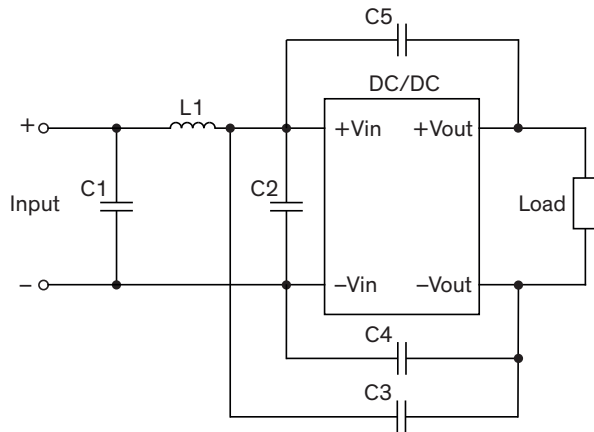


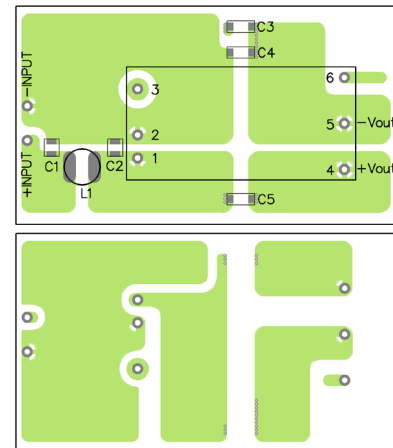
EMI Consideration

Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class A limits (24 & 48 Vin models)

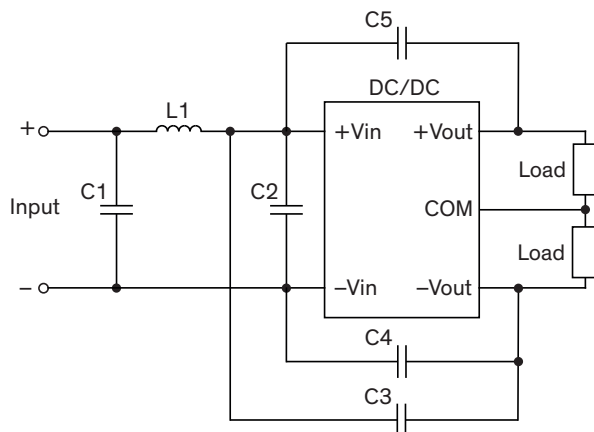
Single output models



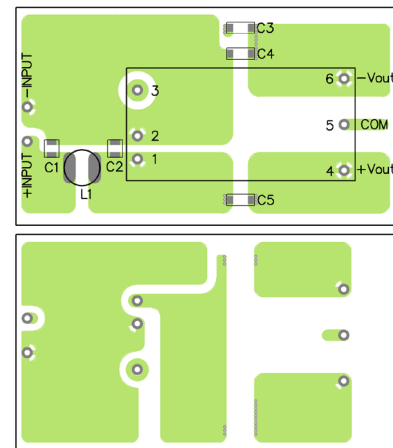
PCB layout suggestion



Dual output models



PCB layout suggestion



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

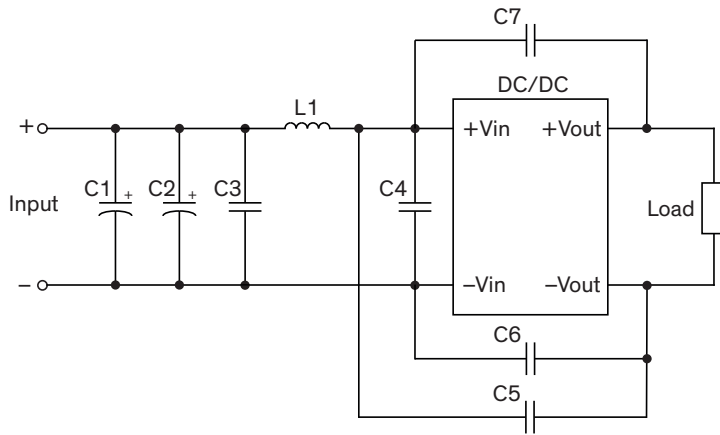
Model	C1, C2	C3, C4, C5	L1
TEN 40-24xxWIR	10 μ F / 50 V 1210 MLCC	680 pF / 3 KV 1808 MLCC	2.2 μ H TCK-097
TEN 40-48xxWIR	4.7 μ F / 100 V 1210 MLCC	680 pF / 3 KV 1808 MLCC	12 μ H TCK-112

