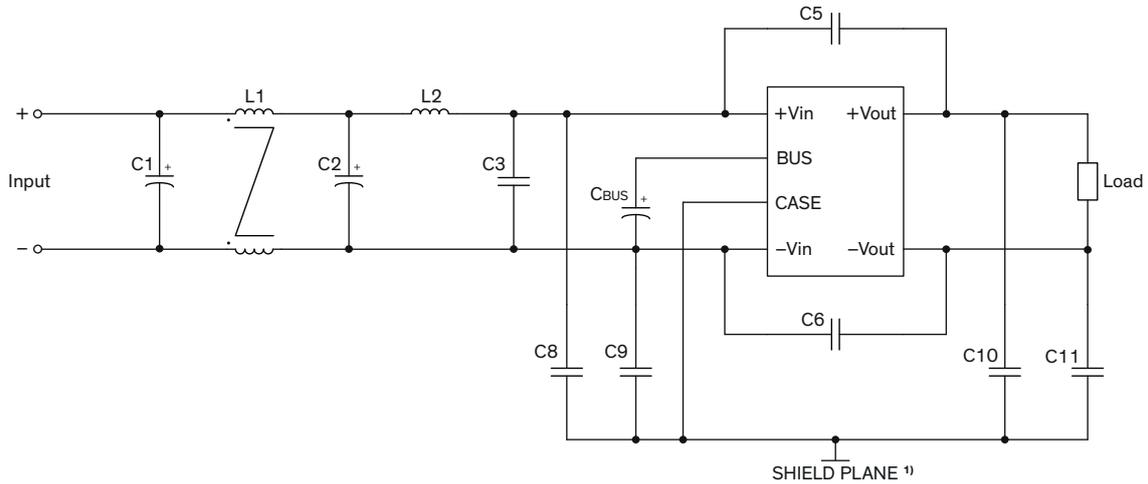


EMI Consideration

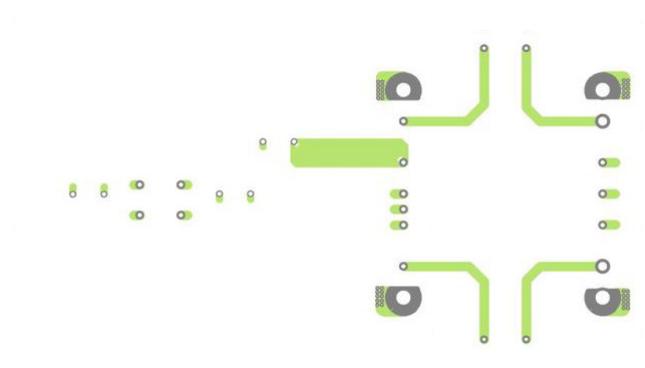
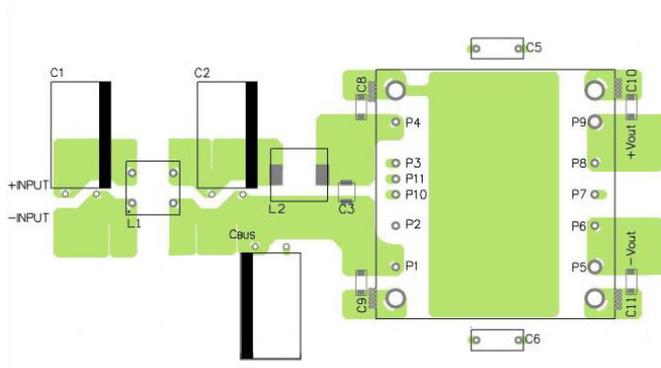
Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class A limits



¹⁾ SHIELD PLANE: floating / isolated

PCB layout suggestion, Top View

PCB layout suggestion, Bottom View



Suggested components to comply with EN 55032 Conducted and Radiated Emissions Class A limits

