

**Texas Instruments**  
**UCC38500 BILL OF MATERIALS**

Ref Des	Qty	Part Number	Description	MFG
C12, C20, C29	3	ECQ-V1H105JL	1uf, 50V, Polypropylene	Panasonic
C13	1	ECU-S2A470JCA	47pf, 100V, Ceramic Capacitor	Panasonic
C7, C16, C14	2	ECU-S1H103JCB	10nf, 50V, Ceramic Capacitor	Panasonic
C19	2	ECU-S1H222JCB	2.2nf, 50V, Ceramic Capacitor	Panasonic
C2	1	ECQ-E4474KZ	470nf, 400V, Polypropylene	Panasonic
C21	1	ECU-S1H681JCB	680pf, 50V, Ceramic Capacitor	Panasonic
C22	1	ECU-S1H391JCA	390pF, 50V, Ceramic Capacitor	Panasonic
C24	1	ECU-S1H101JCA	100pf, 50V, Ceramic Capacitor	Panasonic
C25	1	ECU-S1H151JCA	150nf, 50V, Ceramic Capacitor	Panasonic
C26	1	ECQ-E6473KF	47nf, 630V, Polypropylene	Panasonic
C17, R38	2	ECU-S1H101JCA	100pf, 50V, Ceramic Capacitor	Panasonic
C27, C18	2	ECU-S1H105KBB	1uf, 50V, Ceramic Capacitor	Panasonic
C28, C23	2	ECU-S1H225MEB	2.2uF, 50V, Ceramic Capacitor	Panasonic
C3	1	ECO-S2WB101BA	100uF, 450V, Electrolytic Capacitor	Panasonic
C30	1	ECA-1EFQ182	1800uf, 25V, Electrolytic Capacitor	Panasonic
C4, C5, C8	3	ECU-S1H104KBB	0.1uf, 50V, Ceramic Capacitor	Panasonic
C6	1	EEU-FC1E101S	100uf, 25V, Electrolytic Capacitor	Panasonic
D1	1	GI756CT	6A, 600V, Diode	General Instruments
D11	1	PB66	6A, 600V, Bridge Rectifier	Diodes Inc
D12	1	SR103CT	1A, 40V, Shottky Diode	
D13	1	TL431CLP	TL431, Programmable Reference	Texas Instruments
D14	1	1N4740	10V, 1W, Zener Diode	
D15, D2	2	1N4746	18V, 1W, Zener Diode	
D3	1	HFA08TB60	6A, 600V, Ultra Fast Diode	International Rectifier
D4, D6	2	BYV26C	1A, 600V, Fast Recovery Diode	Philips
D5, D7, D9, D10, D16	5	1N5819	1A, 40V, Shottky Diode	
D8	1	MBR2045	6A, 600V, Full Wave Rectifier	International Rectifier
F1	1		6A, 250V, 3AG Glass Fast Acting *Cartridge Type, 1.25"x.25"	
FH1, FH2	2		3AG Fuse Clip, for 1.25"x.25" fuse	
HS3	1	513201	Heat Sink for Q3	Aavid
HS4, HS5	2	579302 B 0 00 00	Heat Sink for D3 and D8	Aavid
HS1, HS2	2	593002 B 0 34 00	Heat Sink for Q1 and Q2	Aavid
L1	1	CTX08-14730	1.7mH, 2.5A, Coupled Inductor	Cooper Electronic Technologies
L2	1	CTX08-14729	35uH, 8.3A, Inductor	Cooper Electronic Technologies
Q1, Q2	2	IRF840	8A, 500V, N Channel FET	International Rectifier
Q3	1	IRFP450	14A, 500V, N Channel FET	International Rectifier

Q4, R8, R9, C9, C15, C10	6		Not Used	
Q5	1	MJE13005	NPN Transistor	
R1, R12	2		Short	
R10, R36	2		200 ohm, 1/4W Resistor	
R25, R29, R27	3		10K ohm, 1/4W Resistor	
R13	1		2K ohm, 1/4W Resistor	
R14	1		1.5K ohm, 1/4W Resistor	
R15, R19	2		3.92K ohm, 1/4W Resistor	
R16	1		750 ohm, 1/4W Resistor	
R17	1		7.5K ohm, 1/4W Resistor	
R18, R24	2		392K ohm, 1/4W Resistor	
R2, R11	2		1K ohm, 1/4W Resistor	
R20	1		22.1K ohm, 1/4W Resistor	
R21	1		8.25K ohm, 1/4W Resistor	
R22, R33	2		562K ohm, 1/4W Resistor	
R23	1		200K ohm, 1/4W Resistor	
R26	1		100 ohm, 1/4W Resistor	
R28	1		100K ohm, 1W Resistor	
R30	1		30.1K ohm, 1/4W Resistor	
R31	1		33.2K ohm, 1/4W Resistor	
R32	1		4.75K ohm, 1/4W Resistor	
R34	1		220K ohm, 1/4W Resistor	
R35	1		16.2K ohm, 1/4W Resistor	
R39	1		1K ohm, 1W Resistor	
R4	1		1 ohm, 1W Resistor	
R5	1		0.33 ohm, 3W Resistor	
R6	1		10 ohm, 1/4W Resistor	
R7	1		20 ohm, 1/4W Resistor	
R3	1		51K ohm, 2W, 400V Resistor	
T1	1	CTX08-14226	8mH, 10A, 10.8:1 Transformer	Cooper Electronic Technologies
T2	1	CTX08-14225	560-990uH, 1:1 Gate Drive Transformer	Cooper Electronic Technologies
U4	1	UCC38500N	PWM	Texas Instruments
U3	1	H11AV1	Opto Isolator	
X1 @ Q1, Q2, D8	3		Thermal Pad TO220	
X2 @ Q3	1		Thermal Pad TO247	
X3 @ Q1, Q2, Q3, D8	4		Screw Pan Head #4-40 X 7/16	
X4 @ Q1, Q2, Q3, D8	4		Nut #4X40	
X5 @ Q1, Q2, D8	3		Nylon Shoulder Washer #4	

X6 @ Q3	1	Bevel Washer #4	
PCB	1	UCC38500 Bare Bd	

Notes:

- 1) The values of these components are to be determined by the user in accordance with the application requirements.
- 2) All resistors have tolerances of +/- 1%