

PROJECT NAME: BOM STEVAL-IHP002V1 - PLM SMARTPLUG v2
BILL OF MATERIALS

June 17, 2011

Item	Qty	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	PACKAGE-FOOT-PRINT	Manufacturer	Manufacturer Code	RS/Distelec/Other Code	More Info
1	2	C5,C6	22pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0603				
2	1	C122	470nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
3	1	C7	22pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0603				
4	2	C11,C12	33pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
5	5	C14,C27,C103C114,C115	10nF	±10%	50V		Ceramic capacitorX7R	SMD 0603	Murata	GRM188R71H103KA01D	RS : 204-0779	
6	3	C15,C17,C24	10uF	±20%	16V		Ceramic capacitorX7R	SMD 1206	Kemet	C1206C106K4PAC7800	RS : 648-0755	
7	13	C16,C18,C25,,C109,C110,C111,C112,C113,C97,C98,C99,C100, C104	100nF	±10%	50V		Ceramic capacitorX7R	SMD 0603	Murata	GRM188R71H104KA93D	RS : 624-2480	
8	2	C21,C33	100 pF	±5%	50V		Ceramic capacitor COG	SMD 0603	Murata	GRM1885C1H101JA01D	RS : 653-0327	
9	1	C22	10uF	±10%	10V		Ceramic capacitor X5R	SMD 0805	Murata	GRM21BR61A106KE19L	RS : 106-846	
10	1	C23	68nF	±20%	300V		X2 Capacitor	Through Hole	Any		Distrelec : 821885	
11	1	C26	6.8 nF	±5%	50V		Ceramic capacitor COG	SMD 1206	Murata	GRM3195C1H682JA01D	RS : 624-2597	
12	1	C30	15 pF	±5%	50V		Ceramic capacitor COG	SMD 0402	Murata	GRM1555C1H150JZ01D	RS : 624-2935	
13	1	C31	22 pF	±5%	50V		Ceramic capacitor COG	SMD 0402	Murata	GRM1555C1H220JZ01D	RS : 624-2187	
14	1	C32	270 pF	±5%	50V		Ceramic capacitor COG	SMD 0603	Kemet	C0603C271J5GAC7867	RS : 147-207	
15	1	C95	100uF	+/-20%	16V		Electrolytic Capacitor	SMD	Any		RS : 565-695	
16	1	C96	47uF	+/-20%	25V		Electrolytic Capacitor	SMD	Any		RS : 565-712	
17	1	C101	10uF	10%	10V		Tantalum capacitor	SMD	Any		RS : 464-7619	
18	1	C123	10nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
19	1	C124	1nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805				
20	1	C108	1nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0603				
21	2	C116,C117	4.7uF	+/-20%	400V		Electrolytic Capacitor	Through Hole	Any		RS : 365-4745	
22	1	C118	470pF	+/-10%	400V		Ceramic capacitor X7R	SMD 1206	Any		RS : 192-718	
23	1	C119	470uF	+/-20%	16V		Electrolytic Capacitor Low ESR	Through Hole	Any		Distrelec : 801839	
24	1	C120	2.2uF	+/-10%	35V		Tantalum capacitor	SMD	Any		RS : 699-3324	
25	1	C121	2.2nF	+/-20%	250V		Y2 Ceramic capacitor	Through Hole	Any		RS : 216-1595	
26	1	DL1	RED				Chip LED	SMD 0805	Any		Distrelec : 250154	
27	1	DL2	Blue				Chip LED	SMD 0805	Any		Distrelec : 250159	
28	1	D1	BI-COLOR LED RED/GREEN				LED Bi-Red,Green	SMD	Any		RS : 419-053	
29	3	D6,D13,D17	LL4148				Switching diode	SOD-80	any		Distrelec : 601496	
