KiCad Example

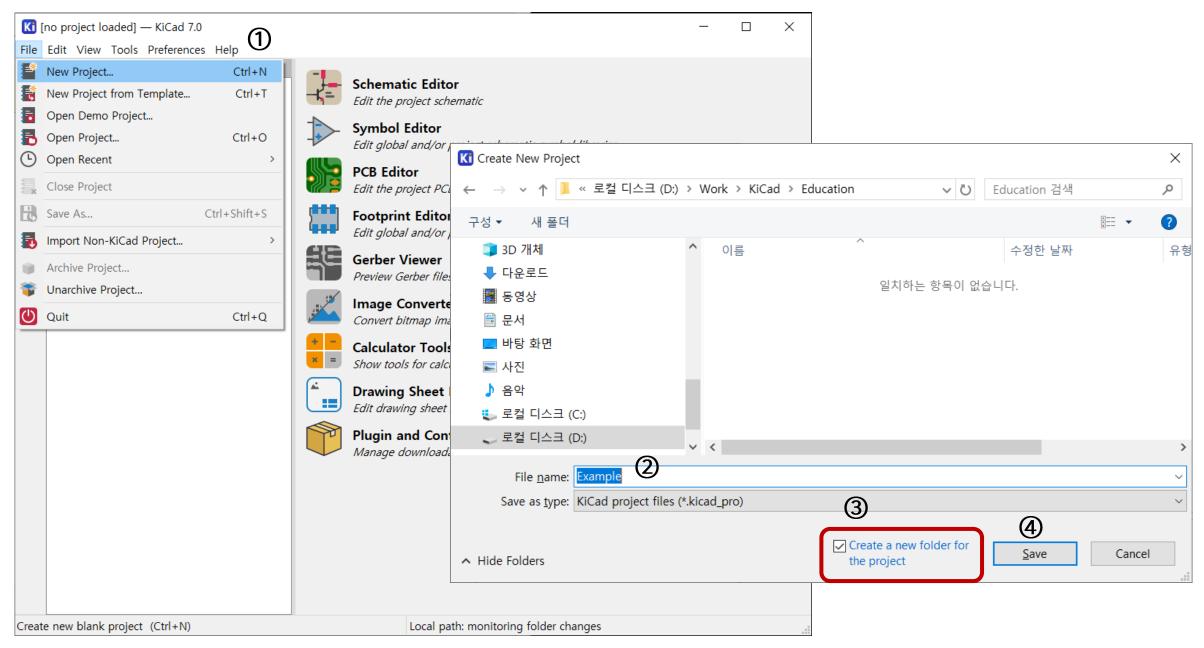
2024.04.08.

김병헌 Byeongheon Kim benkim@plecko.biz



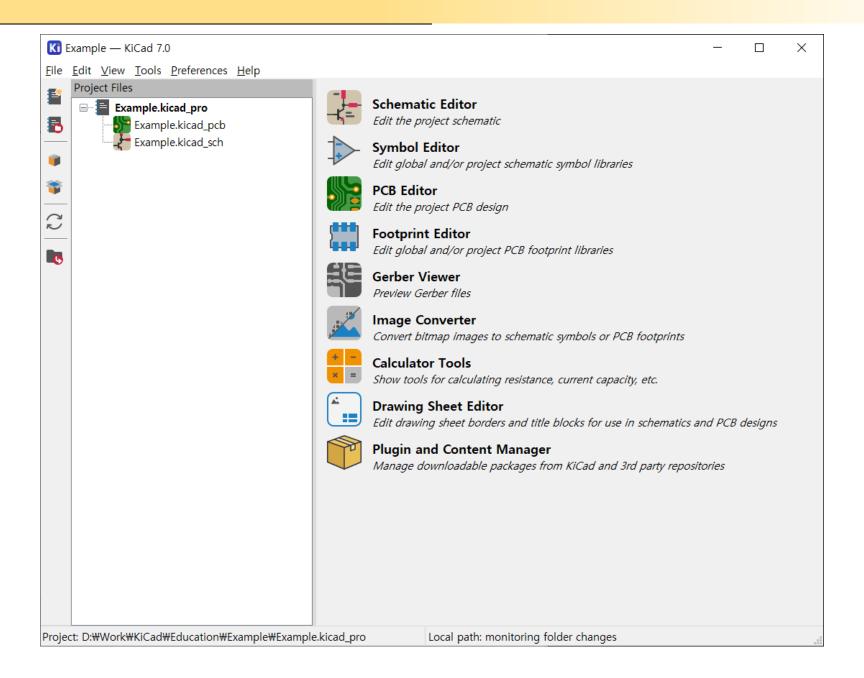
프로젝트 생성





프로젝트 생성



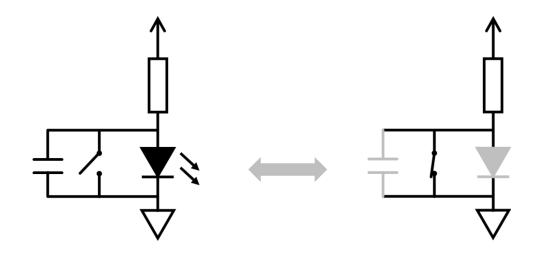


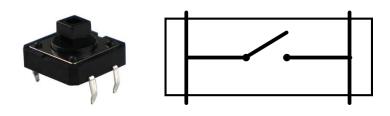
Design Circuit



❖ LED ON/OFF Circuit 예제

- ► LED: 2012 size, Chip LED, 20 mA, on drop 2 V
- ▶ 저항: 2012 size, 330 Ohm, 1/8 W
- ▶ 전원: 5 V 외부 전압
 - ✓ 커넥터: 2 pin connector (2.54 mm picth)
- ▶ 스위치
 - ✓ 택트 스위치
- ▶ 캐패시터: 2012 size, 1 nF, > 6V



