



Board title:

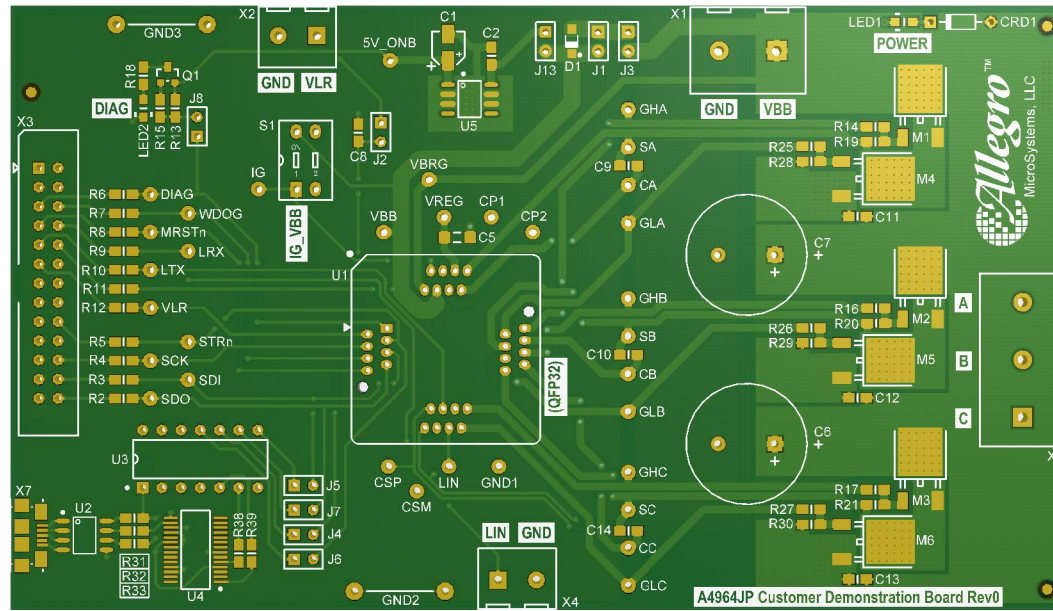
A4964JP Customer Demonstration Board Rev0

PCB reference:

