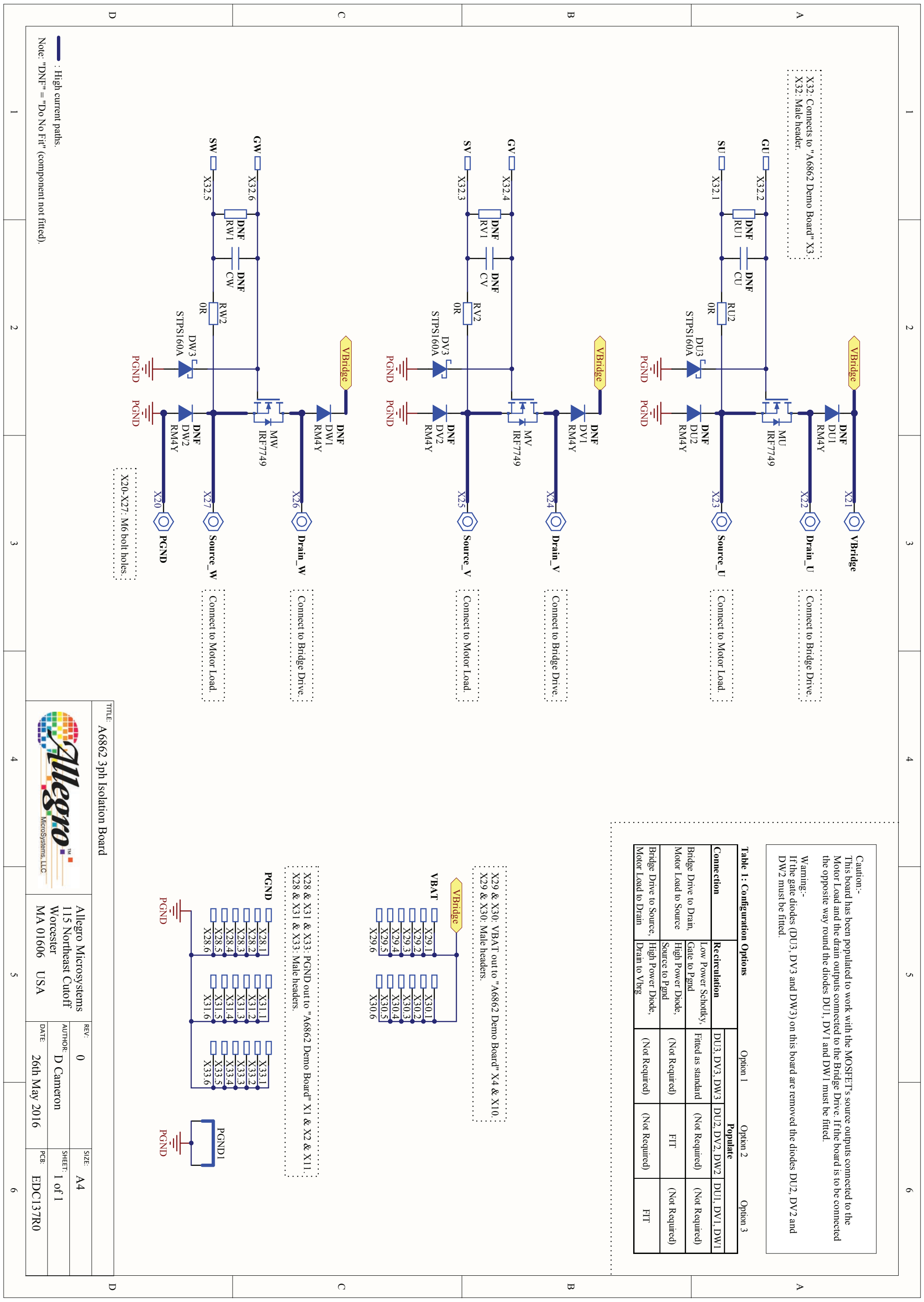
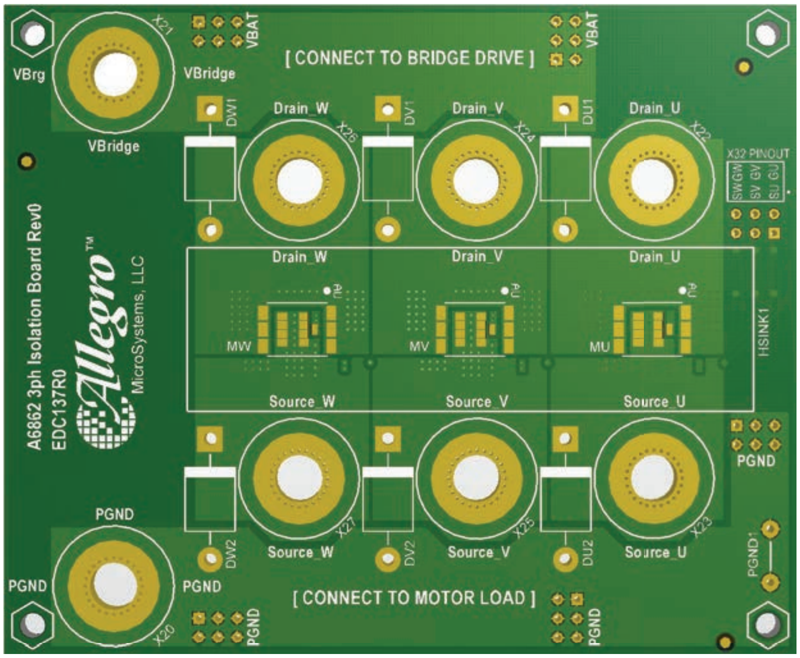
