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FILE REF: HE\_IH2O BOM.wpd

**BILL OF MATERIALS for HE IH2O.CKT**

#	QTY	Part Ref	Description	\$ Ea.	\$ Price
1	6	R1,2,3,8, 13,14	100K resistor 5%, 1/4W, YAGEO, 100KQBK-ND or equiv.	\$ 0.0242	\$ 0.15
2	2	R4,16	3.3K ohm resistor 5%, 1/4W, YAGEO, 3.3KQBK-ND or equiv.	\$ 0.0242	\$ 0.05
3	4	R10,11,12, 17	1K resistor 5%, 1/4W, YAGEO, 1.0KQBK-ND or equiv.	\$ 0.0242	\$ 0.10
4	2	R6,7	1.0M ohm resistor 5%, 1/4W, YAGEO, 1.0MQBK-ND or equiv.	\$ 0.0242	\$ 0.05
5	1	R9	82K ohm resistor 5%, 1/4W, YAGEO, 82KQBK-ND or equiv.	\$ 0.0242	\$ 0.02
6	1	R5	180K resistor 5%, 1/4W, YAGEO, 180KQBK-ND or equiv.	\$ 0.0242	\$ 0.02
7	1	R15	68K resistor 5%, 1/4W, YAGEO, 68KQBK-ND or equiv.	\$ 0.0242	\$ 0.02
8	1	C1	10nF metalized poly, +/- 10%, Panasonic ECQ-V1H103JL, Digi-Key P4513-ND or equiv.	\$ 0.0560	\$ 0.06
9	6	C2,3,4,5,6, 7	100nF metalized poly, +/- 10%, Panasonic ECQ-B1H104FL, Digi-Key P4593-ND or equiv.	\$ 0.0687	\$ 0.41
10	5	D1,2,3,4,9	1N4148 silicon diode, 100PIV, 200mA, Digi-Key 1N4148FS-ND or equiv.	\$ 0.0293	\$ 0.15
11	2	D5,8	LED, GRN (green), Lite-On LTL-16KEE Digi-Key 160-1081 or equiv.	\$ 0.0469	\$ 0.09
12	1	D6	LED, YEL (yellow), Lite-On LTL-16KYE Digi-Key 160-1082 or equiv.	\$ 0.0469	\$ 0.05
13	1	D7	LED, RED (red), Lite-On LTL-16KGE Digi-Key 160-1083 or equiv.	\$ 0.0469	\$ 0.05
14	1	J1	2.1mm x 5.5mm power jack, CUI PJ-o037A, DigiKey CP-037A-ND	\$ 0.6300	\$ 0.63
15	1	PS1	12 VDC, 1 A, switching power supply, MCM Electronics MCM Part # 28-19365	\$ 4.9900	\$ 4.99
16	1	U1	LM324N Quad op-amp, Texas Instruments, DigiKey 296-1391-5-ND	\$ 0.2784	\$ 0.28
18	1	Q1	PN2222A transistor, 40V, 600 mA, or equiv., Fairchild Semi, DigiKey PN2222AFS-ND	\$ 0.0912	\$ 0.09
19	1	RLY1	12 VDC, 10 A relay, TE Connectivity, ORWH series, DigiKey PB1321-ND	\$ 0.6530	\$ 0.65
			Total		\$ 7.86