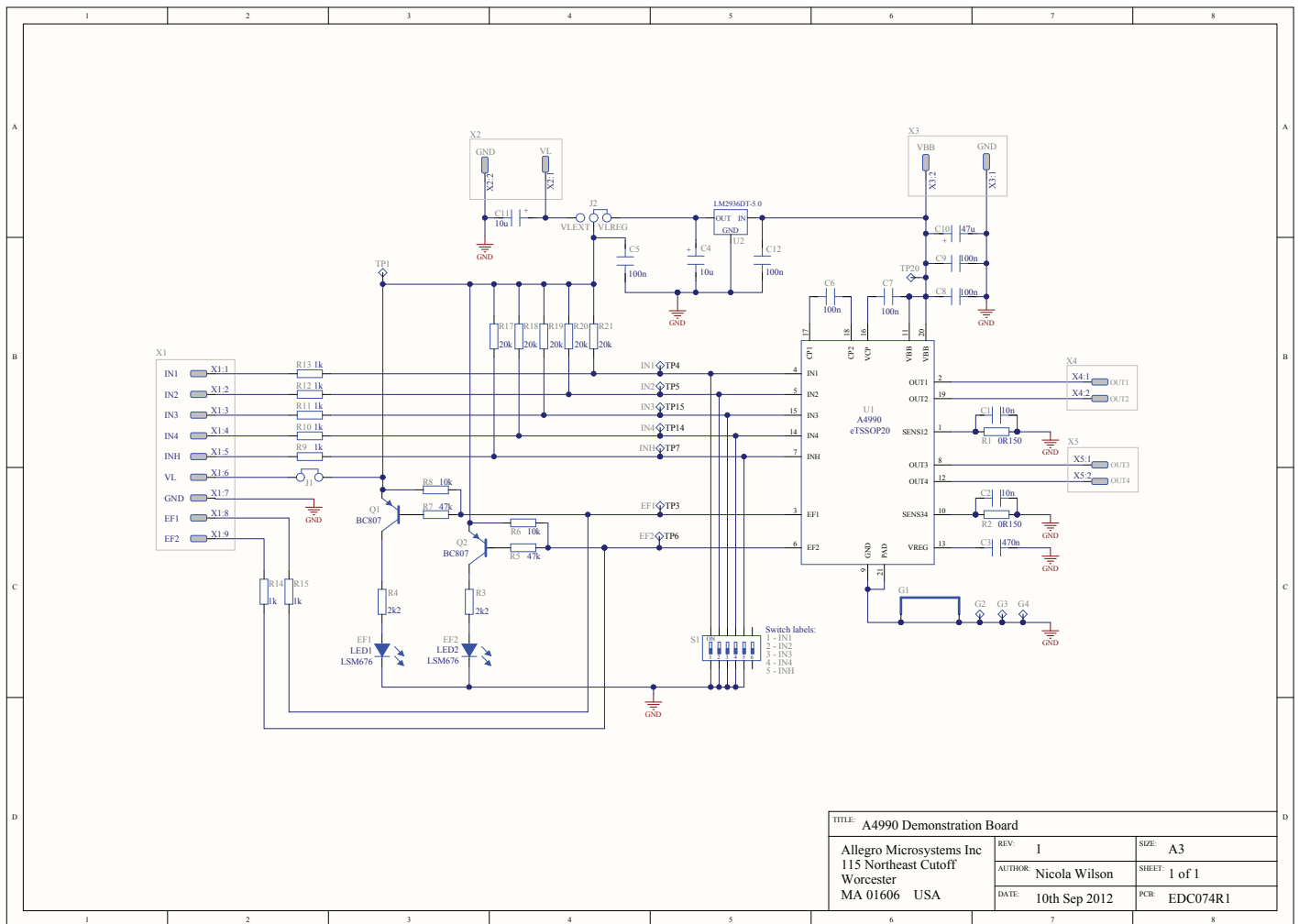