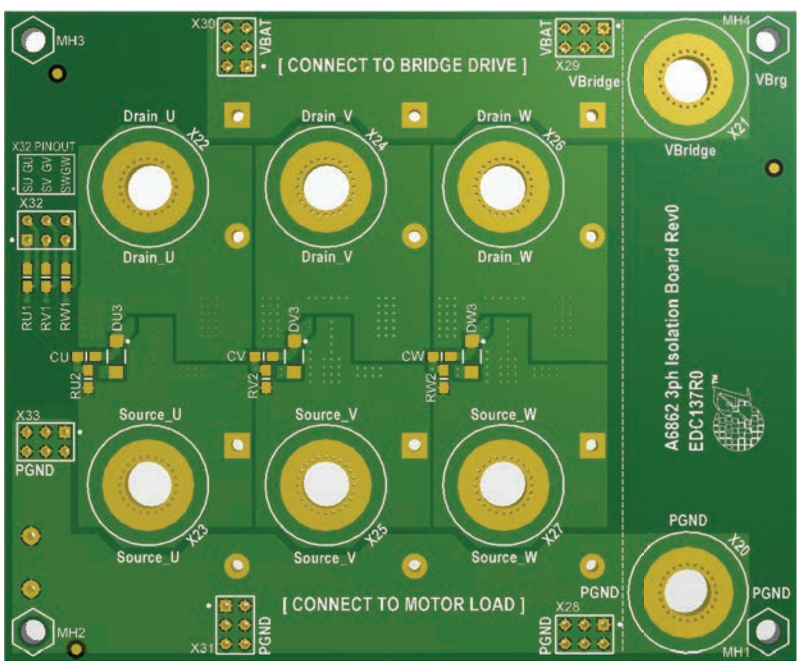
Isolation Board Schematic/Layout