EDC145R0



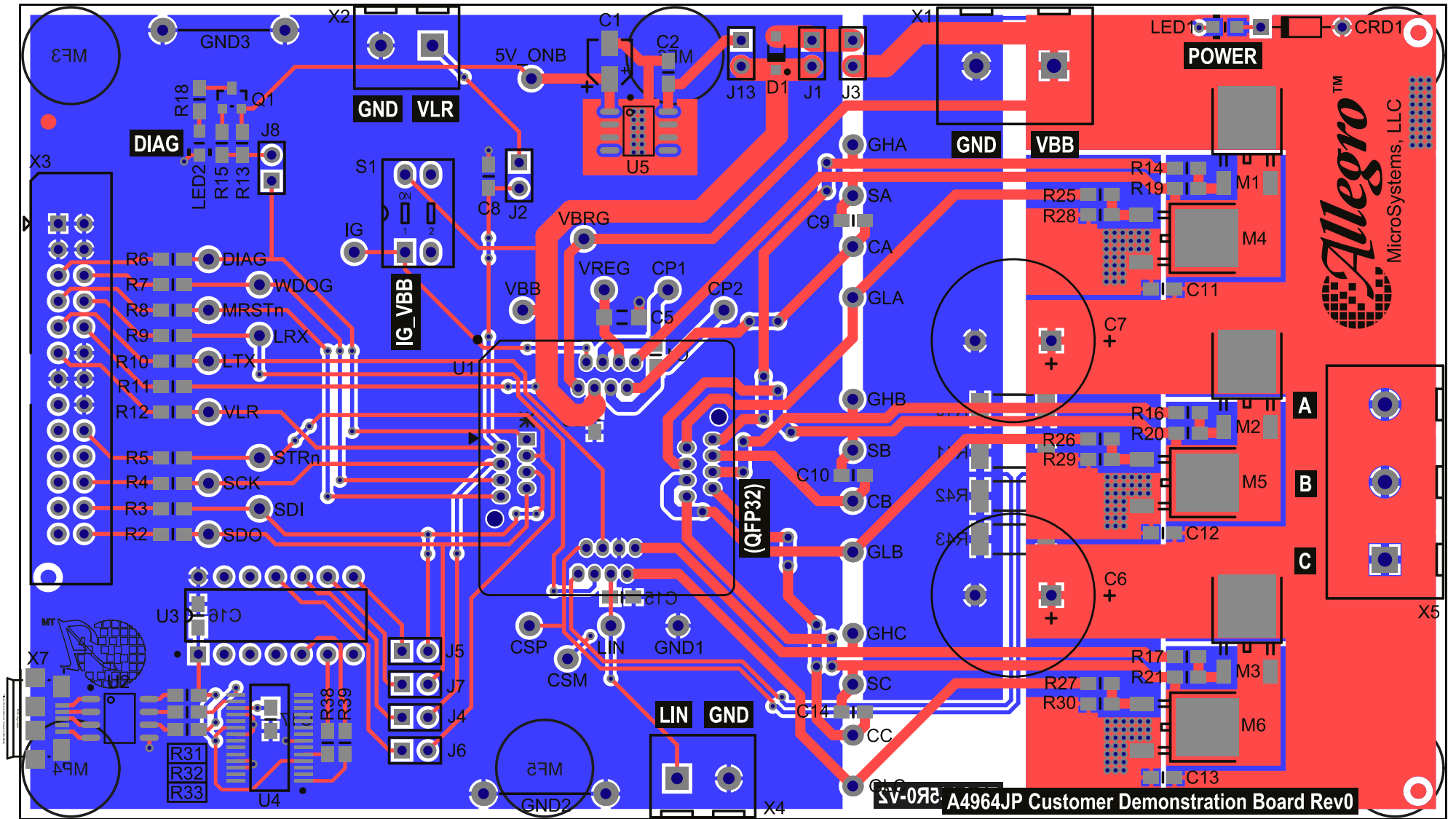
1:1 Scale



Top Paste Top Silk

Top Layer (L1) Btm Layer (L2)