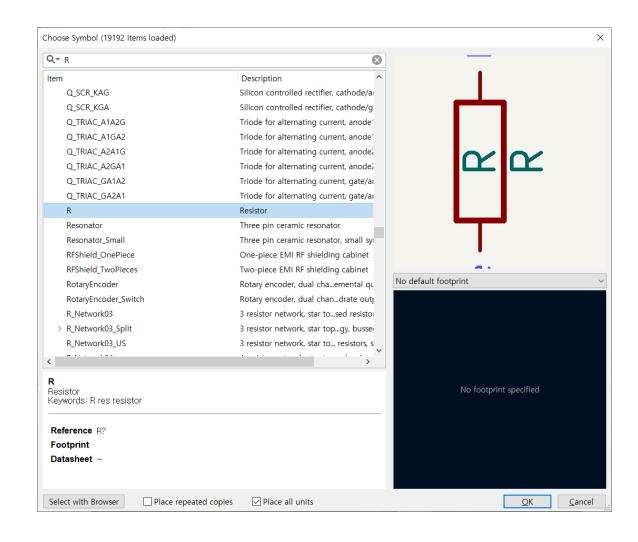


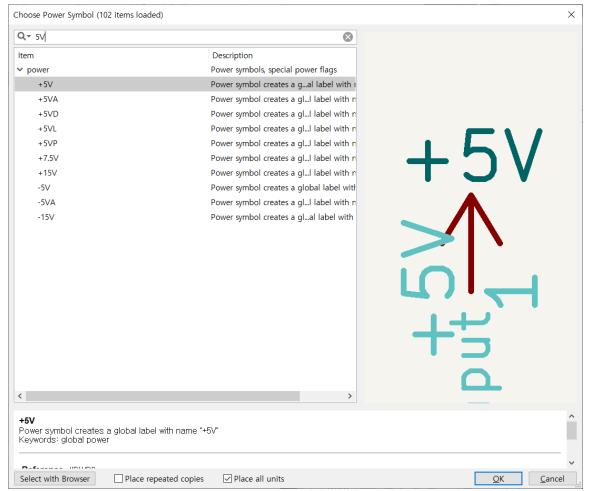


❖ LED ON/OFF Circuit 예제

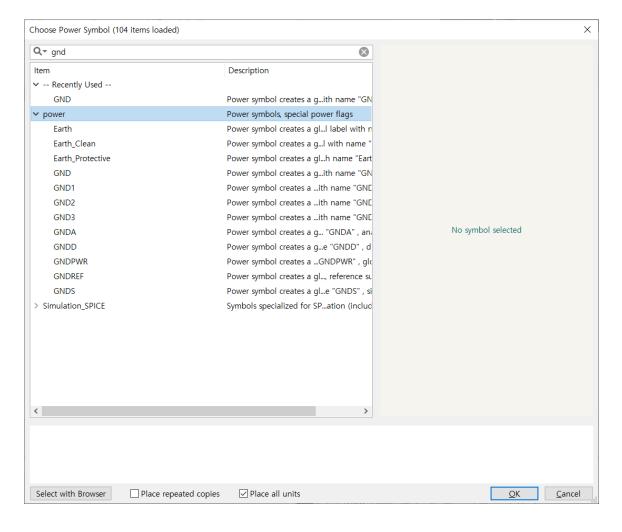
- ▶ 커넥터와 Power pin 배치,
 - ✓ 커넥터: 2 pin connector (2.54 mm picth)
- ► Ground 배치
- ▶ 저항 및 LED, 캐패시터, 스위치 배치
 - ✓ LED: 2012 size, Chip LED, 20 mA, on drop 2 V
 - ✓ 저항: 2012 size, 330 Ohm, 1/8 W
 - ✓ 캐패시터: 2012 size, 1 nF, > 6V
 - ✓ 스위치: SW_Push 사용

