

Source: C:\Users\gmaur\Documents\KiCad Projects\MPPT_1KW_ESP32_ggmV3\ MPPT_1KW_ESP32_ggmV3.sch Date: 45203.6738 Tool: Eeschema (5.1.10)-1 Component Count: 104				
Ref	Value	Footprint	Description	URL
C1	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C2	2.2uF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C3	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C4	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C5	4.7uF	Capacitor_SMD:C_1206_3216Metric_Pad1.33x1.80mm_HandSolder		
C6	4.7uF	Capacitor_SMD:C_1206_3216Metric_Pad1.33x1.80mm_HandSolder		
C7	470uF	Capacitor_THT:CP_Radial_D16.0mm_P7.50mm		
C8	470uF	Capacitor_THT:CP_Radial_D16.0mm_P7.50mm		
C9	2.2uF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C10	4.7uF	Capacitor_SMD:C_1206_3216Metric_Pad1.33x1.80mm_HandSolder		
C11	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C12	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C13	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C14	33uF/100V	Capacitor_THT:CP_Radial_D8.0mm_P2.50mm		
C15	33uF/100V	Capacitor_THT:CP_Radial_D8.0mm_P2.50mm		
C16	33nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C17	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C18	33nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C19	100uF/35V	Capacitor_THT:CP_Radial_D6.3mm_P2.50mm		
C20	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C21	100uF/35V	Capacitor_THT:CP_Radial_D6.3mm_P2.50mm		
C22	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C23	100nF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C24	1uF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
C25	1uF	Capacitor_SMD:C_0805_2012Metric_Pad1.18x1.45mm_HandSolder		
D1	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D2	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D3	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D4	1N4007	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D5	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D6	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D7	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D8	1N4007	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D9	SS310	Diode_SMD:D_2010_5025Metric_Pad1.52x2.65mm_HandSolder		
D51	LED1	LED_SMD:LED_0805_2012Metric_Pad1.15x1.40mm_HandSolder		
D52	LED2	LED_SMD:LED_0805_2012Metric_Pad1.15x1.40mm_HandSolder		
F1	35A	ESP32:Mini_Blade	SL-506P Mini Blade Fuse Holder for PCB	https://www.amazon.com/Artudatech-10Pcs-SL-506P-Holder-Automotive/dp/B08GSG1FNV
F2	35A	ESP32:Mini_Blade	SL-506P Mini Blade Fuse Holder for PCB	https://www.amazon.com/Artudatech-10Pcs-SL-506P-Holder-Automotive/dp/B08GSG1FNV
H1	MountingHole	MountingHole:MountingHole_2.7mm		
H2	MountingHole	MountingHole:MountingHole_2.7mm		
H3	MountingHole	MountingHole:MountingHole_2.7mm		

H4	MountingHole	MountingHole:MountingHole_2.7mm		
J1	Solar-Battery	ESP32:Conn-Screw-4-term	HB9500 9.5mm 4Pin Barrier Terminal Block Pitch 9.5mm Terminal Block	https://www.aliexpress.us/item/2251832171349153.html?spm=a2g0o.order_list.order_list_main.101.6b841802NNjj7i&gatewayAdapt=glo2usa4itemAdapt
J2	Interface	Connector_1x08_P2.50mm_Verical_pins		
J3	Thermistor	Connector_JST:JST_XH_B2B-XH-A_1x02_P2.50mm_Verical		
J4	Fan	Connector_JST:JST_XH_B2B-XH-A_1x02_P2.50mm_Verical		
J5	ADS 1x15 Connector	Connector_1x10_P2.50mm_Verical_socket	40 Pin 2.54mm Single Row Straight Female PCB Header Connector	https://www.amazon.com/gp/product/B07CGGSDWF/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
J6	TFT	Connector_1x05_P2.50mm_Verical_pins		
J8	5V	Connector_JST:JST_XH_B2B-XH-A_1x02_P2.50mm_Verical		
L1	60uH	Inductor_THT:L_Toroid_Verical_L41.9mm_W17.8mm_P12.70mm_Pulse_F	T130-60 toroidal Sendust Core 77071-A7 CS330060	https://www.aliexpress.us/item/2251832617113148.html?spm=a2g0o.order_list.order_list_main.106.6b841802NNjj7i&gatewayAdapt=glo2usa4itemAdapt
L2	100uH/1A	Inductor_SMD:L_Taiyo-Yuden_NR-60xx_HandSoldering	Inductor CD54 Power Inductance SMD 100UH	https://www.aliexpress.us/item/2251832700220018.html?spm=a2g0o.order_list.order_list_main.164.6b841802NNjj7i&gatewayAdapt=glo2usa4itemAdapt
L3	100uH/1A	Inductor_SMD:L_Taiyo-Yuden_NR-60xx_HandSoldering	Inductor CD54 Power Inductance SMD 100UH	https://www.aliexpress.us/item/2251832700220018.html?spm=a2g0o.order_list.order_list_main.164.6b841802NNjj7i&gatewayAdapt=glo2usa4itemAdapt
Q1	CSD19505	Package_TO_SOT_THT:TO-220-3_Verical		
Q2	CSD19505	Package_TO_SOT_THT:TO-220-3_Verical		
Q3	CSD19505	Package_TO_SOT_THT:TO-220-3_Verical		
Q4	Si2306	Package_TO_SOT_SMD:SOT-23		
Q5	Si2306DS	Package_TO_SOT_SMD:SOT-23		
R1	200k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R2	5.1k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R3	3.3k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R4	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R5	1k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R6	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R7	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R8	100k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R9	100	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R10	100	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R11	100k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R12	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R13	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R14	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R15	1k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R16	47k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R17	47k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R18	18k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R19	3300	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R20	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R21	18k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		