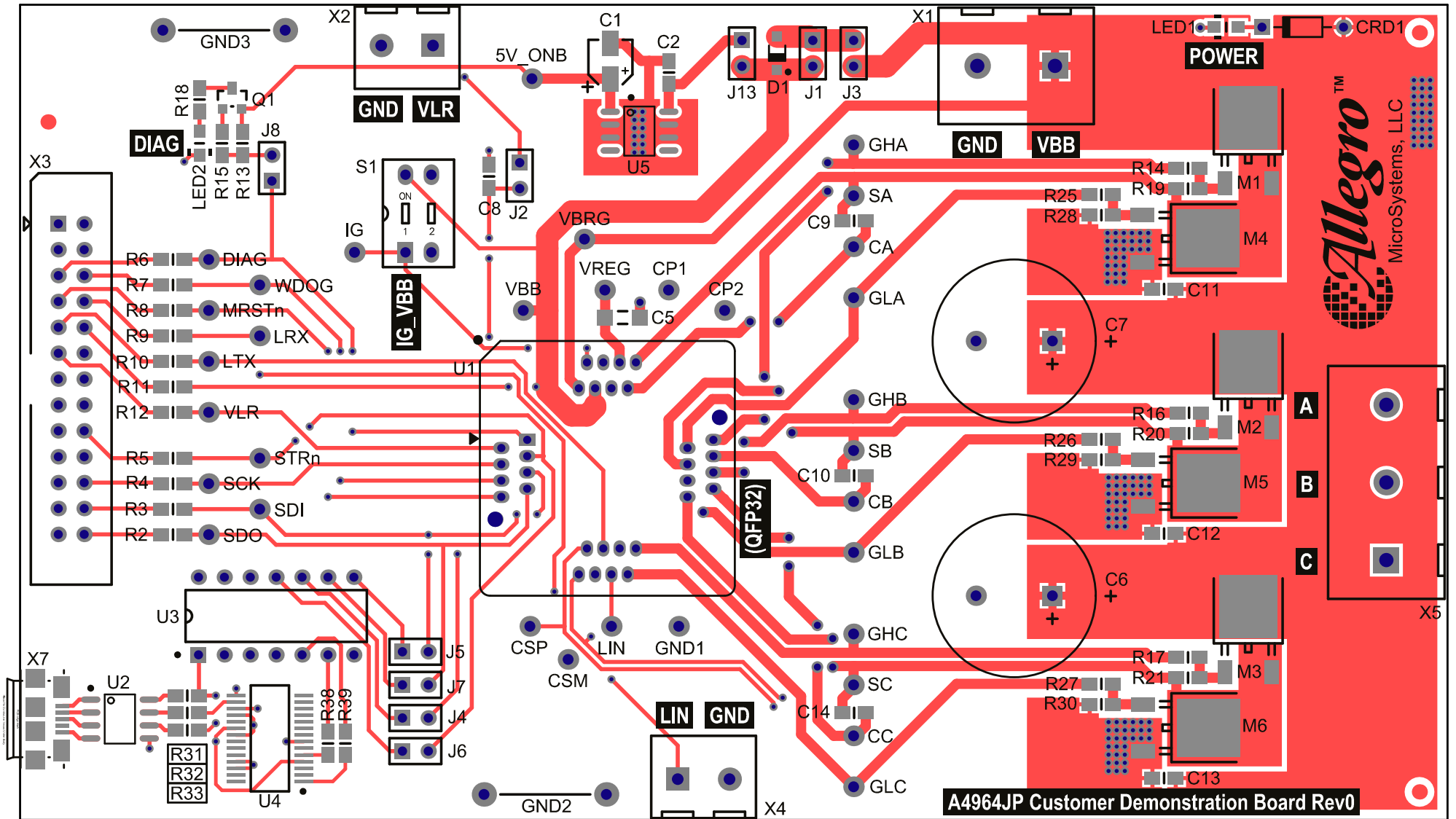
Btm Silk Btm Paste



Top View Orientation Watermark

Top Paste Top Silk

Top Layer (L1)



