

Document / Project reference: Single Phase Energy Meter using STPM01 and STM8L152 (ME.EGM0009.09)		PCB reference: STEVAL-IPE012V1			Date:	18/05/2010		
Company: STMicroelectronics								
Category	S. No.	Reference Designator	Component Description	Package	Manufacturer	Manufacturer's ordering code / Orderable Part Number	Supplier Ordering Code	Quantity
ST Devices	1	U1	STPM metering Engine	TSSOP20	ST	STPM10BTR	STPM10BTR	1
	2	U2	STM8L microcontroller	LQFP48	ST	STM8L152C6T6	STM8L152C6T6	1
	3	U3	EEPROM 32Kb	SO8	ST	M24C32-RDW6P	M24C32-RDW6P	1
	3	U5	Voltage Reference	TO92	ST	TL431AIZ	TL431AIZ	1
	4	D5,D11,D12,D13,D14	Small Signal Diode	SOD-523	ST	BAT30KFILM	BAT30KFILM	5
Crystal and Oscillator	1	Y1	4194.304KHz Oscillator	2-pin (3.5mm)	ECS Inc	ECS-42-12-4X	X1046-ND	1
	2	Y2	32.768KHz Oscillator	2-pin (Cylindrical)	Corporation	AB26T-32.768KHZ	535-9032-ND	1
Connectors and jumpers	1	J1	Swim Connector (SMT, 4 pin, 1.27mm)	SMD	ERNI	ERNI	284697	1
	2	J2,J4	3-pin connector	3-pin (2.54mm)		Any		2
	3	J5	4-pin Connector	4-pin (2.54mm)		Any		1
	4	J6	2-pin connector	2-pin (2.54mm)		Any		1
LEDs	1	D10	LED	Leaded (3MM)		HLMP-K150	516-1311-ND	1
Capacitors	1	C1,C3,C4,C20,C23,C27	1uF	SMD0805		Any		6
	2	C2,C29	1nF	SMD0805		Any		2
	3	C5,C14,C15,C17,C21,C22,C24,C28,C30	100nF	SMD0805		Any		9
	4	C6,C8	15pF	SMD0805		Any		2
	5	C7,C10	10nF	SMD0805		Any		2
	6	C9,C11	12pF	SMD0805		Any		2
	7	C12	4.7uF	SMD1206		Any		1
	8	C16,C30	4.7uF	Tantulum SMD EIA 3216-18/Size A		Any		2
	9	C13	33nF	SMD0805		Any		1

	10	C18	200nF/630V	Leaded	Vishay/BC Components	BFC2 383 20204	BC1857-ND	1
	11	C19	220uF/16V	Leaded	Panasonic - ECG	EEU-FC1C221	P11199-ND	1
	12	C25	1nF/500V	Leaded	Components	D102K25Y5PL63L6R	1457PH-ND	1
	13	C26	100uF/50V	Leaded	Panasonic - ECG	ECE-A1HN101U	P1284-ND	1
	14	C32	6.8uF/16V	Leaded	Panasonic - ECG	ECE-A1CKG6R8	P909-ND	1
	15	C33	470uF/35V	Leaded	Nichicon	UVR1V471MPD	493-1084-ND	1
Resistors	1	R1,R13,R17,R18,R36,R37,R41	10k	SMD0805		Any		7
	2	R2	1M	SMD0805		Any		1
	3	R3,R11,R20,R21,R27,R33,R34,R35	0	SMD0805		Any		8
	4	R4,R10,R14,R19,R32	1k	SMD0805		Any		5
	5	R5	6.8	SMD0805		Any		1
	6	R6	27	SMD0805		Any		1
	7	R7	42.2k	SMD0805		Any		1
	8	R9,R15	2M	SMD0805		Any		2
	9	R12	100	SMD0805		Any		1
	10	R16	2.2k	SMD0805		Any		1
	11	R22	100k	SMD0805		Any		1
	12	R23,R24,R25	261k	SMD1206		Any		3
	13	R26	475	SMD0805		Any		1
	14	R28	82, 2W	Leaded	Yageo	RSF200JB-82R	82W-2-ND	1
	15	R29	15k	SMD0805		Any		1
	16	R30	22k	SMD0805		Any		1
	17	R31	470	SMD0805		Any		1
	18	R38	5.1	SMD0805		Any		1
	19	R39	150, 2W	Leaded	Vishay/BC Components	PR02000201500JR50	PPC150W-2CT-ND	1
	20	R40	8k	SMD0805		Any		1
	21	R41	10k	SMD0805		Any		1
	21							
Inductors	1	L1	220uH	SMD	Panasonic - ECG	ELJ-FB221JF	PCD1469CT-ND	1
	2	L2, L3	1uH	SMD	Panasonic - ECG	ELJ-FC1R0JF	PCD1228CT-ND	2
Diodes	1	D1,D2,D3,D4,D6,D7,D8,D9	DIODE GPP 1A 1000V DO41	Leaded	Fairchild Semiconductor	1N4007	1N4007FSCT-ND	8
	2							
Misc Components	1	U6	Infrared Transceiver Module (SIR, 115.2 kbit/s)	SMD-8pin	Vishay Electronics	TFDU4300	751-1073-1-ND	1

	2	U4	MICROPOWER OMNIPOLAR HALL-EFFECT SENSOR SWITCH	SC-59-3L	Diodes Inc.	AH180_SC59-3L	AH180-WGDICT-ND	1
	3	SW1	RESET switch for micro	Leaded	TYCO ELECTRONICS	1555986	FSM10JH	1
	4	SW2	CASE TAMPER switch	Leaded	TYCO ELECTRONICS	1555986	FSM10JH	1
	5	SW3	LCD_PUSH switch	Leaded	TYCO ELECTRONICS	1555986	FSM10JH	1
	6	J3	LCD Glass 18x4	22 pin conector		OPT6089A	PIE Electronics	1
	7	MOV1	SUR ABSORBER 10MM 750V 2500A ZNR	Leaded	Panasonic - ECG	ERZ-V10D751	P7260-ND	1
	8	RS1	Current Sensing Resistors 5WATT .0005OHM 1%	Leaded	IRC	CSL-5R0005F0002LF	66-CSL-5R0005FLF	1
	9	CT1	Current Transformer	Leaded	VACUUMSCHME LZE (VAC)	T60404-E4623-X002	T60404-E4623-X002	1
	10	BAT1	BATTERY LITHIUM COIN 3V W/TABS	Leaded	Panasonic - BSG	CR-2032/F4N	P245-ND	1
	11	BAT2	BATT LITH COIN 3V 23MM 50MA VERT	Leaded	Panasonic - BSG	VL-2330/VCN	P086-ND	1
	12	Q1	TRANSISTOR NPN 45V 0.1A SOT23	SOT23	Fairchild Semiconductor	BC847BMTF	BC847BMTFCT-ND	1