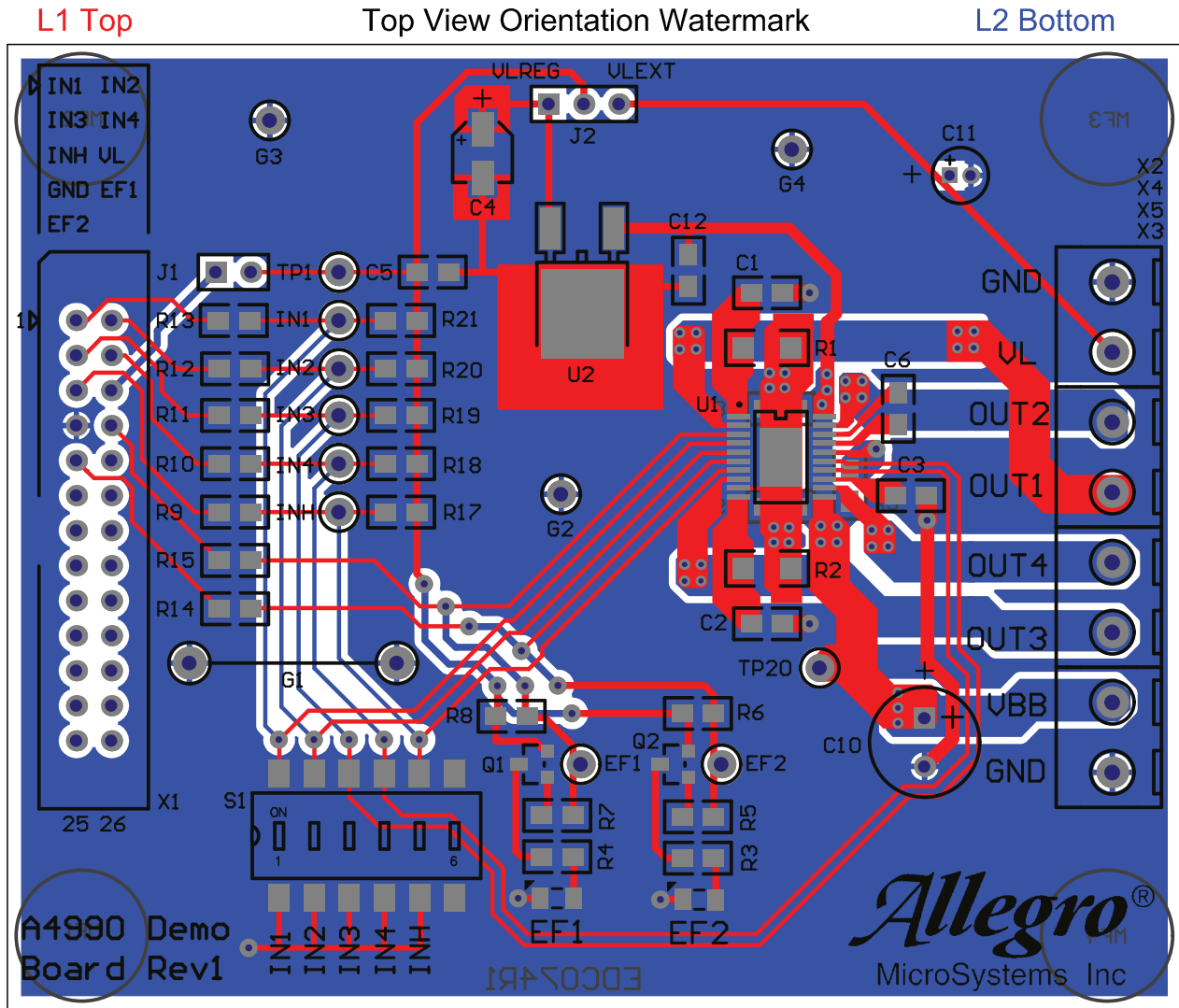