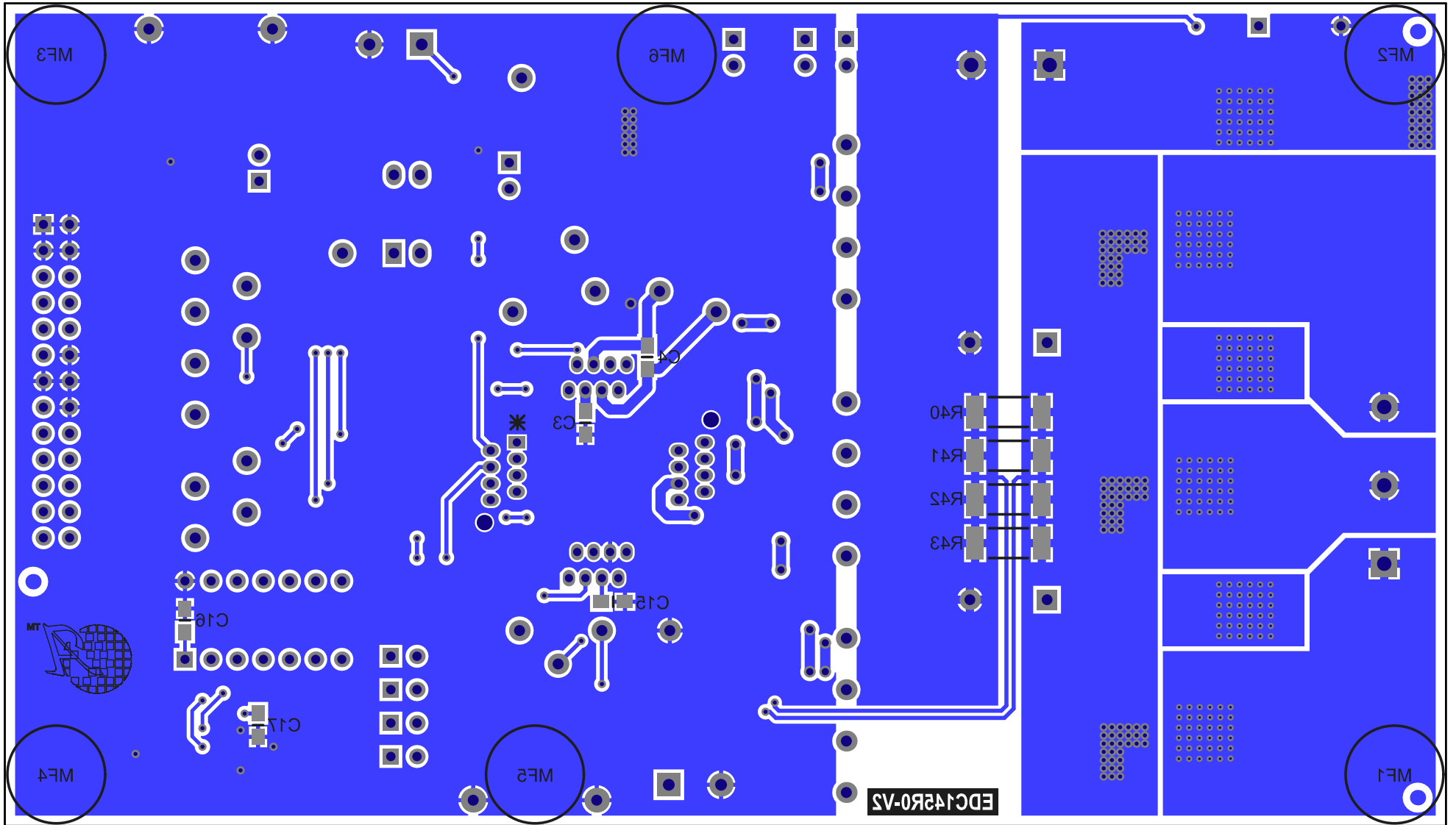
Top View Orientation Watermark