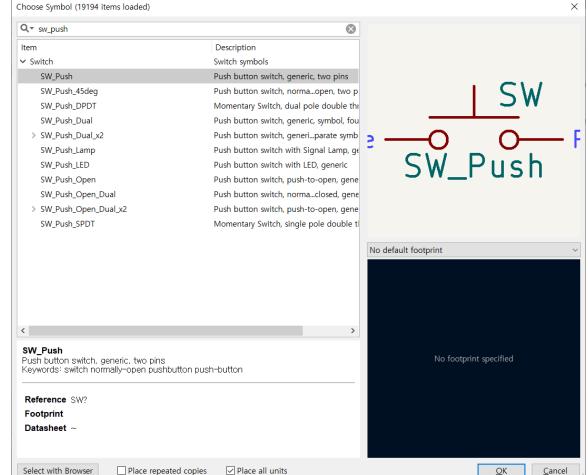




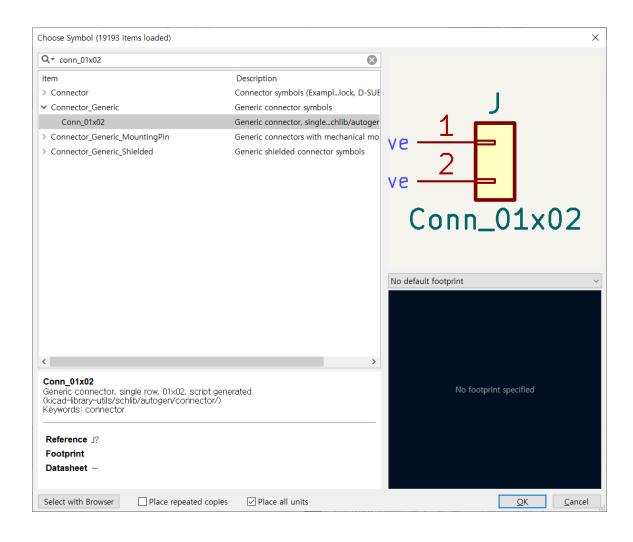


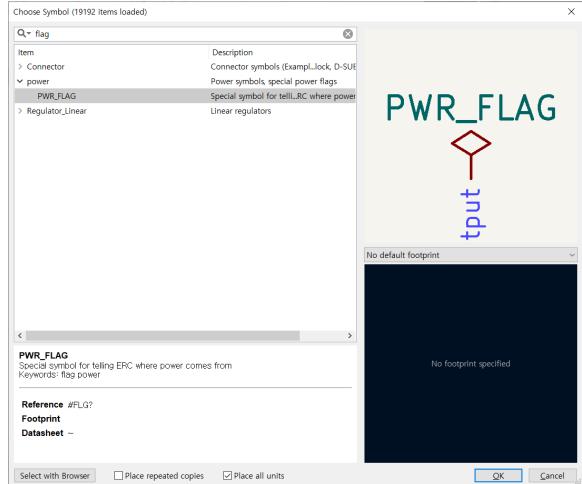




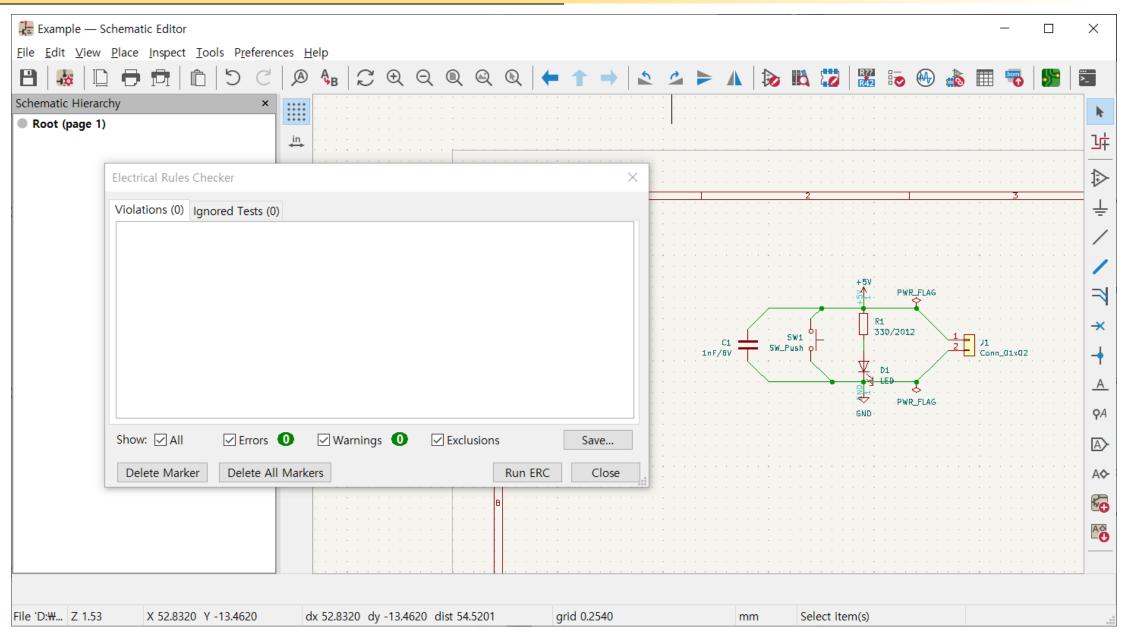




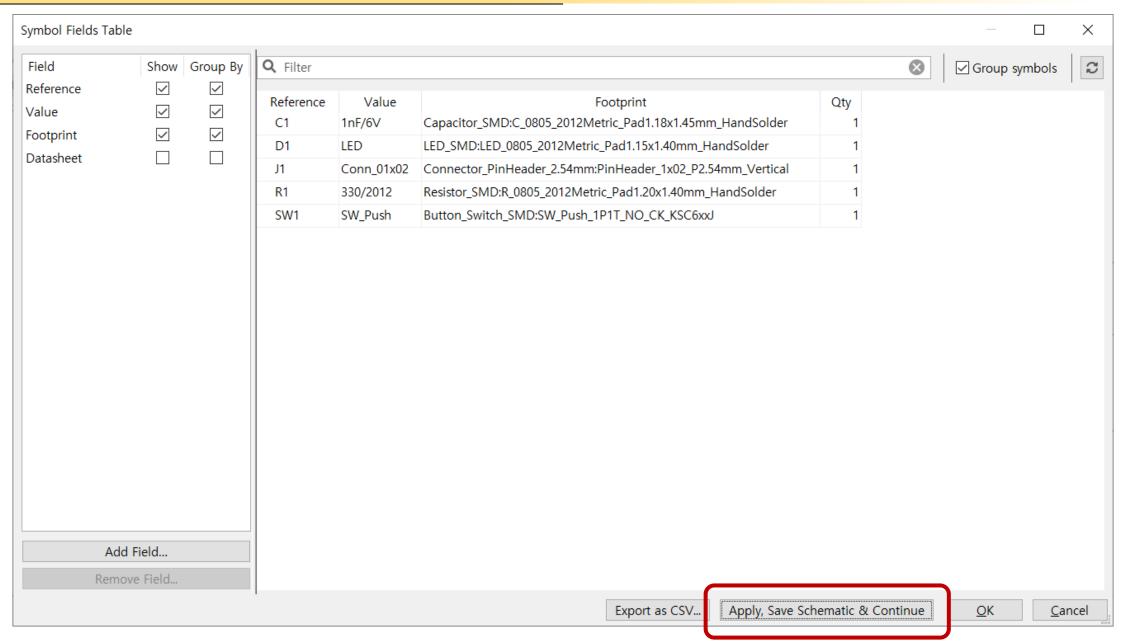




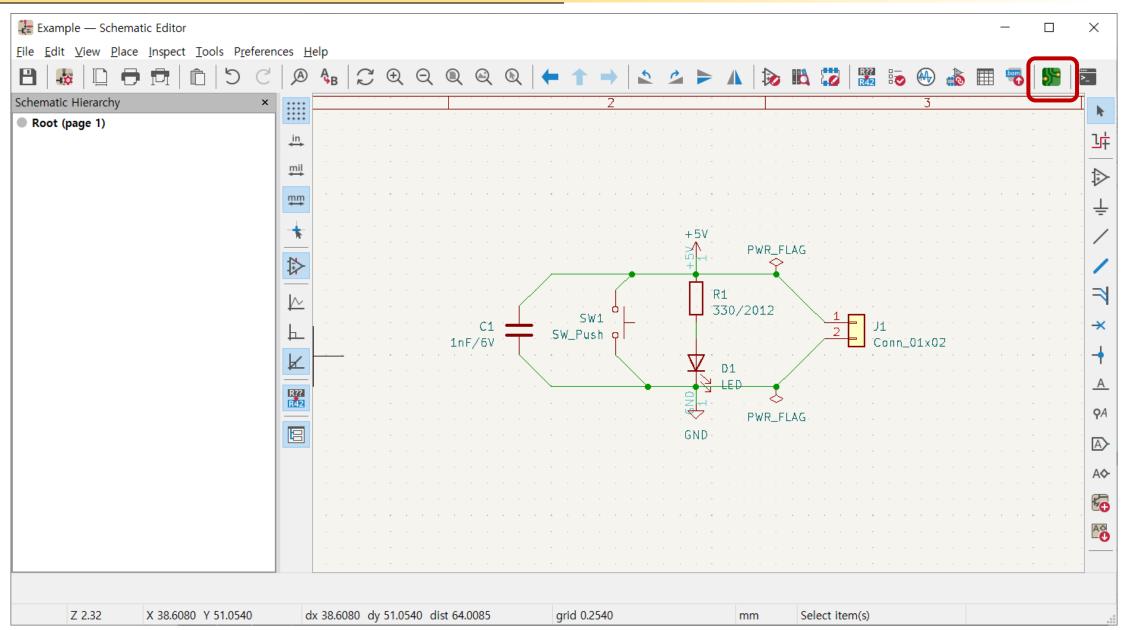




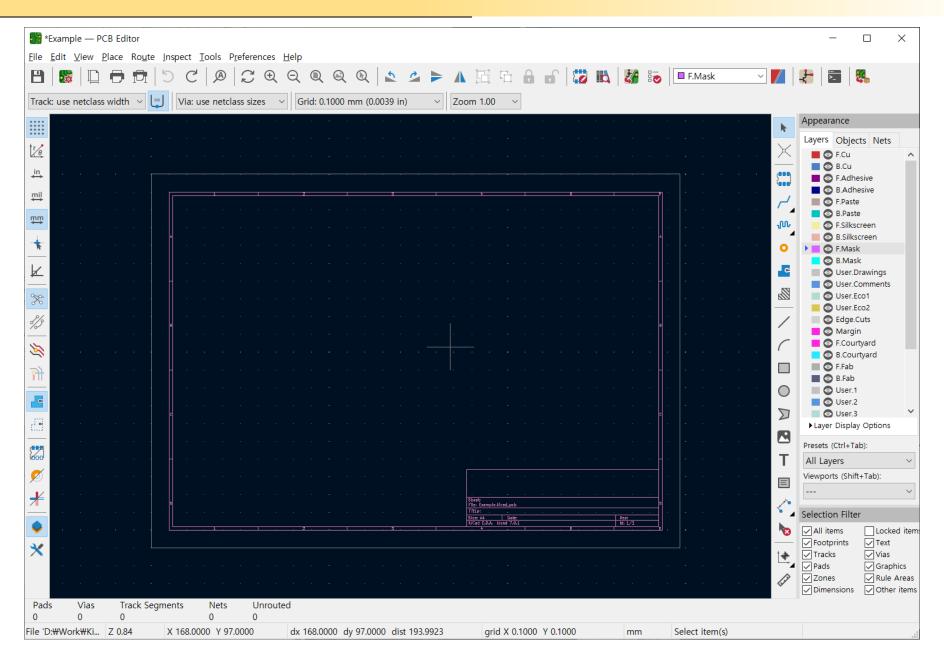






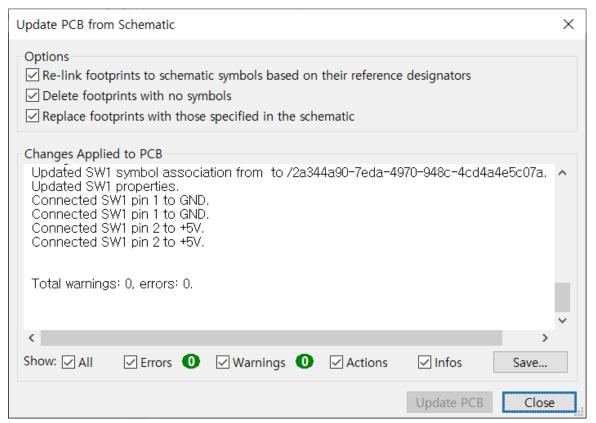




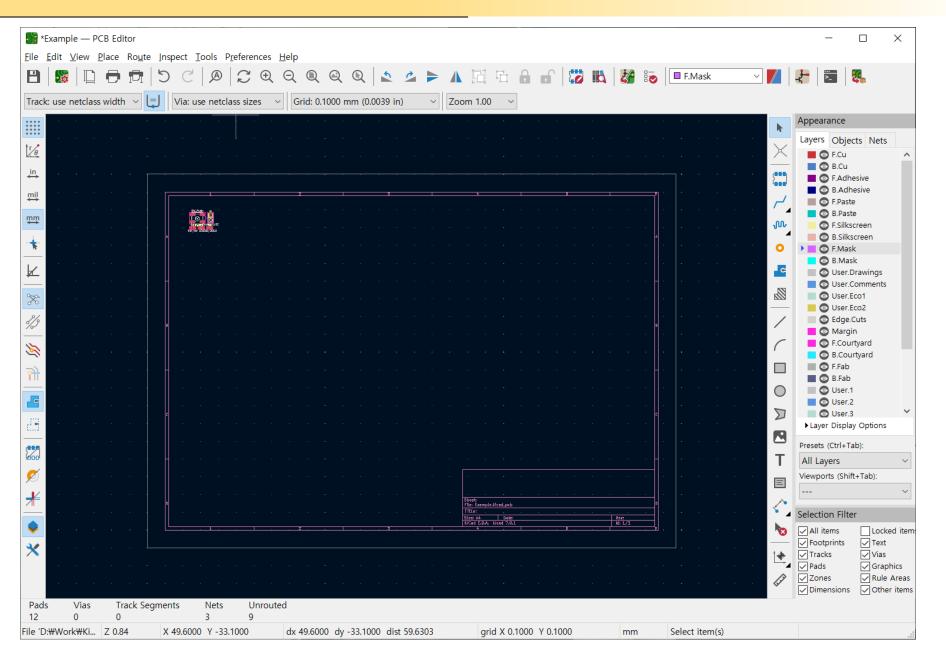






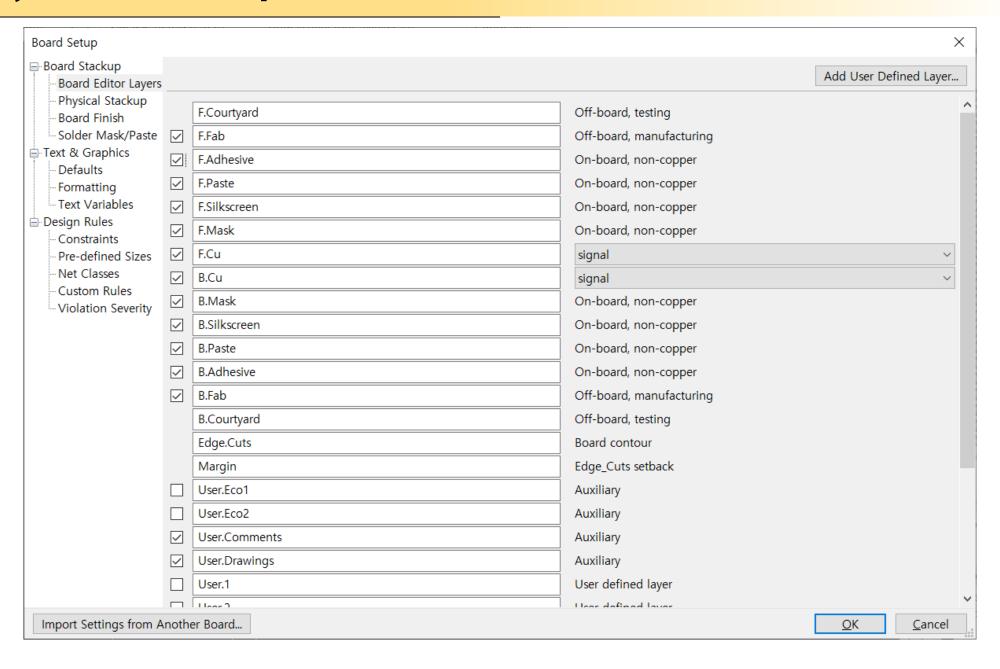






Board Layout: Board setup



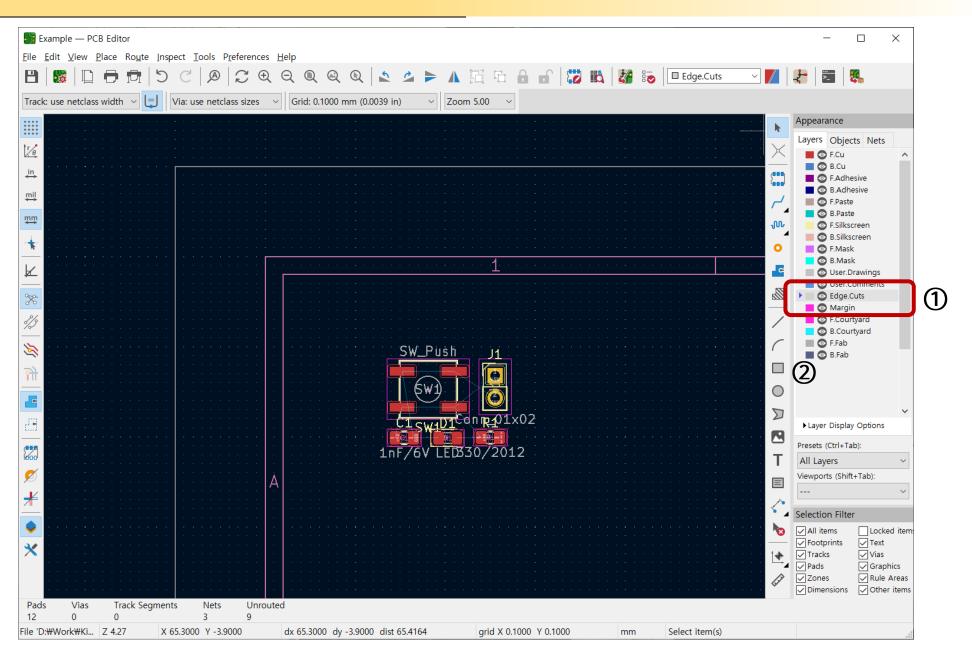


Board Layout: Board setup