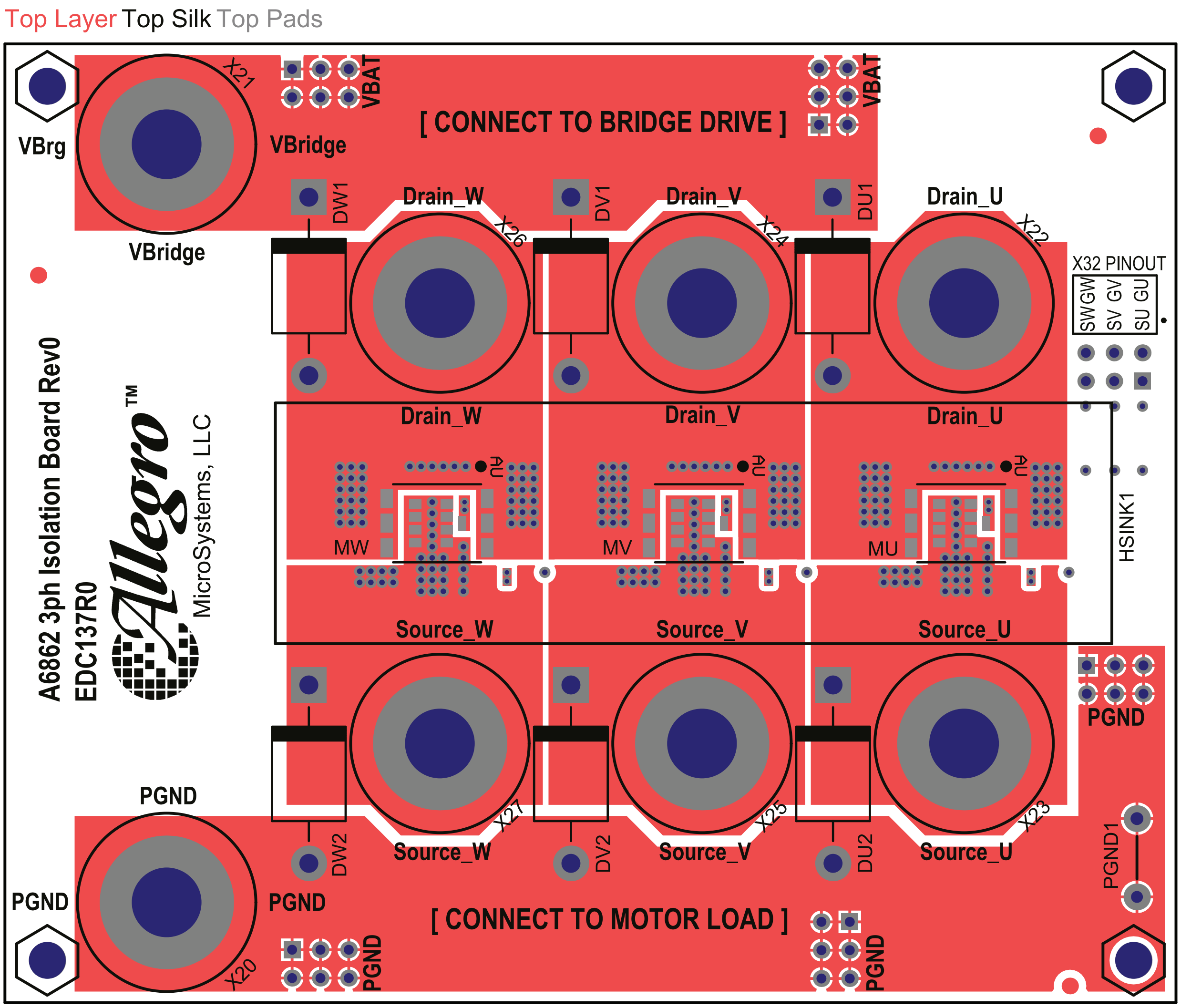
SCHEMATIC



LAYOUT

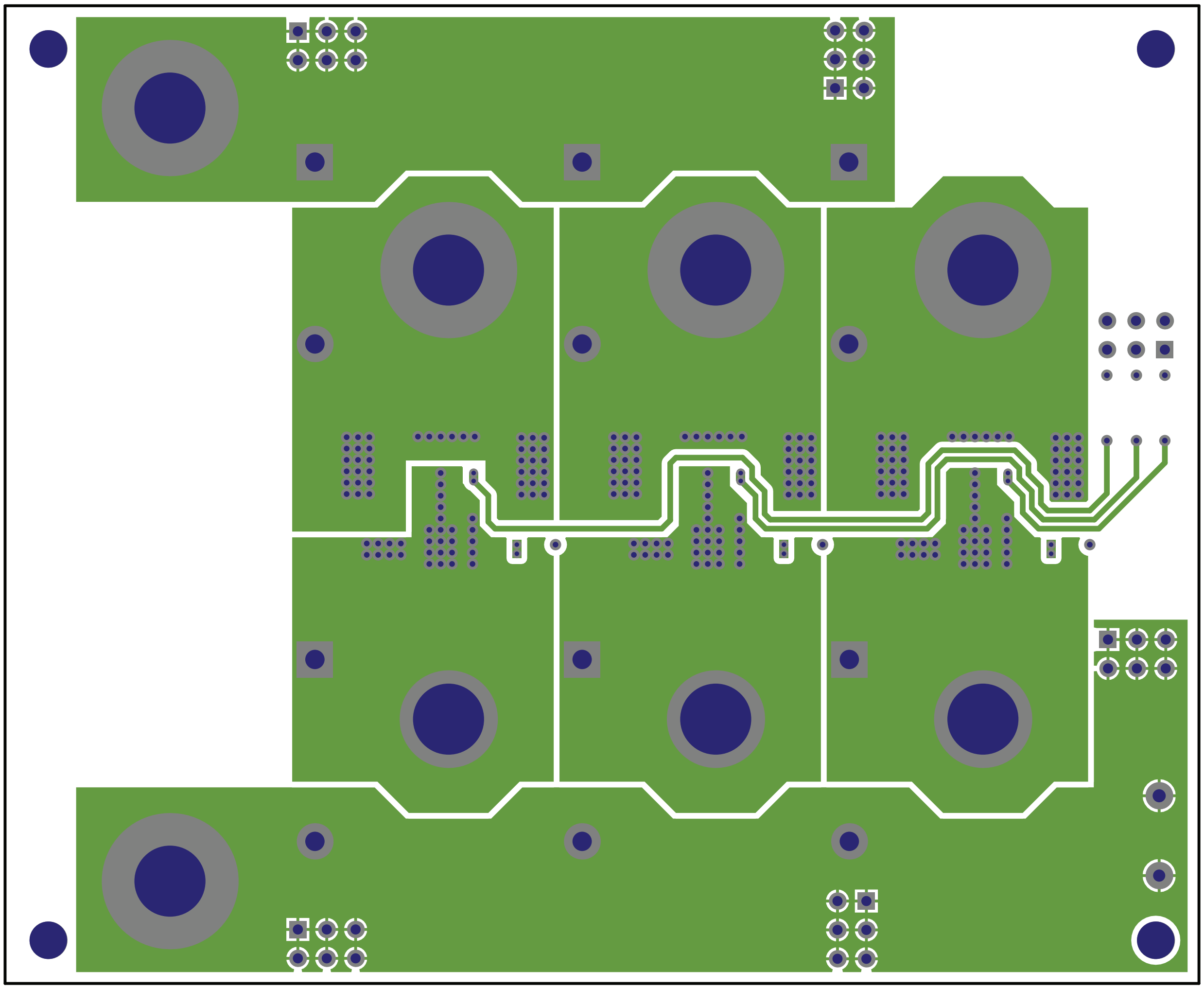

[CONNECT TO BRIDGE DRIVE]
VBAT
VBrg
VBridge
Drain_W
Drain_V
Drain_U
Source_W
Source_V
Source_U
A6862 3ph Isolation Board Rev0
EDC137R0
Allegro MicroSystems, LLC
HSINK1
PGND
[CONNECT TO MOTOR LOAD]


