

[查询"LQH55DN3R3M03"供应商](#)
Component List

Ref Designation	Value	Description	Manufacturer Part Number	Manufacturer
C1	22μF	Ceramic Cap, 22μF, 25V, 1210, X5R	GRM32ER61E226KE15L	Murata
C2	22μF	Ceramic Cap, 22μF, 25V, 1210, X5R	GRM32ER61E226KE15L	
C3	22μF	Ceramic Cap, 22μF, 25V, 1210, X5R	GRM32ER61E226KE15L	
C4	NU			
C5	1000pF	Ceramic Cap, 1000pF, 50V, 0603, X7R	GRM188R71E102K	
C6	1μF	Ceramic Cap, 1μF, 25V, 0603, X5R	GRM188R61E105KA12D	
C _C	1000pF	Ceramic Cap, 1000pF, 50V, 0603, X7R	GRM188R71E102K	
R1 ⁽¹⁾	31.6kΩ	Thick Film Res, 1%, 31.6k, 0603	CRCW060331K6FKTAP	DALE
R2	20kΩ	Thick Film Res, 1%, 20k, 0603	CRCW060321K0FKTAP	
R _C	20kΩ	Thick Film Res, 1%, 20k, 0603	CRCW060321K0FKTAP	
L1	4.7μH	Inductor, 4.7μH, 2.9A	LQH55DN3R3M03	Murata
D1		Schottky Barrier Diode, 2A, 30V, SMA	B230A-FDICT-ND	DIODES
U1	AOZ1019AI	Buck Regulator IC, 2A, 16V	AOZ1019AI	AOS

Note:

1. Output voltage is set by R1; $R1 = \frac{8 + (10 \times V_O)}{0.8k\Omega}$. Table 1 shows that the value of R1 with typical output voltages.

Table 1.

V _O (V)	R1 (kΩ)
1.2	4.99
1.8	12.7
2.5	21.5
3.3	31.6
5.0	52.3

PCB Layout [查询"AOZ1019-EVA"供应商](#)

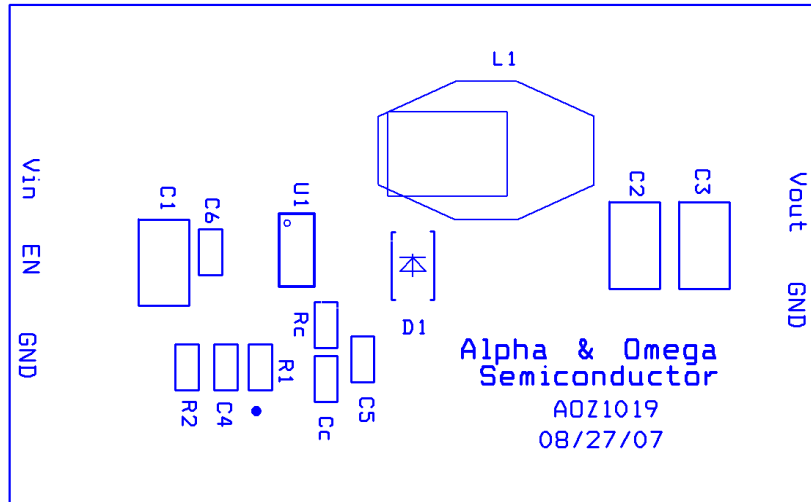


Figure 1. Top Silk Screen

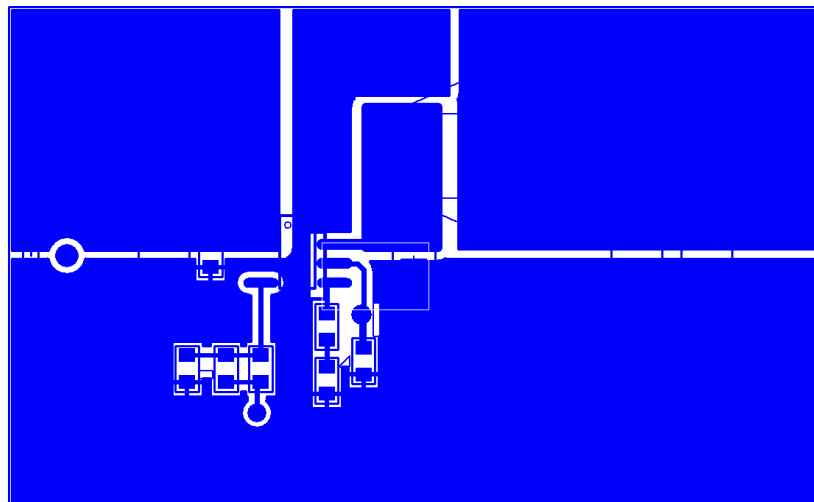


Figure 2. Top Layer

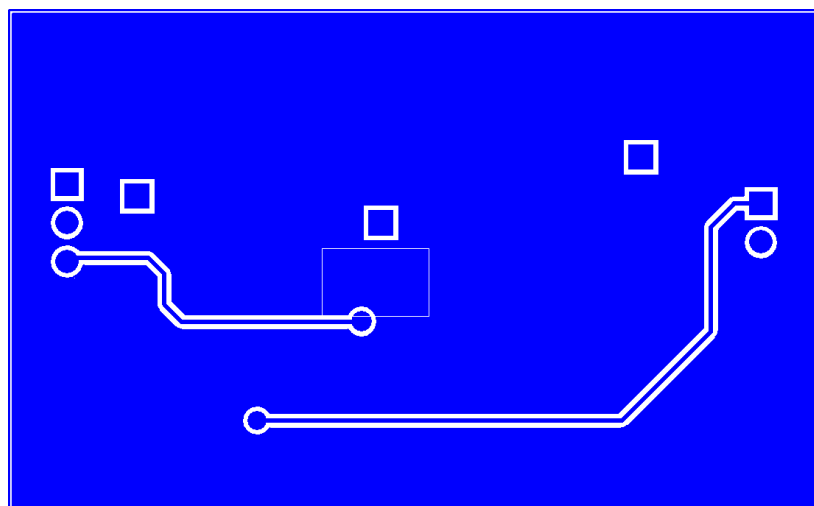


Figure 3. Bottom Layer

Quick Start Guide [查询"OH55DN3R3M03"供应商](#)

1. Connect the terminals of load to +V_{OUT} pins and GND pins. Set load current to between 0A and 2A.
2. Connect the DC power supply to +V_{IN} pin and GND pins. Set DC power supply voltage to between 4.5V and 16V.
3. Connect EN pin to +V_{IN} or any voltage source which is higher than 2V and less than 16V.
4. Turn on DC power supply and evaluation circuit will start.
5. Measure input voltage at the +V_{IN} pin and GND pins to eliminate the effect of voltage drop on wire between DC power supply and evaluation board.
6. Measure output voltage at the +V_{OUT} pin and GND pins to eliminate the effect of voltage drop on wire between load and evaluation board.
7. Use an oscilloscope to monitor input ripple voltage right across input capacitor C1.
8. Use an oscilloscope to monitor output ripple voltage right across output capacitor C2.

This datasheet contains preliminary data; supplementary data may be published at a later date. Alpha & Omega Semiconductor reserves the right to make changes at any time without notice.

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