TCK-097 datasheet: www.tracopower.com/products/tck097.pdf

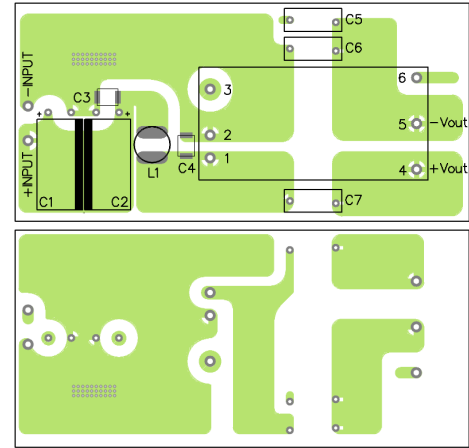
TCK-112 datasheet: www.tracopower.com/products/tck112.pdf

Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class A limits (72 Vin models)

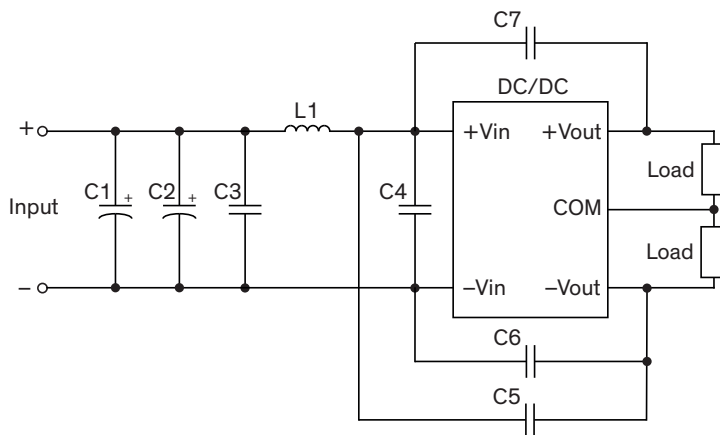
Single output models



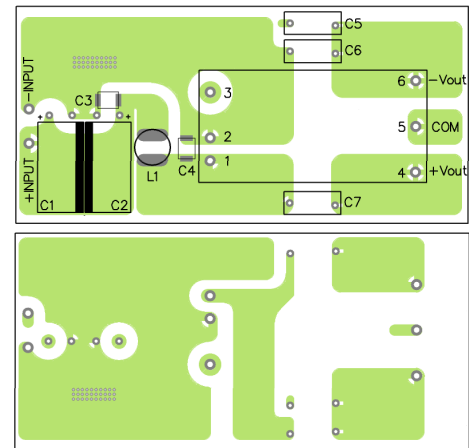
PCB layout suggestion



Dual output models



PCB layout suggestion



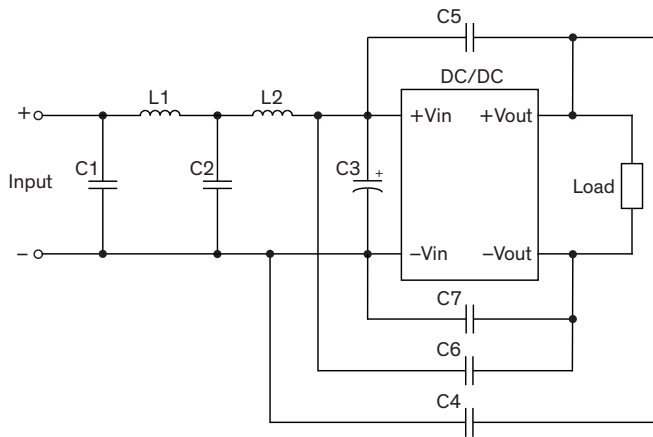
Suggested components to comply with EN 55032 Conducted and Radiated Emissions Class A limits