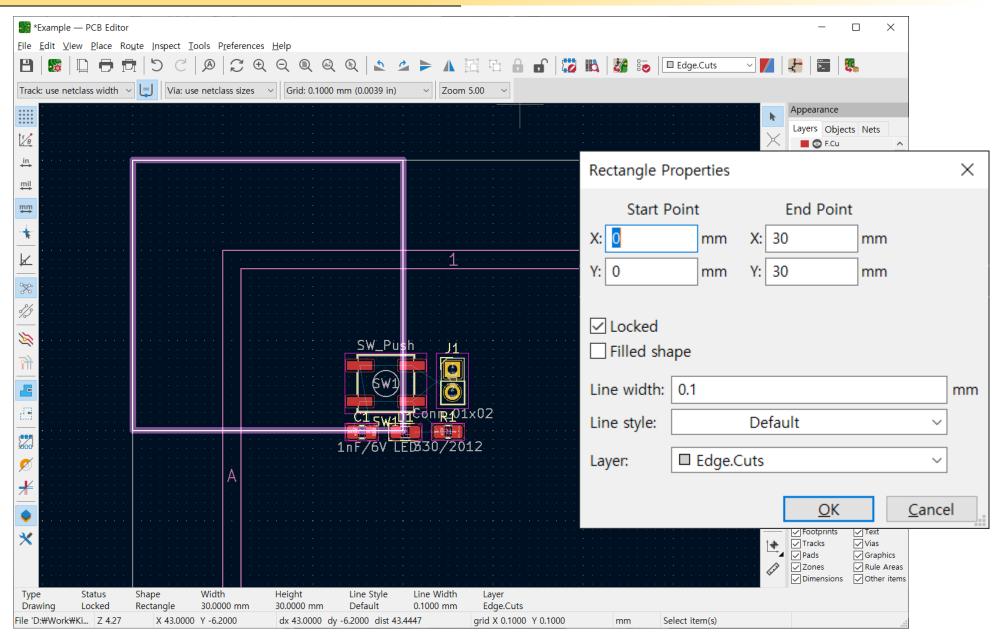
Board Setup						×
Board Setup Board Stackup Board Editor Layers Physical Stackup Board Finish Solder Mask/Paste Text & Graphics Defaults Formatting Text Variables Constraints Pre-defined Sizes Net Classes Custom Rules Violation Severity	Copper Minimum clearance: Minimum track width: Minimum connection width: Minimum annular width: Minimum via diameter: Copper to hole clearance: Copper to edge clearance:		0 0.2 0 0.05 0.4 0.25	mm mm mm mm mm mm	Arc/circle approximated by segments Max allowed deviation: 0.005 mm Note: zone filling can be slow when < 0.005 mm. Zone fill strategy Allow fillets outside zone outline Min thermal relief spoke count: 2 Length tuning Include stackup height in track length calculations	×
	Holes	Minimum through hole:	0.3	mm		
		Hole to hole clearance:	0.25	mm		
	uVias					
	**	Minimum uVia diameter:	0.2	mm		
	×	Minimum uVia hole:	0.1	mm		
	Silkscreen					
		Minimum item clearance:	0	mm		
		Minimum text height:	0.8	mm		
		Minimum text thickness:	0.08	mm		
Import Settings from Another Board OK						<u>C</u> ancel