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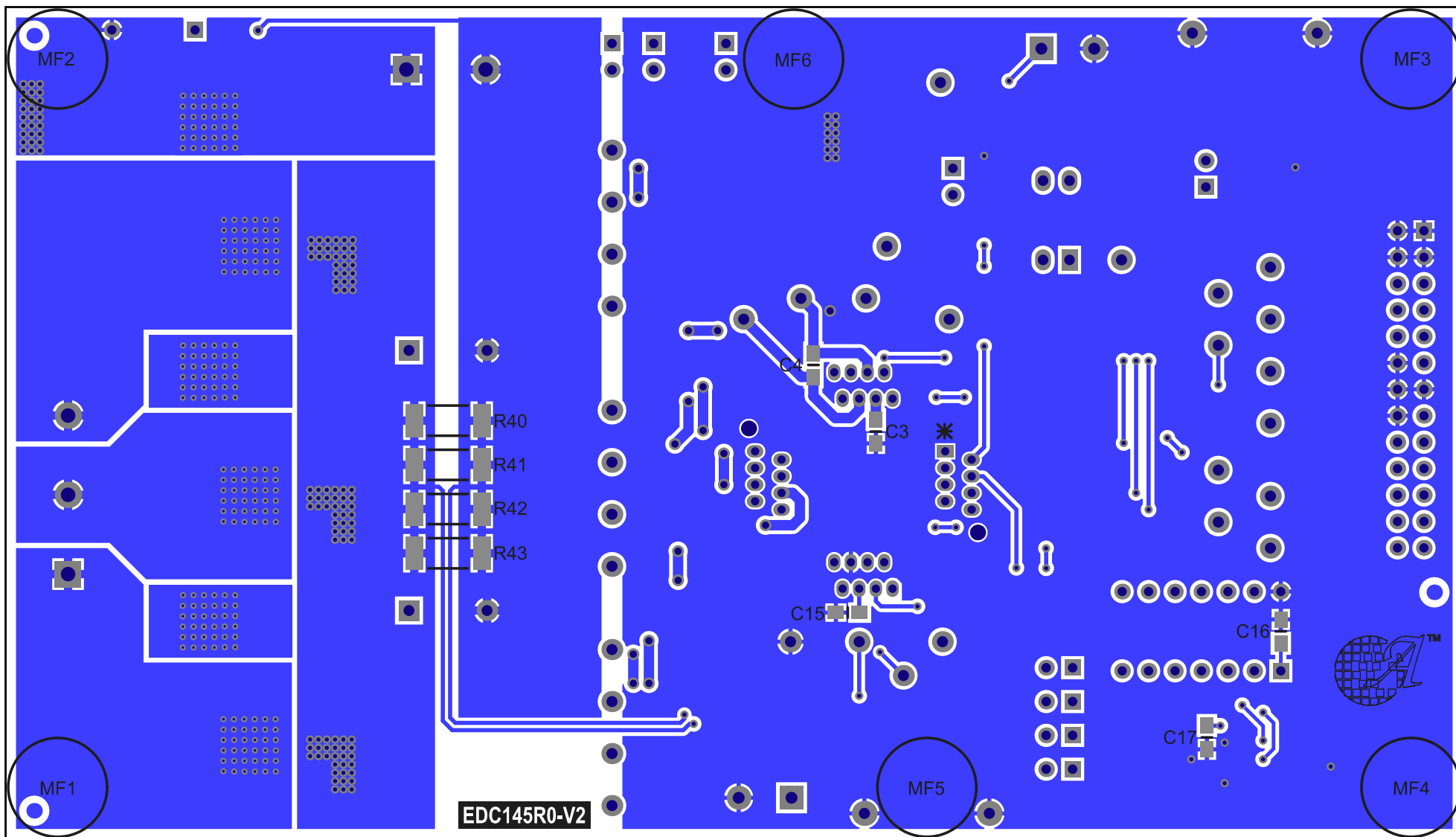
Btm Layer (L2)

