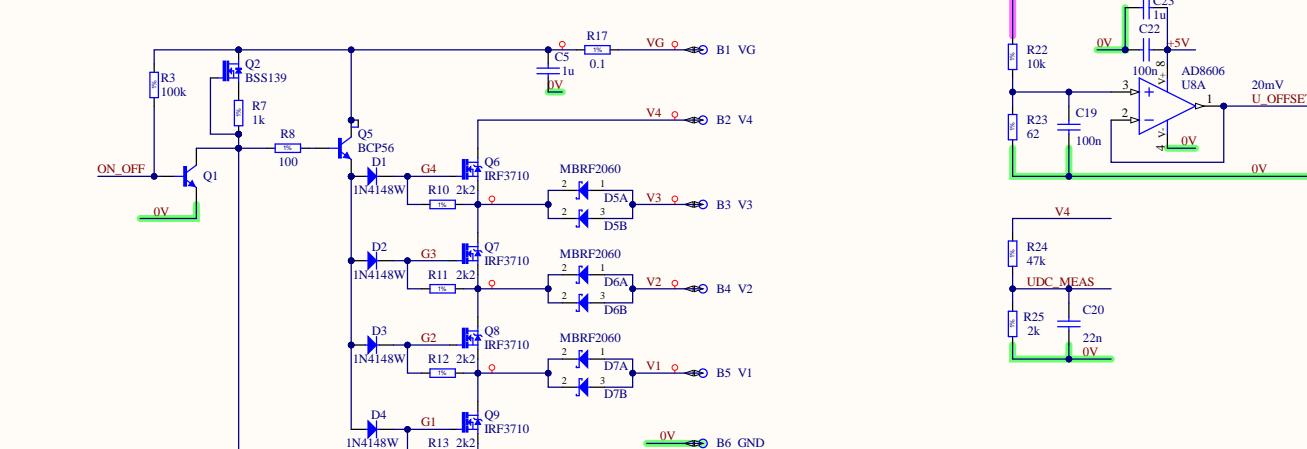


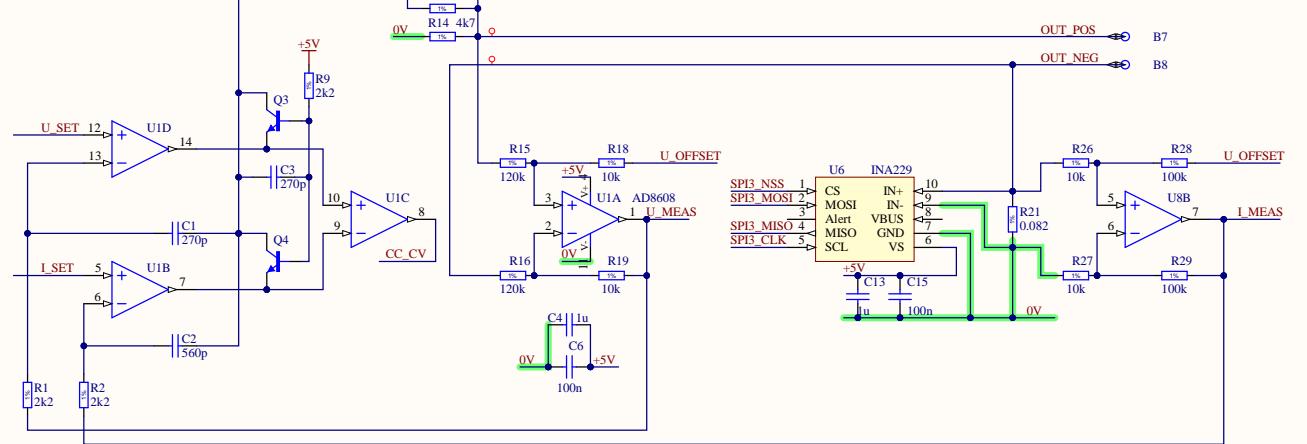
A



Linear Regulator 36V 8A

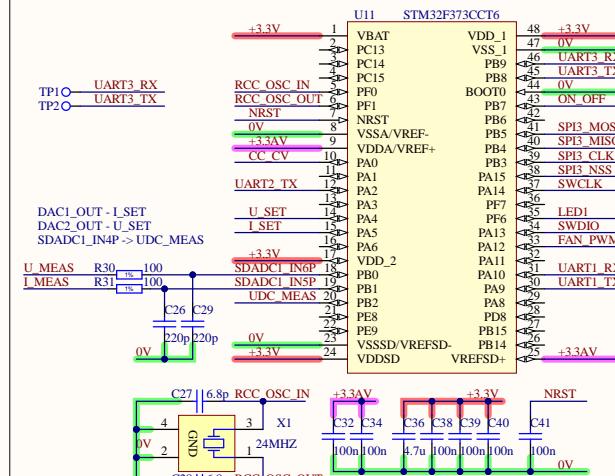


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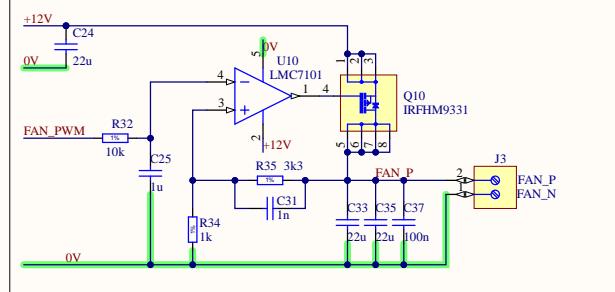


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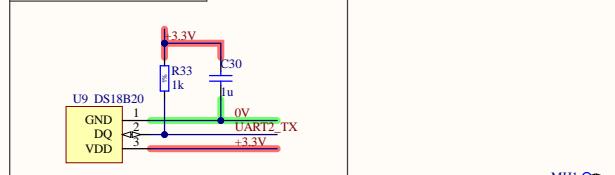
MCU Signals