R22	2000	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R23	3300	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R24	5600	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R25	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R26	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R27	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R28	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R29	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R30	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R31	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R32	47k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R33	47k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R34	1k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R36	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R37	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R38	10k	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
R39	0	Resistor_SMD:R_0805_2012Metric_Pad1.20x1.40mm_HandSolder		
U1	ACS712xLCTR-30A	Package_SO:SOIC-8_3.9x4.9mm_P1.27mm		
U2	B1212	ESP32:B1212S	B1212S-1W B1212 B1212S SIP-4 DC-DC module	https://www.aliexpress.us/item/2255800922161519.html?spm=a2g0o.order_list.order_list_main.126.6b841802NNjj7i&gatewayAdapt=glo2usa4itemAdapt
U3	AMS1117-5.0	Package_TO_SOT_SMD:SOT-223-3_TabPin2		
U4	XL7015	Package_TO_SOT_SMD:TO-252-5_TabPin3	XL7015E1 TO-252-5 XL7015 TO252 7015E1 TO252-5 buck DC converter chip	https://www.aliexpress.us/item/3256801935296947.html?spm=a2g0o.order_list.order_list_main.66.6b841802NNjj7i&gatewayAdapt=glo2usa
U5	XL7015	Package_TO_SOT_SMD:TO-252-5_TabPin3	XL7015E1 TO-252-5 XL7015 TO252 7015E1 TO252-5 buck DC converter chip	https://www.aliexpress.us/item/3256801935296947.html?spm=a2g0o.order_list.order_list_main.66.6b841802NNjj7i&gatewayAdapt=glo2usa
U6	XL7015_Module OPTIONAL	ESP32:Module_XL7015 Use in place of U4 and associated components See Schematic	XL7015 DC-DC Power Converter Module 1.25-20V Adjustable Step Down Power Module 5-80V Wide Voltage Input Power Voltage Converter Module	https://www.amazon.com/JESSINIE-Converter-1-25-20V-Adjustable-Voltage/dp/B0BLGZJP8S/ref=sr_1_1_sspa?crd=2UWML9RHOC06U&keywords=xl7015&qid=1696462410&sprefix=%2Caps%2C156&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1
U7	IR2104	Package_SO:SOIC-8_3.9x4.9mm_P1.27mm		https://www.aliexpress.us/item/3256801935296947.html?spm=a2g0o.order_list.order_list_main.66.6b841802NNjj7i&gatewayAdapt=glo2usa
U8	ESP32 Connector	ESP32 Connector	40 Pin 2.54mm Single Row Straight Female PCB Header Connector	https://www.amazon.com/gp/product/B07CGGSDWF/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
U9	XL7015_Module OPTIONAL	ESP32:Module_XL7015 Use in place of U5 and associated components See schematic	XL7015 DC-DC Power Converter Module 1.25-20V Adjustable Step Down Power Module 5-80V Wide Voltage Input Power Voltage Converter Module	https://www.amazon.com/JESSINIE-Converter-1-25-20V-Adjustable-Voltage/dp/B0BLGZJP8S/ref=sr_1_1_sspa?crd=2UWML9RHOC06U&keywords=xl7015&qid=1696462410&sprefix=%2Caps%2C156&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1
	Thermistor		THERMISTOR NTC 10K 2% UL LUG MNT	https://www.amazon.com/gp/product/B00HKHWRFC/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1

	ESP-WROOM-32S	ESP32-Footprints:ESP-WROOM-32S	ESP32S ESP32 ESP-WROOM-32 Development Board 2.4GHz Dual-Core WiFi +Bluetooth 2	https://www.amazon.com/gp/product/B08246MCL5/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
	ADS1015 Module	Connector_1x10_P2.50mm_Vertical	ADS1115 16 Bits 4 Channel I2C IIC Analog-to-Digital ADC PGA Converter	https://www.amazon.com/gp/product/B08PP9QB3T/ref=ppx_yo_dt_b_search_asin_title?ie=UTF8&psc=1
	Fuse	Mini Blade, F1 and F2		