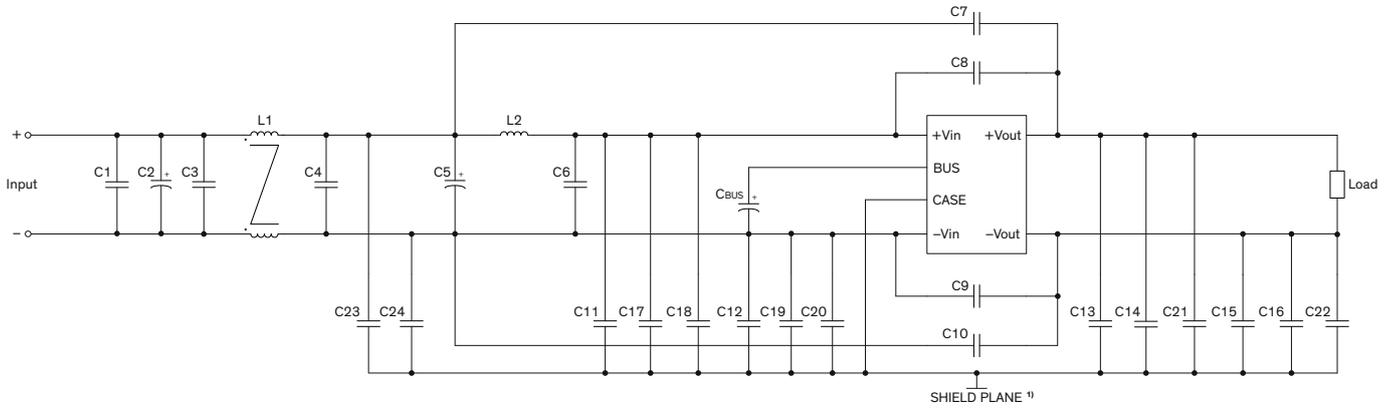
Model	C1, C2, C _{BUS} *	C3	C5, C6	C8, C9
TEP 200-xxxxUIR	150 μ F / 200 V Al. Cap. (lie down) KXJ	1 μ F / 250 V 1812 MLCC	1000 pF / Y1	330 pF / 250 VAC 1808 MLCC
	C10, C11	L1	L2	
	1000 pF / 250 VAC 1808 MLCC	415 μ H TCK-185	3.3 μ H TCK-186	