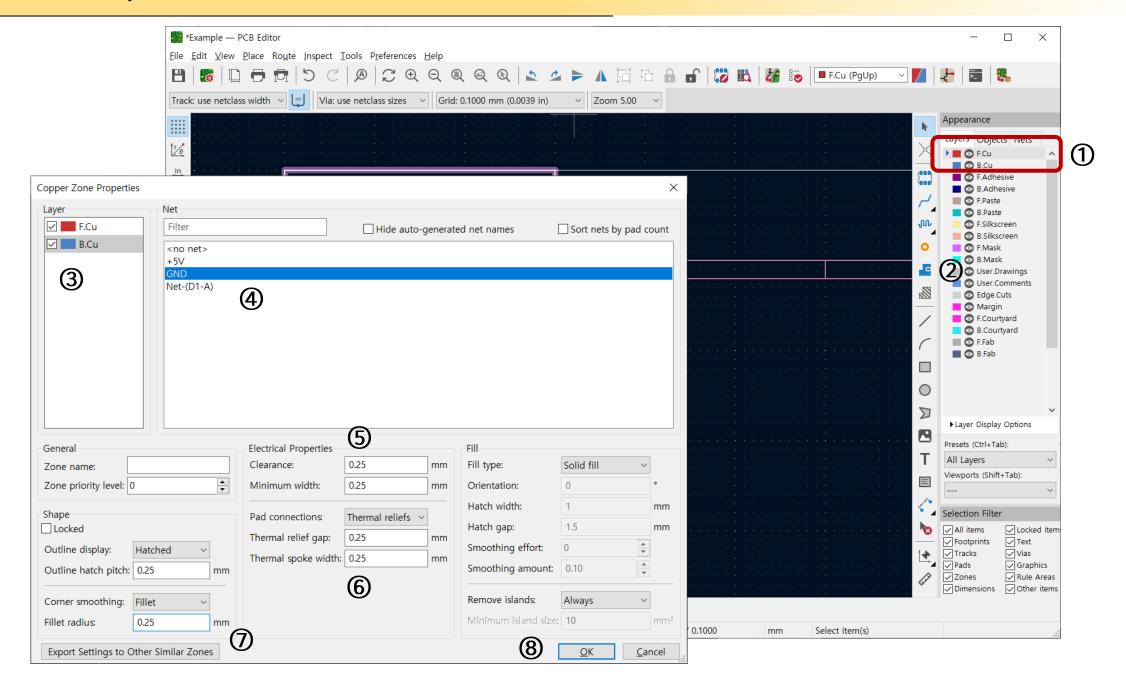
Board Layout: 경계선 긋기





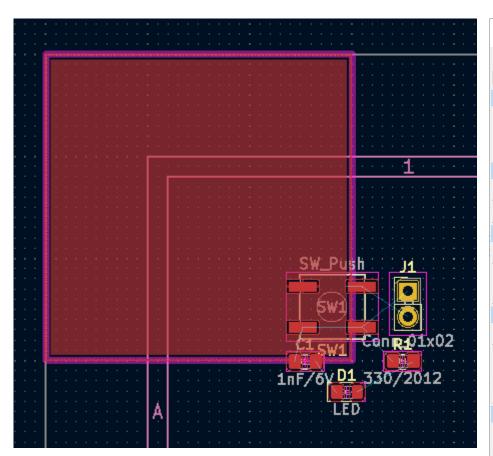
Board Layout: Pour 그리기





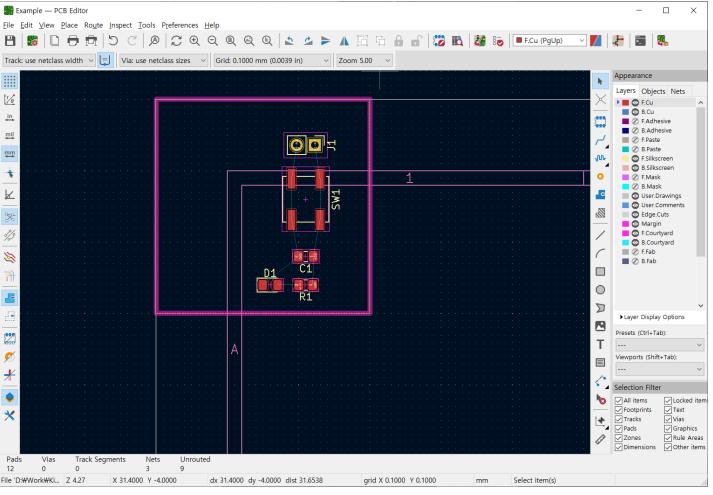


단축키: B



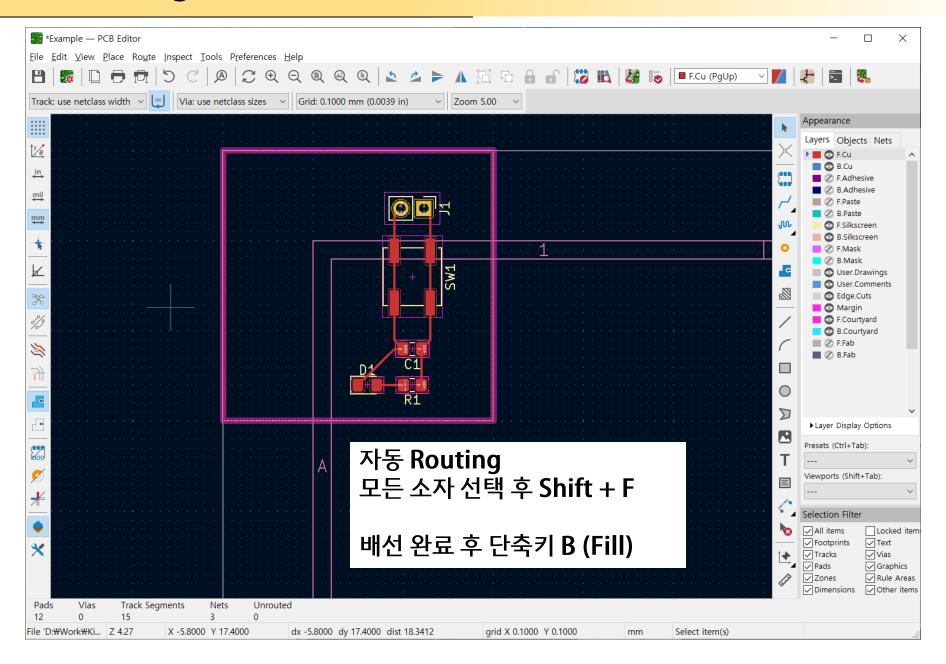
Edgecut 경계선과 똑같은 크기로 그리더라도, board setup에서 지정한 copper to edge clearance가 적용됨.