Cooler Regulator

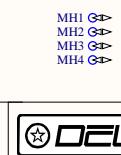


Temperature sensor



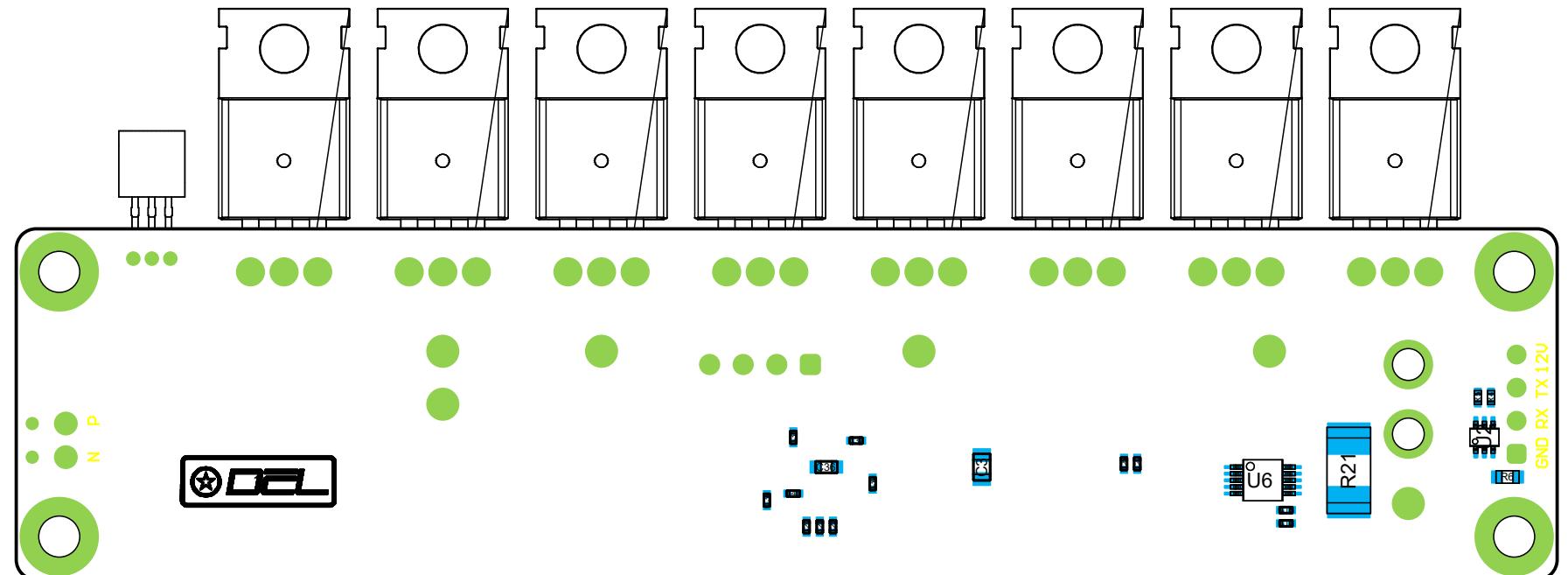