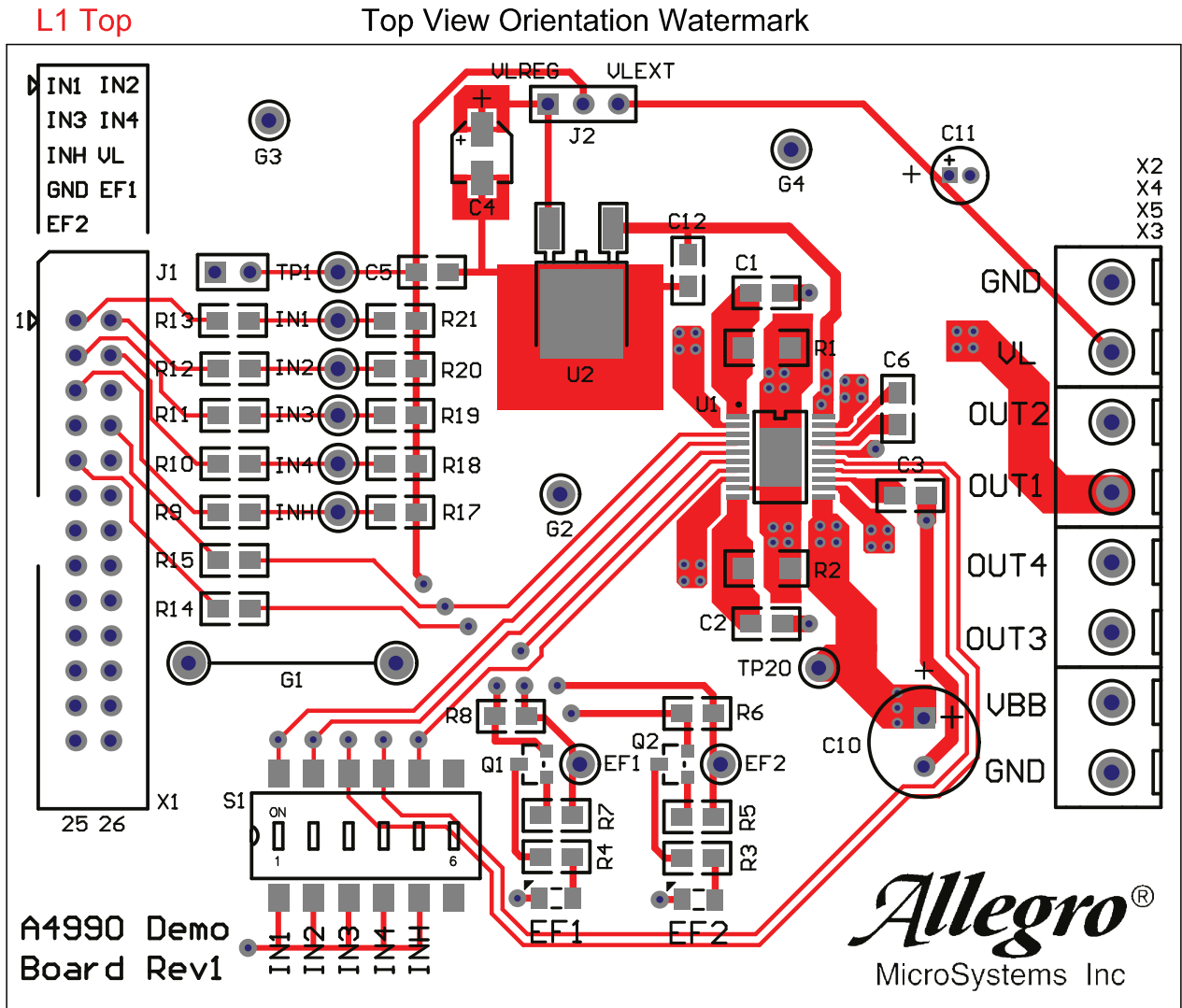
## Demo Board Schematic/Layout

### SCHEMATIC



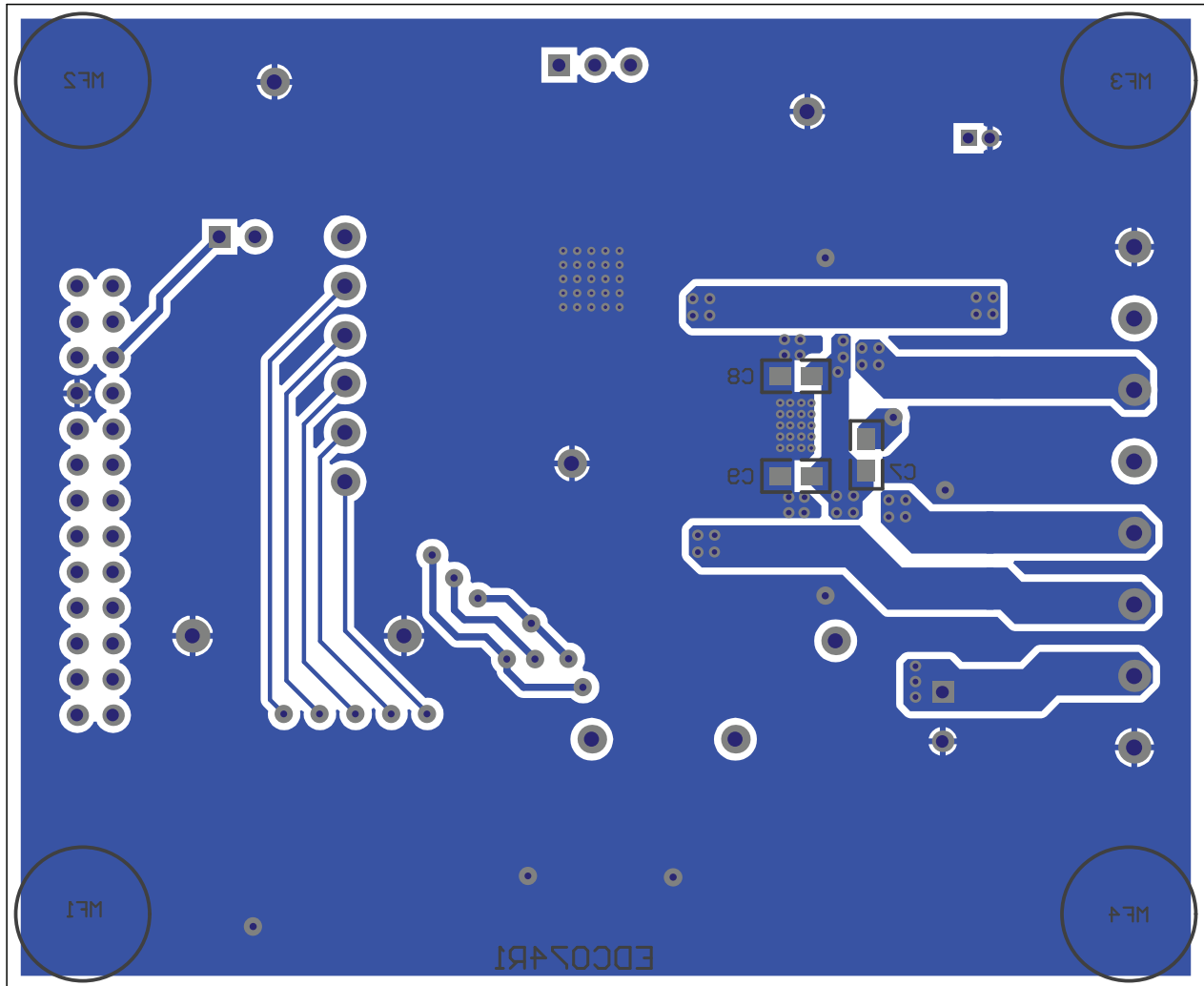
LAYOUT

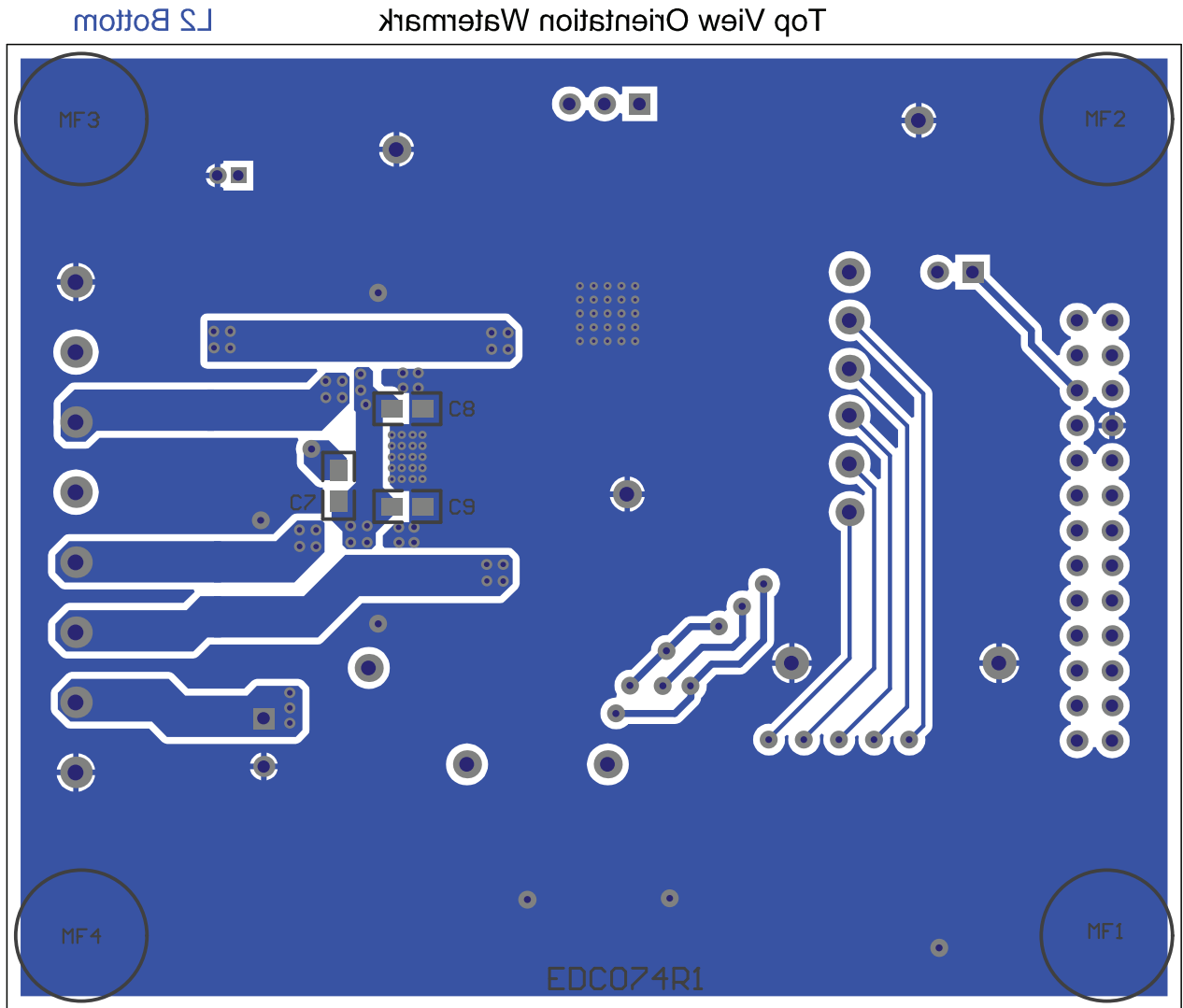




Top View Orientation Watermark

L2 Bottom





## BILL OF MATERIALS

Designator	Value	Rating	Tol	Part Number	Footprint	Description	Qty	RS #	Farnell #
C1, C2	10n	>=16V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	2	264-4371	\
C3	470n	>=10V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	1	723-6379	\
C4	10u	>=10V	20%	\	SM : Case B	Capacitor : Ceramic Chip	1	<b>568-711</b>	<b>1539481</b>
C5	100n	>=16V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	1	264-4416	\