Model	C1, C2	C3, C4	C5, C6, C7	L1
TEN 40-72xxWIR	33 μ F / 250 V Al. Cap. (lie down) Cheami-con KXJ	1 μ F / 250 V 1812 MLCC	1000 pF TDK CD series, Y1	22 μ H TCK-098

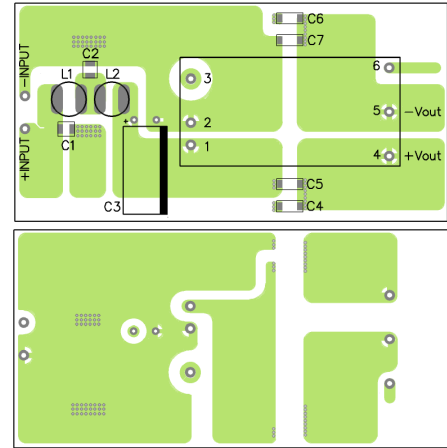
TCK-098 datasheet: www.tracopower.com/products/tck098.pdf

Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class B limits (24 & 48 Vin models)

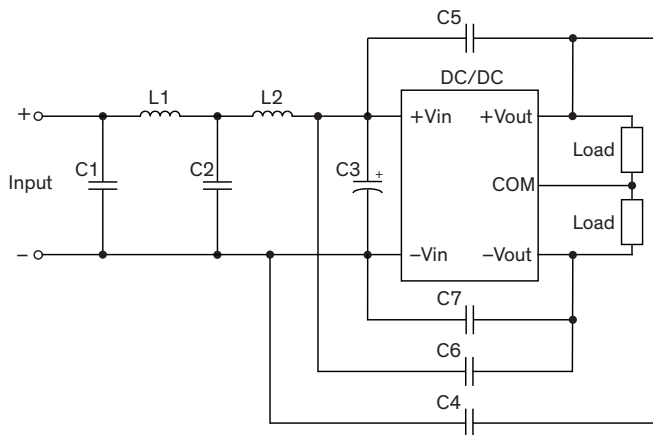
Single output models



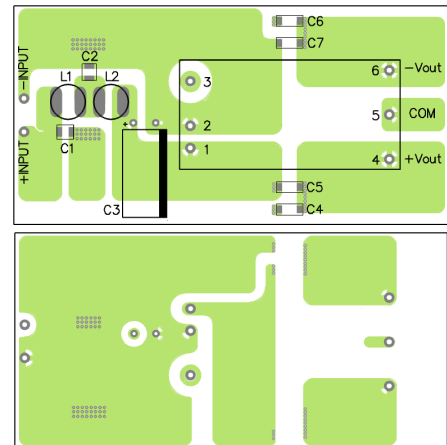
PCB layout suggestion



Dual output models



PCB layout suggestion



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

Model	C1, C2	C3	C4, C6	C5, C7	L1, L2
TEN 40-24xxWIR	10 μ F / 50 V 1210 MLCC	82 μ F / 100 V Al. Cap. (lie down) Chemi-con KY	1000 pF / 3 kV 1808 MLCC	2200 pF / 3 kV 1808 MLCC	3.3 μ H TCK-102
TEN 40-48xxWIR	4.7 μ F / 100 V 1210 MLCC	82 μ F / 100 V Al. Cap. (lie down) Chemi-con KY	1000 pF / 3 kV 1808 MLCC	2200 pF / 3 kV 1808 MLCC	12 μ H TCK-112