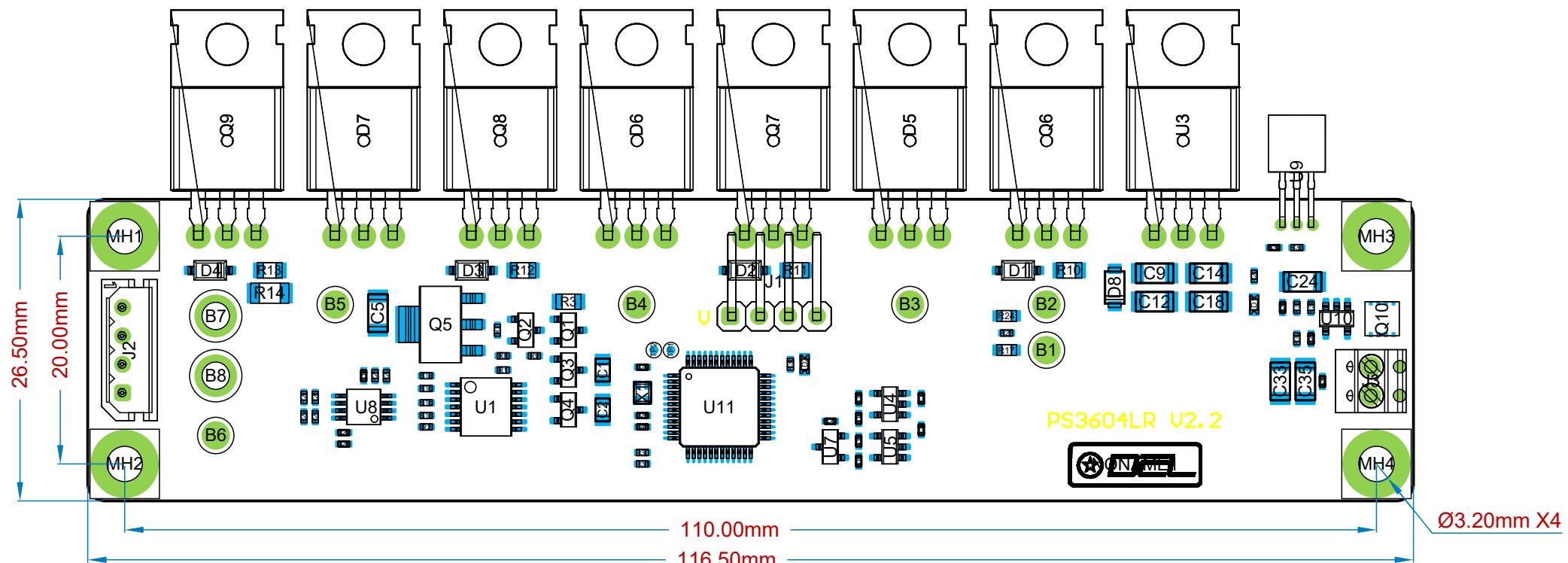
Title **PS3604LR**

Size: A3 Revision: 2.2
Date: 7/21/2023 Time: 12:46:03 Sheet 1 of 1
File: PS3604LR.SchDoc



