



The MP6604C is available in a TSSOP-28EP package. It is recommended to read the MP6604C datasheet before making any changes to the EV6604C-F-00A.

Parameters	Conditions	Value
Input voltage (V_{IN}) range		4.5V to 45V
Maximum output current (I_{OUT})		2.5A

MPS

Monolithic Power Systems
MP6604C Demo Board
EV6604C-F-00A

GND ON = Low

CNI

BLS:
BHS:
BLS:
BHS:
ALS:
AHS:
ALS:
AHS:

WE

ON

UCC SWI

JP3
RESET
JP2
NSLEEP
FAULT

R9 LED1 JP1

Made in China

VIN GND UCC GND

AOUT1

R2 CP2 CP1

VCP C2

U1

R5 R7 R6 R8 R4 R3

C5 C8 C4

C7 C6

R100

R3

C1+

D1

BOUT2

CN2

BOUT1

Board Number	MPS IC Number
EV6604C-F-00A	MP6604CGF

QUICK START GUIDE

1. Connect the input voltage ($4.5V \leq V_{IN} \leq 45V$) and input ground to the VIN and GND connectors, respectively.
2. Connect the VCC voltage ($V_{CC} = 3.3V$ or $5V$) and input ground to the VCC and GND connectors, respectively.
3. Set the input control and logic signal through the CN1 connector via the external MCU, or manually through SW1. Table 1 shows the input logic for the high-side (xHSx) and low-side (xLSx) inputs.