30	2	D8,D10	BAT54S				Small signal Schottky diodes	SOT-23	STMicroelectronics	BAT54SFILM		
31	1	D9	SM6T15CA				Transil	SMB	STMicroelectronics	SM6T15CA		
32	1	D14	MB6S-RC				Diode Bridge	SOIC4	Taiwan Semiconductor		RS : 652-7501	
33	1	D15	STPS1H100A				High voltage power Schottky rectifier	SMA	STMicroelectronics	STPS1H100A		
34	1	D16	STTH1L06A				Turbo 2 ultrafast high voltage rectifier	SMA	STMicroelectronics	STTH1L06A		
35	1	F1	1A				Fuse with Clip 1A	SMD	Schurter	3404.2416.22	RS : 703-2742	
36	1	IC3	LD1117ADT33TR				Low drop fixed and adjustable positive voltage regulators	DPAK	STMicroelectronics	LD1117ADT33TR		
37	2	JP4,JP5	CLOSE				Do not fit	Do not fit	Do not fit	Do not fit	Do not fit	
38	1	J1	PEAK METER CONNECTOR				5 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS :495-8470	
39	1	J2	JTAG				2x10 way double row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS : 1732764	
40	1	J3	USART				3 way single row strip line connector (male connector) 2,54mm pitch	SMD	Tyco Electronics	1241150-3	RS : 528-6237	
41	1	J4	CON3				3way vertical closed header,5.08mm pitch	Through Hole	Phoenix Contact	SL 5.08/3/180B	RS : 294-8443	
42	1	J6	CAL CON				2x10 way double row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS : 1732764	
43	1	J7	CON2				2way vertical closed header,5.08mm pitch	Through Hole	Phoenix Contact	SL 5.08/2/180B4.5	RS : 294-7428	
44	1	J8	RFID READER				4 way single row strip line connector (male connector) 2,54mm pitch	SMD	Tyco Electronics	1241150-4	RS : 528-6243	
45	1	L5	22uH	±10%	2.1A		Smd Inductor	SMD	Epcos	B82464A4223K	RS : 496-0445	
46	1	L6	220 uH	±10%	240mA		Smd Inductor	SMD	Epcos	B82462A4224K	RS : 495-8048	
48	1	L8	470uH	+/-5%	170mA		Inductor	Through Hole	Any		RS : 191-0677	
49	1	L9	10uH	+/-10%	500mA		Inductor	Through Hole	Any		RS : 191-0481	

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50	2	Q1,Q2	BC857B				PNP transistor	SOT23	Any		RS : 445-2051	
51	1	Q5	2STR1215				Low voltage fast-switching NPN power transistor	SOT-23	STMicroelectronics	2STR1215		
52	1	R6	1k1	+/-1%		0.1 W	Resistor	SMD 0603				
53	1	R7	47k	+/-1%		0.1 W	Resistor	SMD 0603				
54	1	R8	15k	+/-1%		0.1 W	Resistor	SMD 0603				
55	7	R9,R88,R71,R72,R73,R108,R109	4K7	+/-1%		0.1 W	Resistor	SMD 0603				
56	1	R10	13k	+/-1%		0.1 W	Resistor	SMD 0603				
57	5	R12,R62,R68,R90,R93	1k	+/-1%		0.1 W	Resistor	SMD 0603				
58	1	R13	2k7	+/-1%		0.1 W	Resistor	SMD 0603				
59	1	R14	1k8	+/-1%		0.1 W	Resistor	SMD 0603				
60	1	R17	470	+/-1%		0.1 W	Resistor	SMD 0603				
61	4	R19,R85,R86,R87	2k4	+/-1%		0.1 W	Resistor	SMD 0603				
62	1	R20	56k	+/-1%		0.1 W	Resistor	SMD 0603				
63	6	R21,R22,R96,R97,R101,R102	261K	+/-1%		1/8W	Mini meff Resistor	SMD 0805	Any		Digi-Key : RT0805FRE07261KL-ND	