[CONNECT TO BRIDGE DRIVE]
VBAT
VBrg
VBridge
Drain_U
Drain_V
Drain_W
Source_U
Source_V
Source_W
X32 PINOUT
A6862 3ph Isolation Board Rev0
EDC137R0
PGND
[CONNECT TO MOTOR LOAD]



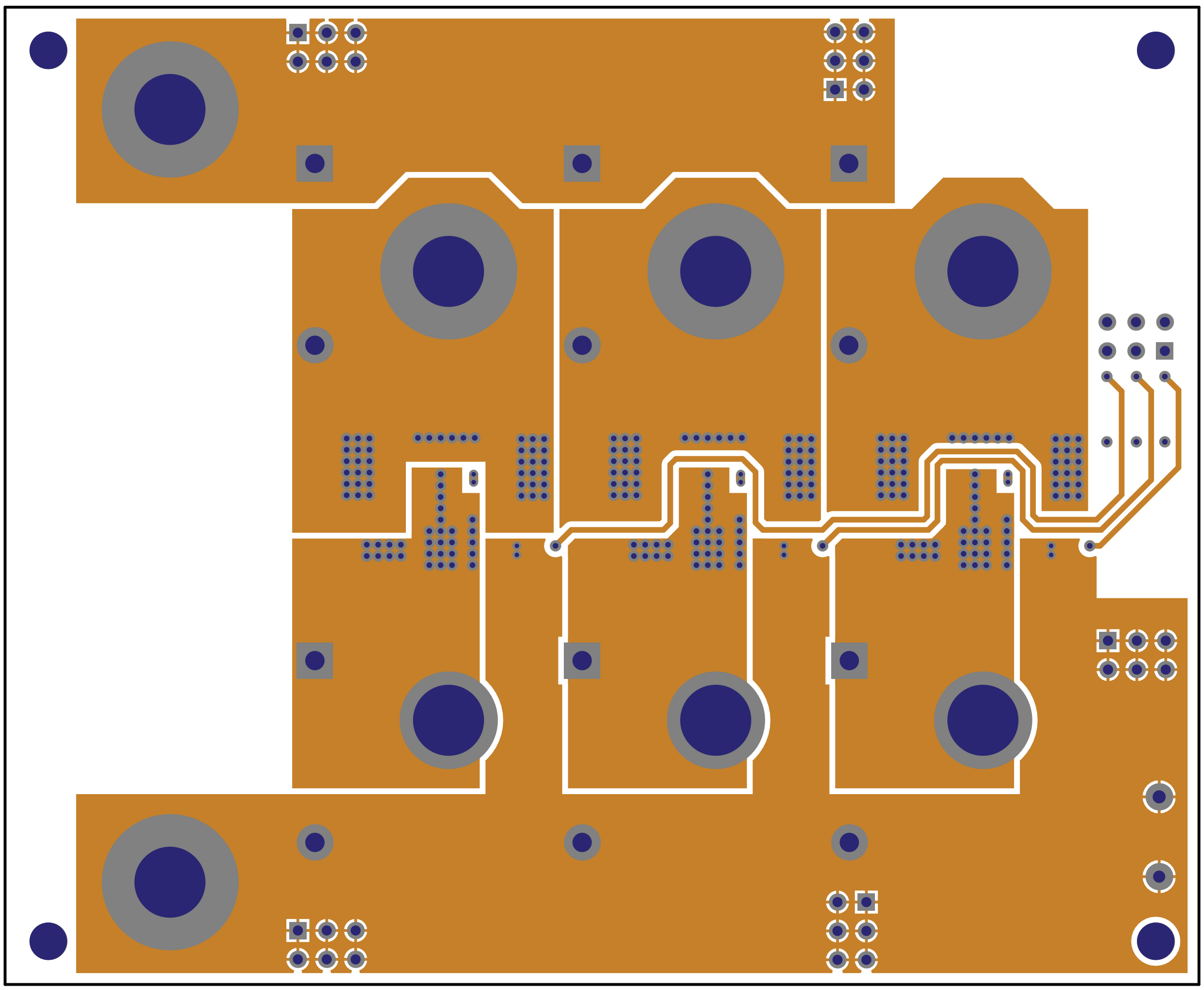
Top View Orientation Watermark

Mid-Layer 1



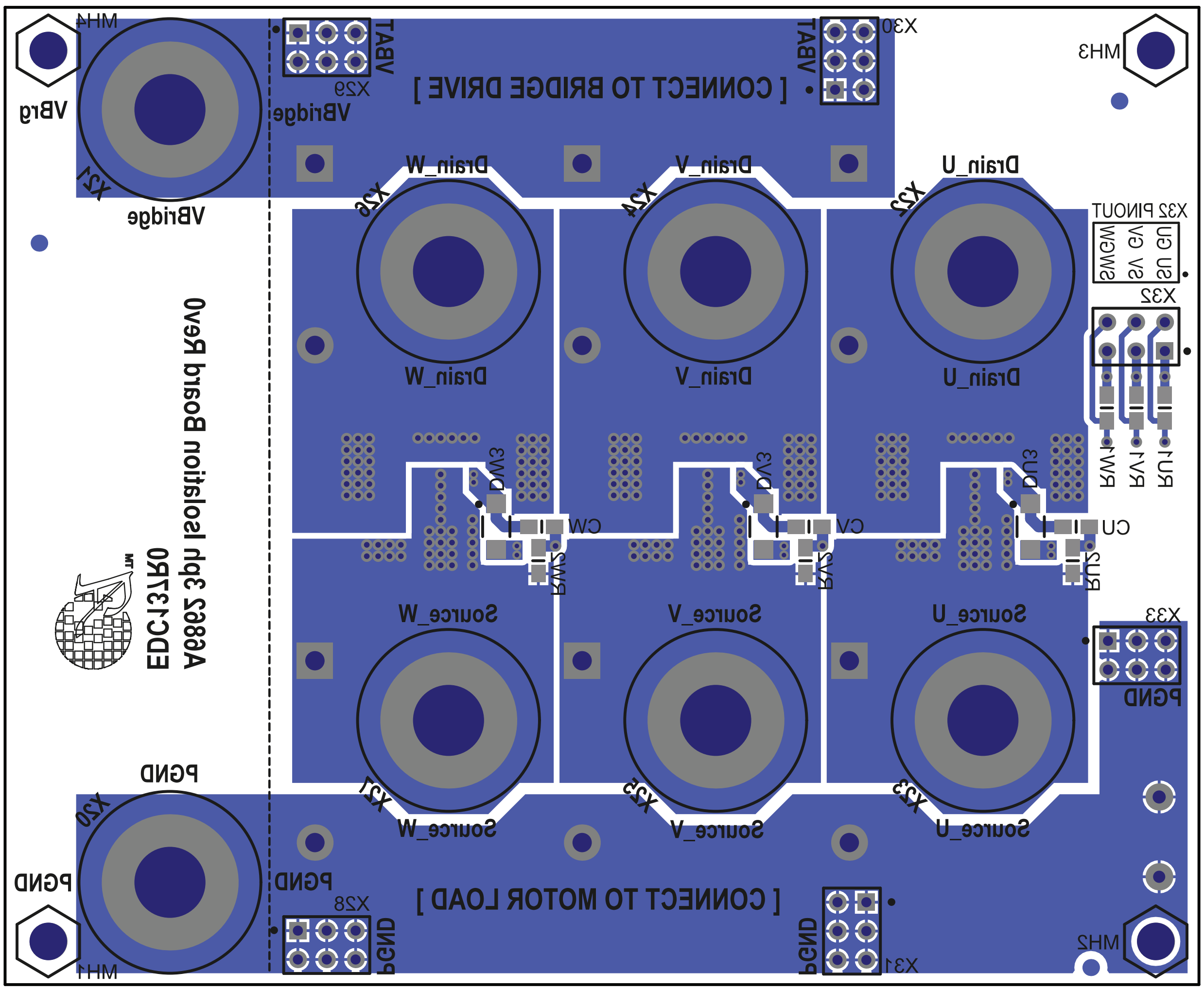
Top View Orientation Watermark

Mid-Layer 2

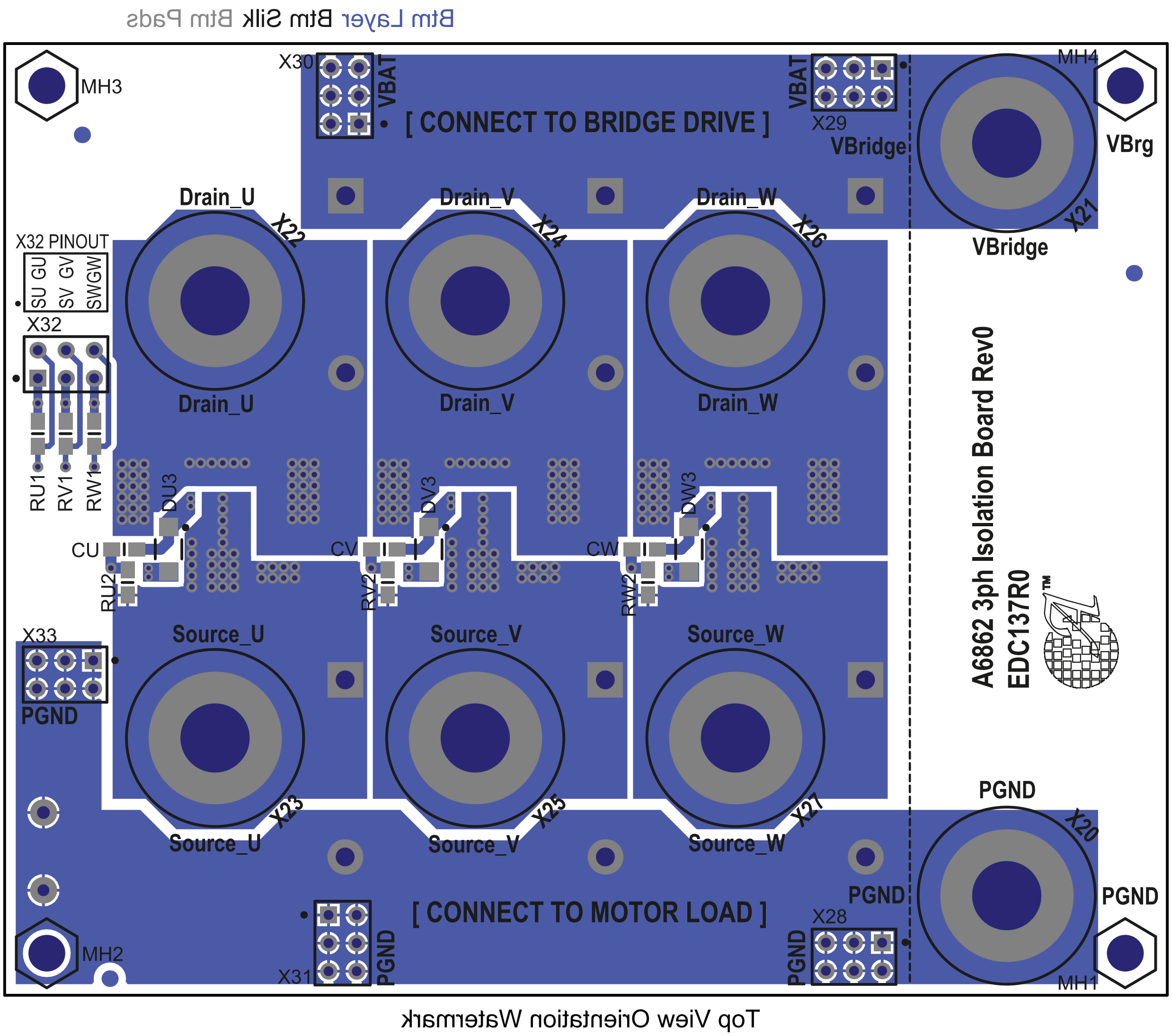


Top View Orientation Watermark

Btm Layer Btm Silk Btm Pads



Top View Orientation Watermark



Btm Layer Btm Silk Btm Pads
MH3
X30
VBAT
[CONNECT TO BRIDGE DRIVE]
VBAT
X29
VBridge
MH4
VBrg
X21
VBridge
Drain_U
X22
Drain_V
X24
Drain_W
X26
X32 PINOUT
SU GU
SV GV
SWGW
X32
Drain_U
Drain_V
Drain_W
RU1
RV1
RW1