Table 1: Input Logic Truth

xHSx	xLSx	xOUTx
0	0	Hi-Z
0	1	L
1	0	H
1	1	Hi-Z

EVALUATION BOARD SCHEMATIC

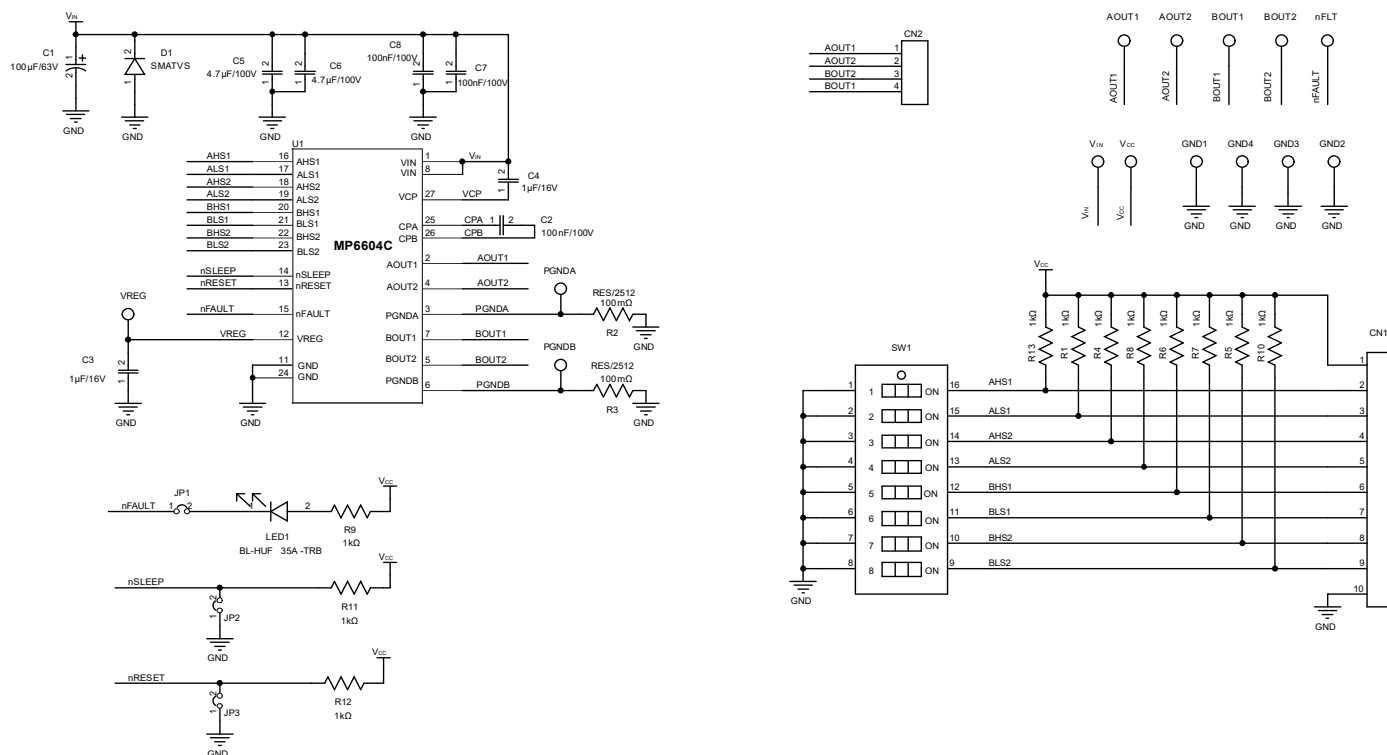


Figure 1: Evaluation Board Schematic

EV6604C-F-00A BILL OF MATERIALS

Qty	Ref	Value	Description	Package	Manufacturer	Manufacturer PN
1	C1	100μF	Electrolytic capacitor, 63V	DIP	Rubycon	63PX100MEFC8X11.5
3	C2, C7, C8	100nF	Ceramic capacitor, 100V, X7R	0603	Würth	885012206120
2	C3, C4	1μF	Ceramic capacitor, 16V, X7R	0603	Murata	GRM188R71C105KA12D
2	C5, C6	4.7μF	Ceramic capacitor, 100V, X7S	1210	TDK	C3225X7S2A475K
11	R1, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13	1kΩ	Film resistor, 1%	0603	Yageo	RC0603FR-071KL
2	R2, R3	100mΩ	Film resistor, 1%	2512	Yageo	RL2512FK-070R1L
1	LED1	20mA	Red LED	0805	Baihong	BL-HUE35A-AV-TRB
1	D1	NS				
1	SW1	25mA	Button	SMD	Würth	418121270808
1	CN1	2.54mm	Connector, 10-bit	DIP	Any	
1	CN2	2.54mm	Connector, 4-bit	DIP	Any	
3	JP1, JP2, JP3	2.54mm	Connector, 2-bit	DIP	Any	
1	JP1	2.54mm	Short jumper	DIP	Any	
4	VG, NFLT, PGNDA, PGNDB	1mm	Test point	DIP	Any	
2	VIN, GND	2mm	Connector	DIP	Any	
8	VCC, GND, AOUT1, AOUT2, BOUT1, BOUT2, GND, GND	1mm	Connector	DIP	Any	
1	U1	MP6604C	45V, 2.5A, dual H-bridge driver (HS/LS)	TSSOP-28EP	MPS	MP6604CGF

PCB LAYOUT

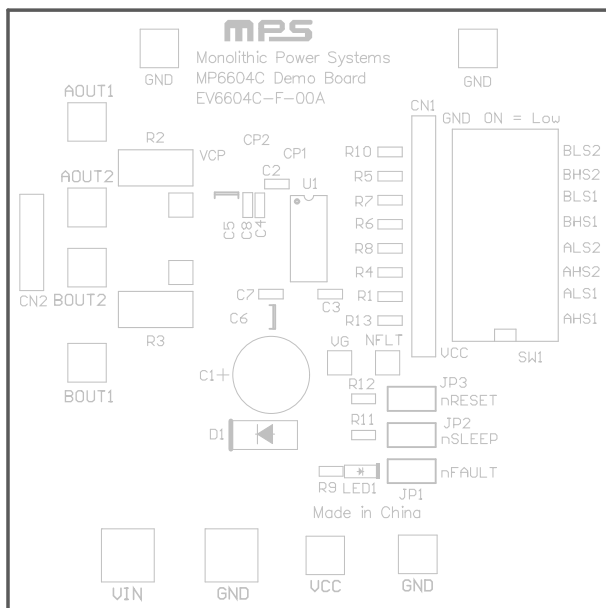


Figure 2: Top Silk

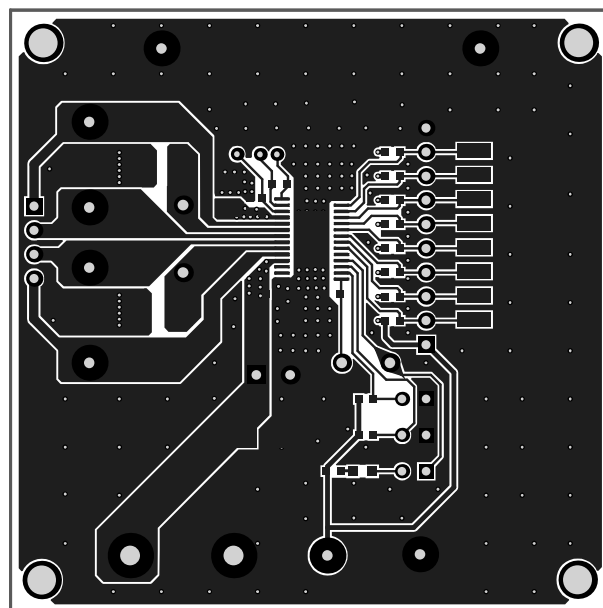


Figure 3: Top Layer

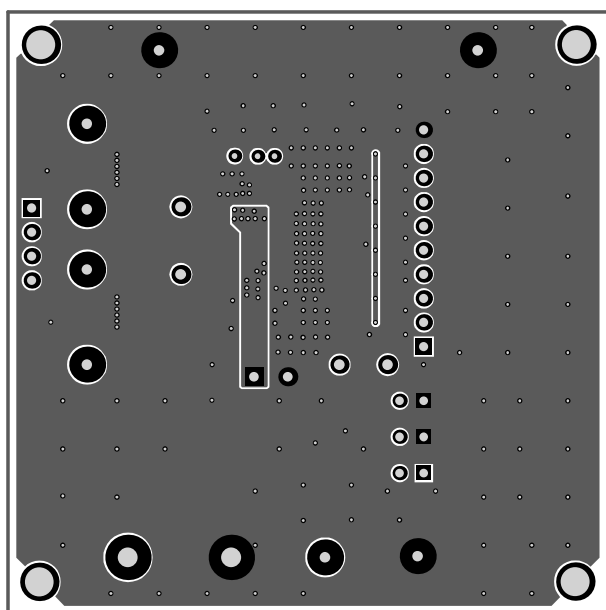


Figure 4: Bottom Layer



REVISION HISTORY

Revision #	Revision Date	Description	Pages Updated
1.0	8/2/2022	Initial Release	-

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