64	2	R61,R106	1k	+/-5%		1/8W	Resistor	SMD 0805				
65	5	R74,R76,R77,R78,R79	10K	+/-5%		0.1 W	Resistor	SMD 0603				
66	2	R112,R118	10K	+/-5%		1/8W	Resistor	SMD 0805				
67	2	R69,R70	82	+/-5%		1/8W	Resistor	SMD 0805				
68	1	R75	1M	+/-5%		0.1 W	Resistor	SMD 0603				
69	1	R89	560	+/-1%		0.1 W	Resistor	SMD 0603				
70	2	R91,R92	6.8	+/-1%		0.1 W	Resistor	SMD 0603			Farnell : 1500646	
71	1	R94	2M	+/-1%		1/4W	Resistor	SMD 1206				
72	1	R95	0	+/-1%		0.1 W	Resistor	SMD 0603				
73	2	R98,R103	475	+/-1%		1/8W	Mini meff Resistor	SMD 0805	Any		Digi-Key : RT0805FRE07475RL	
74	1	R99	43K	+/-1%		0.1 W	Resistor	SMD 0603				
75	1	R100	100	+/-1%		0.1 W	Resistor	SMD 0603				
76	2	R105	1K (DO NOT FIT)	+/-1%		1/4W	Resistor	SMD 1206				
77	1	R110	22	+/-5%		1W	Fuse Resistor	Through Hole	Any		RS : 214-0920	
78	1	R111	120K	+/-5%		1/4W	Resistor	SMD 1206				
79	1	R113	10	+/-5%		1/8W	Resistor	SMD 0805				
80	1	R114	27K	+/-1%		1/8W	Resistor	SMD 0805				
81	1	R115	4.7K	+/-1%		1/8W	Resistor	SMD 0805				
82	1	R116	2.2	+/-1%		1/8W	Resistor	SMD 0805				
83	1	R117	22	+/-1%		1/8W	Resistor	SMD 0805				
84	1	RV1	VAR275V		275V		SMD Varistor	SMD	Epcos	B72650M271K72	Distrelec : 730096	
85	1	SW4	Rst				Surface Mount Tactile Switch	SMD	C & K	Y78B22110FP	RS 505-9186	
86	1	SW8	Calibration settings				3 way single row strip line connector (male connector) 2.54mm pitch	SMD	Tyco Electronics	1241150-3	RS : 528-6237	3-way single stripline
87	20	TP8,TP9,TP10,TP11,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20,TP21,TP22,TP23,TP25,TP26,TP27	Test Point				Test Point	Test Point	Test Point	Test Point	Test Point	
88	1	T1	Current Transformer				Current Transformer	Through Hole	VAC	T60404-E 4622-X503		
89	1	T2	CUSTOM TRANSFORMER				CUSTOM TRANSFORMER	Through Hole	MAGNETICA	1921.0013 rev.2		
90	1	T3	Line transformer				Line transformer	SMD	VAC	T60403-K5024-X044		
91	1	U11	STM32F103CBT6				FSK power line transceiver Medium-density performance line ARM-based 32-bit MCU	HTSSOP28	STMicroelectronics	ST7540TR		
92	1	U12	STPM01				Programmable single phase energy metering IC with tamper detection	TSSOP20	STMicroelectronics	STPM01FTR		
93	1	U13	ALTAIR05T-800						STMicroelectronics			
94	1	X1	16Mhz				16Mhz crystal	SMD	Any		RS : 547-6531	
95	1	Y1	8MHz				8MHz crystal	SMD	Abracon	ABM3B-8.000MHz-B2	RS : 703-1997	
96	2	k2	16A 12Vdc coil (Do Not Fit)		12V/16A		Lowprofile SPDTpowerrelay	Through Hole	OMRON	G2RL-1-E 12DC	RS : 365-0535	
97	1	J4a	CON3				3 way cable mount screw terminal,5.08mm	Through Hole	Phoenix Contact	BL 5.08/3	RS : 403-881	Not mounted on PCB
98	1	J7a	CON3				2 way cable mount screw terminal,5.08mm	Through Hole	Phoenix Contact	BL 5.08/2	RS : 403-875	Not mounted on PCB