Btm Silk Btm Paste



Top View Orientation Watermark

Btm Layer (L2) Btm Silk Btm Paste



to View Orientation Wastmark

Bill Of Materials for:

**A4964JP (QFP32) Customer Demonstration Board Rev0**

Last Update (BOM):

04/03/2018 (dd/mm/yyyy)

Designator	Value	Rating	Tol	Part Number	Footprint	Description	DNF	Qty	RS #1	Farnell #1
5V_ONB, CA, CB, CC, CP1, CP2, CSM, CSP, DIAG, GHA, GHB, GHC, GLA, GLB, GLC, IG, LIN, LRX, LTX, MRSTn, SA, SB, SC, SCK, SDI, SDO, STRn, VBB, VBRG, VLR, VREG, WDOG	\	\	\	\	TH : 1mm Dia Hole	Test Point : 1.4mm Round Loop, Red	\	32	262-2185	8731144
C1	10u	25V	20%	EEEF1E100AR	SM : Case B	Capacitor : Alu Electrolytic SMT	\	1	568-711	1539481
C2, C11, C12, C13	100n	63V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	4	698-3361	1740681
C3	470n	63V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	1	723-6124	2210999
C4	470n	25V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	1	723-6118	\
C5	10u	25V	X7R	\	SM : 1206	Capacitor : Ceramic Chip	\	1	846-7357	2211068
C6, C7	1000u	63V	20%	\	TH : 7.5mm Pitch, 16mm Dia, 25mm H	Capacitor : Alu Electrolytic Radial	\	2	684-2087	1834177
C8	1u	16V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	1	451-5770	9527710
C9, C10, C14	220n	25V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	3	723-6114	\
C15	220p	50V	COG	\	SM : 0805	Capacitor : Ceramic Chip	\	1	264-4309	\
C16, C17	100n	10V	X7R	\	SM : 0805	Capacitor : Ceramic Chip	\	2	264-4416	2070445
CRD1	\	\	\	E202	TH : 1.8x3.9mm Body	Diode : Current Regulation, 100V, 2mA	\	1	RapidOnline 47-2602	\
D1	\	\	\	1N4148W	SM : SOD123	Diode : Rectifier, 100V, 0.15A	\	1	700-3671	1469425
GND1	\	\	\	\	TH : 1mm Dia Hole	Test Point : 1.4mm Round Loop, Black	\	1	262-2179	8731128
GND2, GND3	\	\	\	\	TH : 12mm Pitch, 20swg	Ground Bar : Tinned Copper Wire	\	2	355-063	\
J1, J2, J3, J4, J5, J6, J7, J8, J13	\	\	\	\	TH : SIL2, 2.54mm Pitch, 1x2	Jumper Header : Male 2-pin	\	9	251-8086	\
LED1, LED2	\	\	\	SML-211UT	SM : Proprietary 0805	LED : Chipled, 2pin, Red, 2mA	\	2	700-7907	1685056
M1, M2, M3, M4, M5, M6	\	\	\	IRFR2405PBF	SM : TO-252 (DPAK)	Mosfet : N Channel, 56A, 55V	\	6	543-2222	8649723
MF1, MF2, MF3, MF4, MF5, MF6	\	\	\	\	SM : 9.5mm Dia, 3.8mm H	Mount Foot : Adhesive Rubber	\	6	104-1721	1165068
PCB	\	\	\	EDC145R0-V2	FR4, 2oz Cu, 2 Layer	PCB : A4964JP Demo Board	\	1	\	\
Q1	\	\	\	BC807	SM : SOT23	Transistor : PNP, 45V, 0.5A	\	1	436-7896	1081221
R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12	1k	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	11	223-0427	2078954
R13	10k	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	1	740-8975	2073607
R14, R16, R17, R25, R26, R27	100R	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	6	223-0297	\
R15	47k	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	1	223-0641	\
R18	2k2	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	1	223-0477	\
R19, R20, R21	274k	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	3	679-1178	\
R28, R29, R30	24k9	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	3	679-1147	2073708
R31, R32, R33, R38, R39	0R	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	5	223-0146	2057661
R40, R43	\	2W	1%	\	SM : 2512	Resistor : Ceramic Chip	DNF	0	\	\
R41, R42	0R020	3W	1%	\	SM : 2512	Resistor : Ceramic Chip	\	2	693-4384	1435948
S1	\	\	\	\	TH : 2.54mm (100mils) Pitch	Switch : DIL, 2-way, Raised Actuator	\	1	\	9479031
U1 (Device)	\	\	\	A4964JP	SM : QFP32	Device : Allegro 3-Phase BLDC Driver	DNF	0	\	\
U1 (Socket)	\	\	\	OTQ-32-0.8-02	TH : LQFP32 skt	Socket : Enplas (LQFP32)	\	1	\	\
U2	\	\	\	USB6B1	SM : S08	Device : USB Port Protection	\	1	687-1075	9804358
U3	\	\	\	PIC16F1825	TH : DIP14	Device : Microchip 8 bit MCU	\	1	743-4725	1841447
U4	\	\	\	FT232RL	SM : SSOP28	Device : USB UAR/FIFO	\	1	406-580	1146032
U5	\	\	\	LM2936HVMA-5.0	SM : SOIC8	Device : Voltage Regulator 5V (Vin <60V)	\	1	651-3726	2400656
X1	\	\	\	\	TH : 7.62mm (300mils) Pitch	Connector : Screw Terminal, 2-way	\	1	189-5966	1793006
X2, X4	\	\	\	\	TH : 5.08mm (200mils) Pitch	Connector : Screw Terminal, 2-way	\	2	425-8720	1131855
X3	\	\	\	\	TH : 2.54mm Pitch, 2x13	Connector : IDC 26-way Ribbon Header	\	1	542-8835	9838287
X5	\	\	\	\	TH : 7.62mm (300mils) Pitch	Connector : Screw Terminal, 3-way	\	1	189-5972	1793008
X7	\	\	\	\	SM : Bottom Mount style, Shell SMT	Connector : USB Micro B Female	\	1	702-5475	1568026
[ESDBAG_5x8]	\	\	\	\	\	ESD Bag : 127x203mm (5x8")	\	1	182-8815	4921185
[JMP_SHORT_R]	\	\	\	\	\	Jumper Short/Shunt Link : Red	\	9	251-8531	150411
[SKT_DIP14] [for U3]	\	\	\	\	TH : DIP14 Skt (Row Pitch 7.62mm)	IC Socket : DIP14 turned pin [for U3]	\	1	674-2476	1103845

Note: "DNF" = "Do No Fit" (component not fitted).

Note: USB-A to USB-Micro-B cable will be required for SPI connection at X7 (and GUI file).

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