Designator	Comment	Footprint	Part Number	Part Description	Quantity
B1, B2, B3, B4-	VG, V4, V3, V2, V1, GND	C250h130	PLATED_HOLE1_3_PAD2.5	Plated Through Hole: Hole Dia.=1.3mm Pad Dia.=2.5mm	4
B5, B6			PLATED_HOLE2.5_PAD3.75	Plated Through Hole: Hole Dia.=2.5mm Pad Dia.=2.75mm	2
B7, B8	POS, NEG	C375h250	PLATED_HOLE2.5_PAD3.75	SMD Multilayer Chip Ceramic Capacitor	2
C1, C3	270p	CAPC2012K135N	CC0805_270PF_50V_5%,NP0	SMD Multilayer Chip Ceramic Capacitor	2
C2	560p	CAPC2012K135N	CC0805_560PF_50V_5%,NP0	SMD Multilayer Chip Ceramic Capacitor	1
C4, C7, C8, C13, C16, C17, C21, C23, C25, C30	1u	CAPC1005X55N	CC0402_1uF_10V_20%,XSR	SMD Multilayer Chip Ceramic Capacitor	10
C5	1u	CAPC3216X140N	CC1206_1uF_100V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	1
C6, C15, C19, C22, C32, C34, C37, C38, C39, C40, C41	10n	CAPC1005X55N	CC0402_100nF_50V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	11
C9, C12	4.7u	CAPC3216X140N	CC1206_4.7uF_50V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	2
C10, C11	10n	CAPC1005X55N	CC0402_10nF_50V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	2
C14, C18	10u	CAPC3216X140N	CC1206_10uF_16V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	2
C20	22n	CAPC1005X55N	CC0402_22nF_16V_10%,XTR	SMD Multilayer Chip Ceramic Capacitor	1
C24, C33, C35	22u	CAPC3216X100N	CC1206_22uF_16V_20%,XSR	SMD Multilayer Chip Ceramic Capacitor	3
C26, C29	220p	CAPC1005X55N	CC0402_220PF_50V_5%,NP0	SMD Multilayer Chip Ceramic Capacitor	2
C27, C28	6.8p	CAPC1005X55N	CC0402_6.8PF_50V_0.5PF_NP0	SMD Multilayer Chip Ceramic Capacitor	2
C31	1n	CAPC1005X55N	CC0402_1nF_50V_5%,NP0	SMD Multilayer Chip Ceramic Capacitor	1
C36	4.7u	CAPC1008R87N	CC0603_4.7uF_10V_10%,XSR	SMD Multilayer Chip Ceramic Capacitor	1
D1, D2, D3, D4	1N4148W	SOD3715K145N	1N4148W	Small Signal Diode	4
D5, D6, D7	M88Z2650	TO-220-H-OUTSIDE	M88Z2650TC1G_h_outside	Switch-mode Schottky Power Rectifier (Common Cathode)	3
D8	M88T405T1G	SOD-123L	M88T405T1G	Schottky Power Rectifier	1
J1	Header 4	3M_929550-0104-EU	3M_929550-0104-EU	10 Contacts - Horizontal Contacts Straight Strip Header Pitch 2.54 2.54mm Pitch Header for PCB Board	1
J2	SPOX	MOLEX_22-03-5045	MOLEX_22-03-5045	Header, Vertical, Shrouded, 4 Circuits, Tin (Sn) Plating	1
J3		PHOENIX_1725656	PHOENIX_1725656	6A, 63V, Terminal Block, Pitch 2.54mm, 2 Positions, Screw Connections	1
J4	Red	LED1608X80N, RED	LED1608X80N, RED	Surface Mount Red LED (0603 Case)	1
J5	Blue	LED1608X80N, BLUE	LED1608X80N, BLUE	Surface Mount Red LED (0603 Case)	1
MH1, MH2, MH3, MH4	No Plated Hole	MTG500H20V8P	NON-PLATED_HOLE3.2_PAD6_0.8p	Through Hole: Hole Dia.=1.2mm Pad Dia.=6mm + 6 Via Dia.=0.3mm	4
M11, M12	10n	SOT195P240X130-3N	MMB1555L	160V 600A NPN General Purpose Amplifier	3
M2	BS139	SOT195P240X110-3N	BS139	250V 1A N-Channel MOSFET Degeneration mode	1
M5	BCP56	SOT230P700X180-4N	BCP56	80V 1A NPN Medium Power Transistor	1
M6, M7, M8, M9	RF3710	TO-220-H-OUTSIDE	RF3710_h_outside	100V 5.7A 0.023 Ohm N-Channel Power MOSFET	4
M10	IRFH9331	POFN503P000X300X100_HS W4	IRFH9331TRPBF	-30V 1A 0.014 Ohm P-Channel MOSFET	1
R1, R2, R9	2k2	RES1005X40N	R0402_2k2_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	3