단축키: Ctrl + B 후에 배치

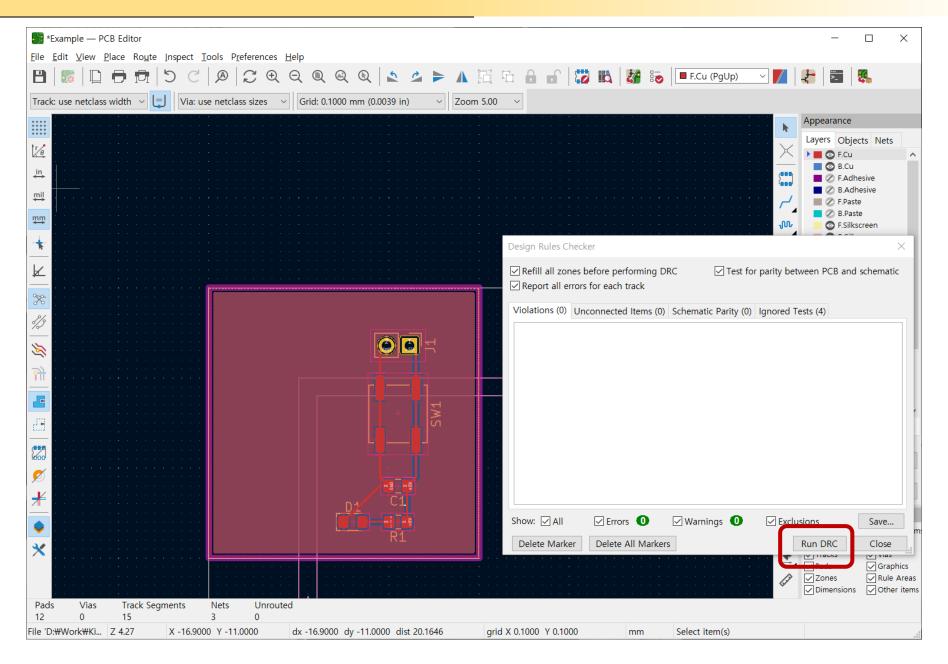


Board Layout: Routing



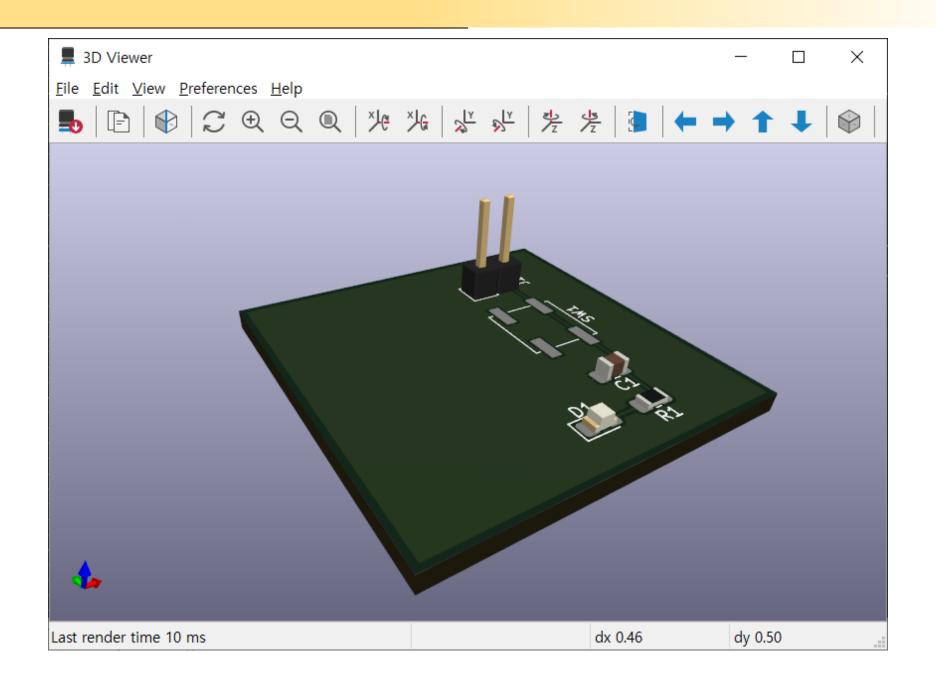






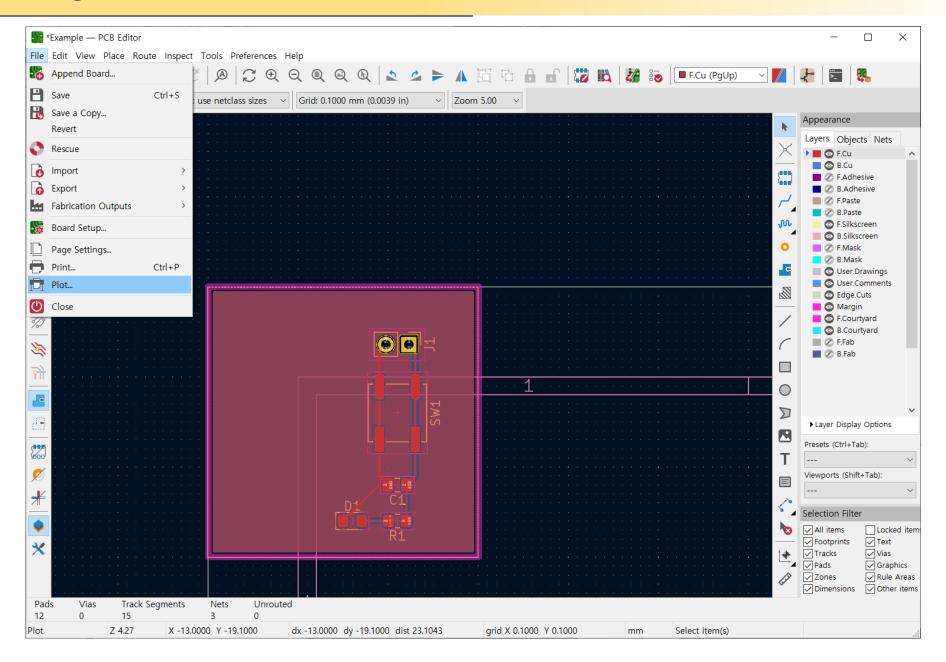
3D Viewer





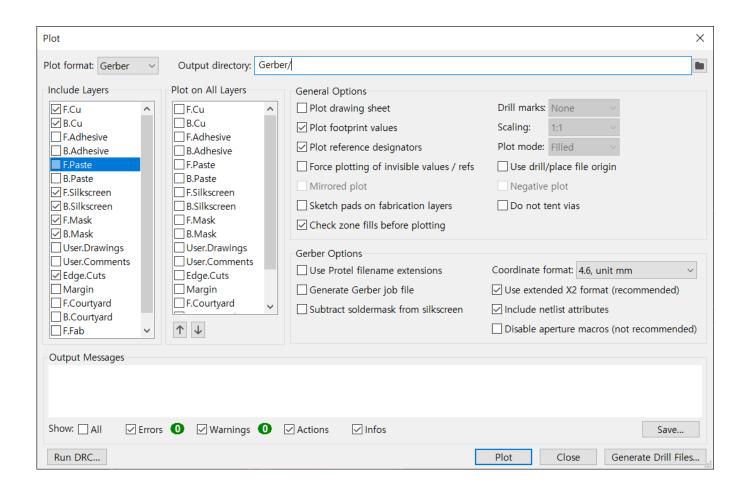
Post processing

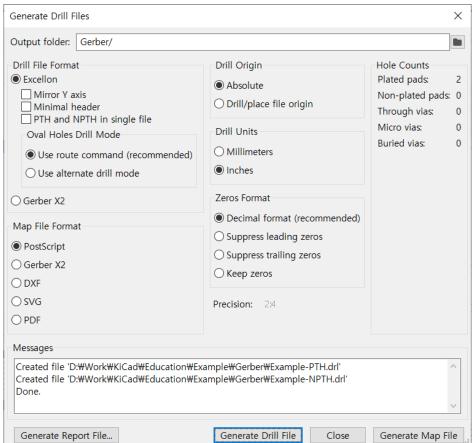