TCK-185 datasheet: www.tracopower.com/overview/tck-185

TCK-186 datasheet: www.tracopower.com/overview/tck-186

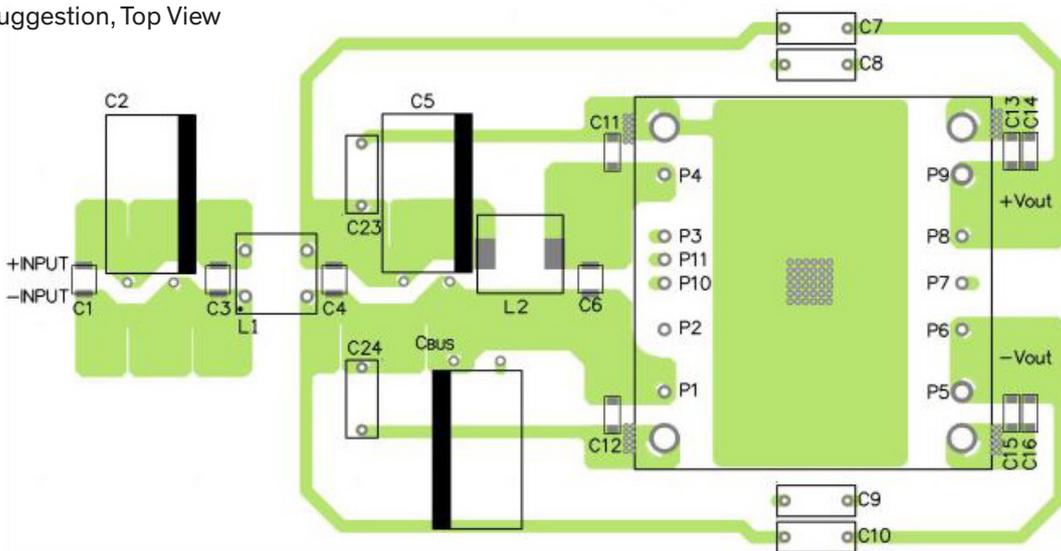
* C_{BUS} must always be connected

Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class B limits

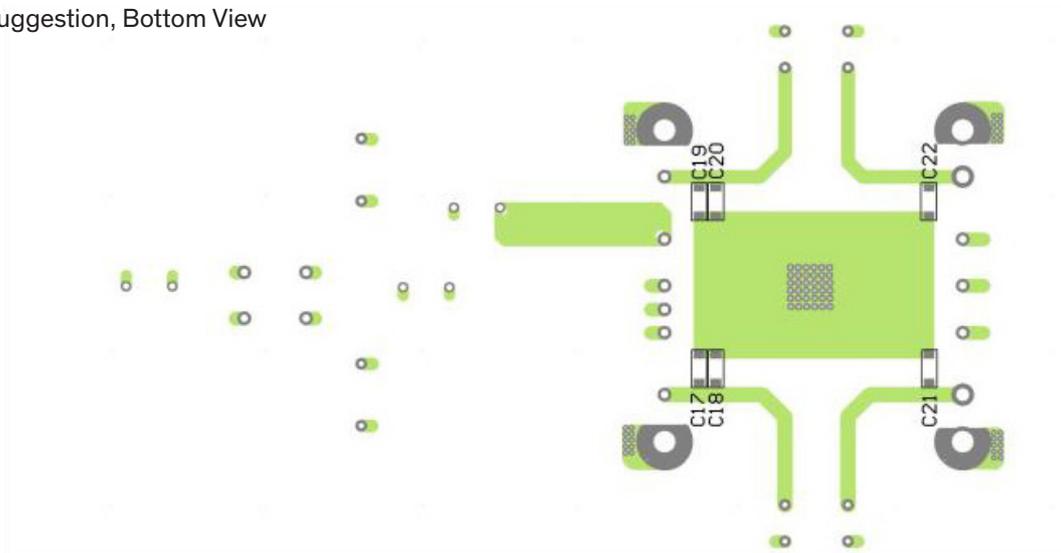


1) SHIELD PLANE: floating / isolated

PCB layout suggestion, Top View



PCB layout suggestion, Bottom View



Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class B limits (continued)

Suggested components to comply with EN 55032 Conducted and Radiated Emissions Class B limits						
Model	C1, C3	C2, C5, C _{BUS} *	C7, C8, C10	C11, C12, C14, C19, C20	C13, C18	
TEP 200-7211UIR	1 µF / 250 VAC 1812 MLCC	150 µF / 200 V Al. Cap. (lie down) KXJ	4'700 pF / Y1	330 pF / 250 VAC 1808 MLCC	1'000 pF / 250 VAC 1808 MLCC	
	C15, C16, C17	C21, C22	C23	C24	L1	L2
	680 pF / 250 VAC 1808 MLCC	100 pF / 250 VAC 1808 MLCC	2'200 pF / Y1	1'000 pF / Y1	415 µH TCK-185	3.3 µH TCK-186
Model	C1, C3, C4	C2, C5, C _{BUS} *	C7, C10, C23, C24	C8, C9	C11, C12	
TEP 200-7212UIR TEP 200-7213UIR TEP 200-7215UIR	1 µF / 250 VAC 1812 MLCC	150 µF / 200 V Al. Cap. (lie down) KXJ	2'200 pF / Y1	1'000 pF / Y1	680 pF / 250 VAC 1808 MLCC	
On demand model with 28 Vout	C13, C14, C15, C16, C17, C19		C18, C20, C21, C22	L1	L2	
	1'000 pF / 250 VAC 1808 MLCC		100 pF / 250 VAC 1808 MLCC	415 µH TCK-185	3.3 µH TCK-186	
Model	C1, C3, C6	C2, C5, C _{BUS} *	C7, C10	C8, C9	C11, C12	
TEP 200-7218UIR	1 µF / 250 VAC 1812 MLCC	150 µF / 200 V Al. Cap. (lie down) KXJ	4'700 pF / Y1	3'300 pF / Y1	680 pF / 250 VAC 1808 MLCC	
On demand model with 53 Vout	C13, C15, C17, C18, C19, C20	C14, C16	C21, C22	L1	L2	
	330 pF / 250 VAC 1808 MLCC	1'000 pF / 250 VAC 1808 MLCC	100 pF / 250 VAC 1808 MLCC	415 µH TCK-185	3.3 µH TCK-186	

 TCK-185 datasheet: www.tracopower.com/overview/tck-185

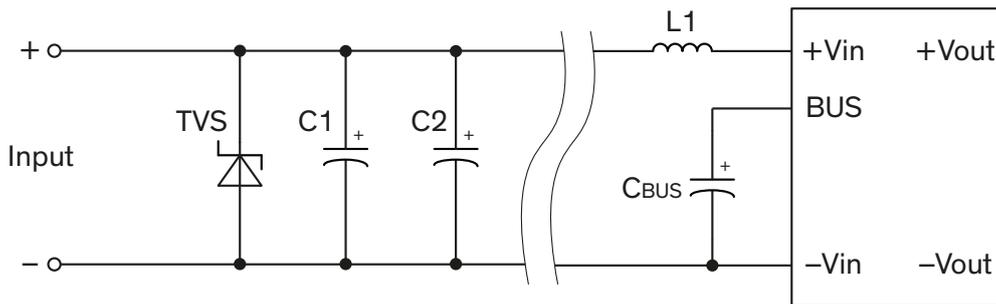
 TCK-186 datasheet: www.tracopower.com/overview/tck-186

 * C_{BUS} must always be connected

EMS Consideration

Suggested filter to comply with EFT (Burst) & Surge

Single output models



Suggested components to comply with EFT (Burst) & Surge

Model	C1, C2, C _{BUS} *	L1	TVS
TEP 200-xxxxUIR	150 µF / 200 V / KXJ	3.3 µH / PIMC135T-3R3MF	170 V / 3'000 W / SMDJ170A

* C_{BUS} must always be connected