R3	100k	RES2012X60N	R0805_100K_1%,0.125W_100PPM	General Purpose Thick Film Chip Resistor	1
R4, R5, R8, R30, R31	100	RES1005X40N	R0402_100R_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	5
R6	10	RES1608X55N	R0603_10R_1%,0.1W_200PPM	General Purpose Thick Film Chip Resistor	1
R7, R20, R33,	1k	RES1005X40N	R0402_1K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	5
R34, R36	1k	RES1005X40N	R0402_1K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	6
R10, R11, R12-	2k2	RES2012X60N	R0805_2k2_1%,0.125W_100PPM	General Purpose Thick Film Chip	4
R14	4k7	RES3216X65N	R1206_4k7_1%,0.25W_100PPM	General Purpose Thick Film Chip Resistor	1
R15, R16	120k	RES1005X40N	R0402_120K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	2
R17	0.1	RES1608X55N	R0603_0R1_1%,0.1W_100PPM	General Purpose Thick Film Chip Resistor	1
R18, R19, R22*	10k	RES1005X40N	R0402_10K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	6
R26, R27, R32		RES2012X60N	R0805_2k2_1%,0.125W_100PPM	General Purpose Thick Film Chip	4
R21	0.082	RES5331X80N	R2512_0R082_1%,2W_50PPM	Metal plate chip type low resistance resistors	1
R23	62	RES1005X40N	R0402_62R_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	1
R24	47k	RES1608X55N	R0603_47K_1%,0.1W_100PPM	General Purpose Thick Film Chip Resistor	1
R25	2k	RES1005X40N	R0402_2K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	1
R28, R29	100k	RES1005X40N	R0402_100K_1%,0.0625W_100PPM	General Purpose Thick Film Chip Resistor	2
R35	3k3	RES1005X40N	R0402_3K3_1%,0.0625W_100PPM	General Purpose Thick Film Chip	1
TP1, TP2	Test Point	TP_SMD_800	TP_SMD_0.8mm	0.8mm round SMD Pad	2
U1	AD8606	SOP65P640X110-14N	AD8660ARUZ-REEL	Precision, Low Noise, CMOS, Rail-to- Rail Input/Output Operational Amplifiers	1
U2	NUP4202	SOT65P220X110-6N	NUP4202W1	ESD Protection Diode, Low Clamping Voltage	1
U3	KIA7812	TO-220-H-OUTSIDE	KIA7812API_h_outside	3-Terminal 12V 1A Positive Voltage Regulator	1
U4	I2P2985A-33DBV	SOT195P280X145-5N	I2P2985A-33DBV	3.3V, 150mA Low-Noise Low- Dropout Regulator (Vfb Shutdown)	1
U5	I2P2985A-50DBV	SOT195P280X145-5N	I2P2985A-50DBV	5V, 150mA Low-Noise Low-Dropout Regulator (Vfb Shutdown)	1
U6	INA229	SOP50P490X110-10N	INA229ADGS	±8.5V, ±20.8V, Ultra-Precise Power/Energy/Charge Monitor With SPI Interface	1
U7	REF1333AIDBZR	SOT195P237X112-3N	REF1333AIDBZR	Precision Low-Noise Low- Dropout Regulator (Vfb Shutdown)	1
U8	AD8606	SOP65P490X110-8BN	AD8660ARUZ-REEL	Precision Low-Noise, CMOS, Rail-to- Rail Input/Output Operational Amplifiers	1
U9	DS18B20	TO-92-H-OUTSIDE	DS18B20_h_outside	Programmable Resolution 1-Wire Digital Thermometer	1
U10	LMC7101	SOT195P280X145-5N	LMC7101AIMSX/NOPB	2.7-15V, Rail-to-Rail I/O Amplifier	1
U11	STMF32F373CCT6	QFP50P900X900X160-4BN	STMF32F373CCT6	256kB Flash-32kB SRAM, timers, 4 ADCs (16-bit Sig. Delta / 12-bit SAR), 3 DACs, 2 comp., 2.0-3.6V	1
X1	24MHz	OSC1160X200X65-4N	24MHz_XRCG824M000F3M0R0	±30ppm at (25±3°C), -30°C to +85°C, 6pf Ceramic SMD Crystal, Type HCR2016	1

A B C D E
View from Top side (Scale 2:1)



A B C D E
View from Bottom side (Scale 2:1)

A

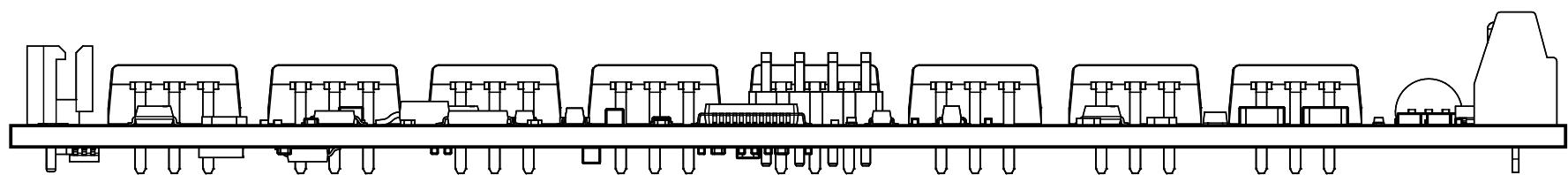
B

C

D

E

View from Front side (Scale 2:1)



A

B

C

D

E