DU3
DV3
DW3
CU
CV
CW
RU2
RV2
RW2
A6862 3ph Isolation Board Rev0
EDC137R0
X33
PGND
Source_U
Source_V
Source_W
Source_U
X23
Source_V
X25
Source_W
X27
PGND
X20
[CONNECT TO MOTOR LOAD]
PGND
X28
PGND
MH2
X31
PGND
PGND
MH1
Top View Orientation Watermark

BILL OF MATERIALS

Designator	Value	Rating	Tol	Part Number	Footprint	Description	DNF	Qty	RS #1	Farnell #1
CU, CV, CW	\	16V	X7R	\	SM : 0805	Capacitor : Ceramic Chip (optional)	DNF	0	\	\
DU1, DU2, DV1, DV2, DW1, DW2	\	\	\	Sanken RM4Y	TH : Pitch 16mm	Diode : Axial, 100V, 3A	DNF	0	\	\
DU3, DV3, DW3	\	\	\	STPS160A	SM : DO214AC (SMA)	Diode : Schottky, 60V, 1A	\	3	249-577	1697509
HSINK1	\	\	\	\	75x21.5x19(H)mm	Heatsink : SK454-75SA	DNF	0	674-4719	1850030
MH1, MH2, MH3, MH4	\	\	\	\	TH : M3 (130mils) hole	Mount Hole : Standoff M3 15mm (2 joined = 30mm)	\	8	325-772	\
MU, MV, MW	\	\	\	IRF7749	SM : L8 (DirectFET)	Mosfet : N Channel, 200A, 60V	\	3	716-5371	1786417
PCB	\	\	\	EDC137R0	FR4, 2oz Cu, 2 Layer	PCB : 3ph Isolation Board	\	1	\	\
PGND1	\	\	\	\	TH : 7mm Pitch, 20swg	Ground Bar : Tinned Copper Wire	\	1	355-063	\
RU1, RV1, RW1	\	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip (optional)	DNF	0	\	\
RU2, RV2, RW2	0R	0.125W	1%	\	SM : 0805	Resistor : Ceramic Chip	\	3	223-0146	2057661
X20, X21, X22, X23, X24, X25, X26, X27	\	\	\	\	TH : M6 hole	Connector : M6 Brass Bolt, Nuts & Washers	DNF	0	\	\
X28, X29, X30, X31, X32, X33	\	\	\	\	TH : 2.54mm Pitch, 3x2	Connector : 6-way Header Unshrouded	\	6	251-8137	2025332
[ESDBAG_3x5_RESEAL]	\	\	\	\	\	ESD Bag : 76x127mm (3x5") resealable	\	1	178-6430	1687879
[ESDBAG_6x10]	\	\	\	\	\	ESD Bag : 152x254mm (6x10")	\	1	182-8821	1503129
[STANDOFF_NUT]	\	\	\	\	\	Mount : Standoff Nut, Plastic, M3	\	4	292-546	\
[THERMAL1]	\	\	\	\	\	Heatsink Adhesive : Low Bond Strength	DNF	0	725-9975	1743753

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

http://uk.RS-online.com/
http://uk.FARNELL.com/

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Revision History

Number	Date	Description
–	September 6, 2016	Initial release

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www.allegromicro.com