C6, C7, C8, C9, C12	100n	>=50V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	4	264-4416	\
C10	47u	>=50V	20%	\	TH : Dia 8mm, 3.5mm Pitch	Capacitor : Alu Electrolytic, Radial	1	711-1586	\
C11	10u	>=10V	20%	\	TH : Dia 4mm, 1.5mm Pitch	Capacitor : Alu Electrolytic, Radial	1	475-8848	\
G1	\	\	\	\	TH : 1.2mm Holes, 15mm Pitch	Ground Bar : Tinned Copper Wire, 20swg	1	355-063	\
G2, G3, G4	\	\	\	\	TH : 1mm Dia Hole	Test Terminal : 1mm, Black	2	262-2179	\
J1	\	\	\	\	TH : SIL2, 2.54mm Pitch, 1x2	Jumper Header : Male 2-pin	1	251-8086	\
J3	\	\	\	\	TH : SIL3, 2.54mm Pitch, 1x3	Jumper Header : Male 3-pin	1	251-8092	\
LED1 (EF1), LED2 (EF2)	\	\	\	LSM676	SM : Proprietary, 2pin	LED : Red	2	<b>654-5919</b>	\
MF1, MF2, MF3, MF4	\	\	\	\	SM : 9.5mm Dia	Mount : Rubber Foot	4	\	1165068