Post processing

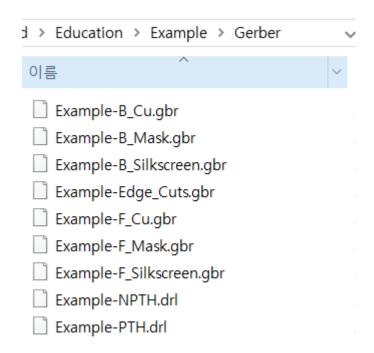


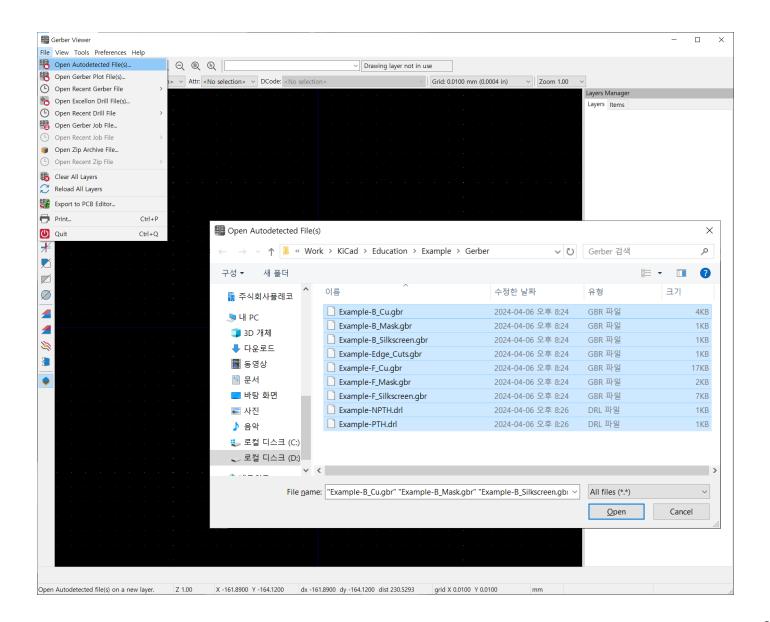




Post processing

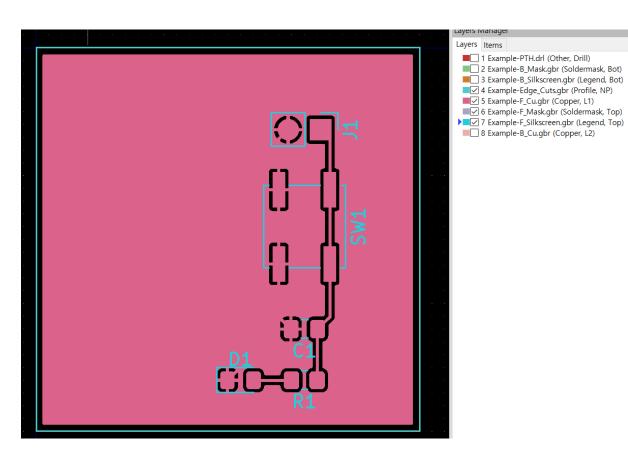


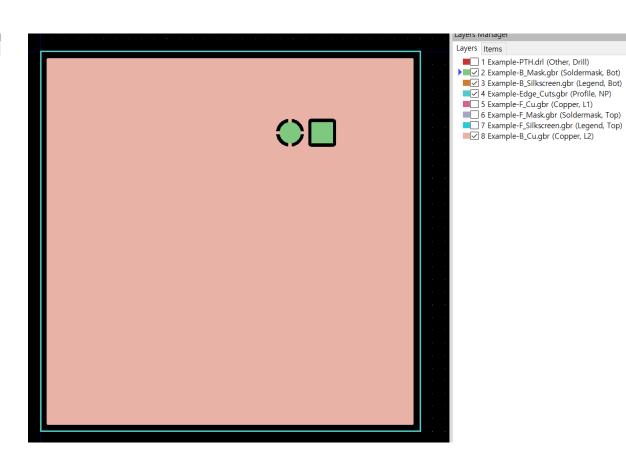




Post processing: Check result







Thank you! benkim@plecko.biz