PCB	\	\	\	EDC074R1	FR4, 2oz Cu, 2 Layer	PCB : A4990 Demo Board	1	\	\
Q1, Q2	\	\	\	BC807	SM : SOT23	Transistor : PNP, 45V, 0.5A	2	<b>436-7896</b>	\
R1, R2	0R150	0.25W	1%	\	SM : 1206	Resistor : Ceramic Chip	2	740-9160	\
R3, R4	2k2	\	1%	\	SM : 0805	Resistor : Ceramic Chip	2	223-0477	\
R5, R7	47k	\	1%	\	SM : 0805	Resistor : Ceramic Chip	2	223-0641	\
R6, R8	10k	\	1%	\	SM : 0805	Resistor : Ceramic Chip	2	740-8975	\
R9, R10, R11, R12, R13, R14, R15	1k	\	1%	\	SM : 0805	Resistor : Ceramic Chip	5	223-0427	\
R17, R18, R19, R20, R21	20k	\	1%	\	SM : 0805	Resistor : Ceramic Chip	5	679-1077	\
S1	\	\	\	\	SM : DIL16	Switch : DIL, 8-way, Raised Actuator	1	702-3681	\
TP1, TP3 (EF1), TP4 (IN1), TP5 (IN2), TP6 (EF2), TP7 (INH), TP14 (IN4), TP15 (IN3), TP20	\	\	\	\	TH : 1mm Dia Hole	Test Terminal : 1mm, Red	9	262-2185	\
U1	\	\	\	A4990LP	SM : eTSSOP20	Device : Allegro Motor Driver	1	\	\
U2	\	\	\	LM2936DT-5.0	SM : DPAK	Voltage Regulator : 5V	1	<b>535-8837</b>	<b>1286864</b>
X1	\	\	\	\	TH : 2.54mm Pitch, 2x13	Connector : IDC 26-way Male Header	1	542-8835	\
X2, X3, X4, X5	\	\	\	\	TH : 5.08mm (200mils) Pitch	Screw Terminal : 2-way, 200mil Pitch	4	425-8720	\
[JMP_SHORT]	\	\	\	\	\	Jumper Short, Red	2	251-8531	\
[ESDBAG_4x6]	\	\	\	\	\	ESD Bag : 102x153mm (4x6")	1	182-8809	\

## Revision History

Number	Date	Description
–	September 6, 2016	Initial release

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