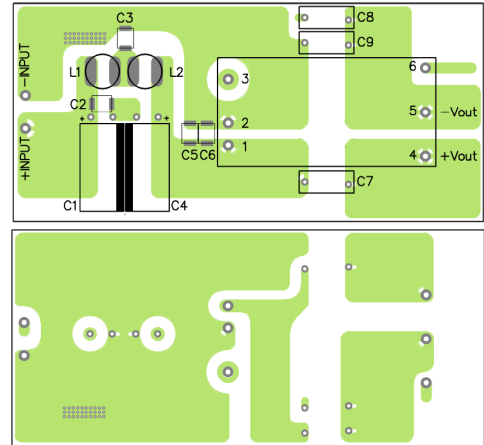
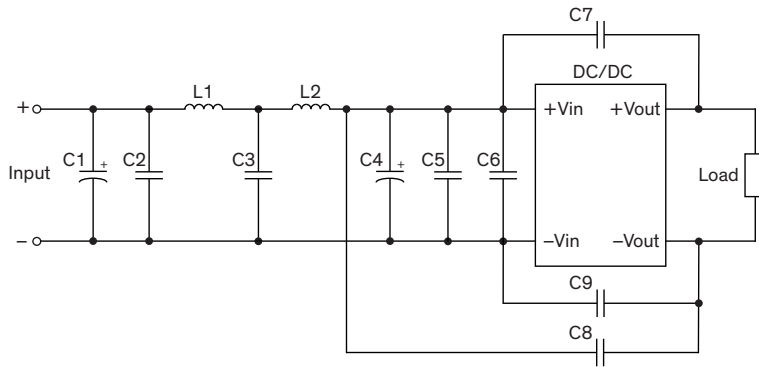
TCK-102 datasheet: www.tracopower.com/products/tck102.pdf

TCK-112 datasheet: www.tracopower.com/products/tck112.pdf

Suggested filter to comply with EN 55032 Conducted and Radiated Emissions Class B limits (72 Vin models)

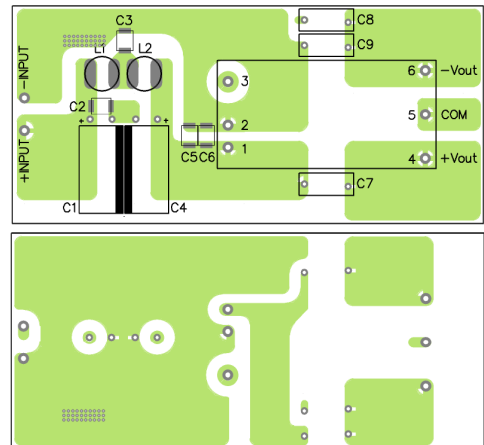
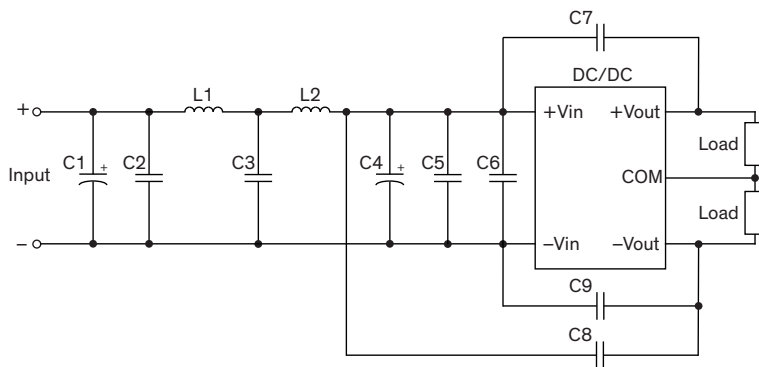
Single output models

PCB layout suggestion



Dual output models

PCB layout suggestion

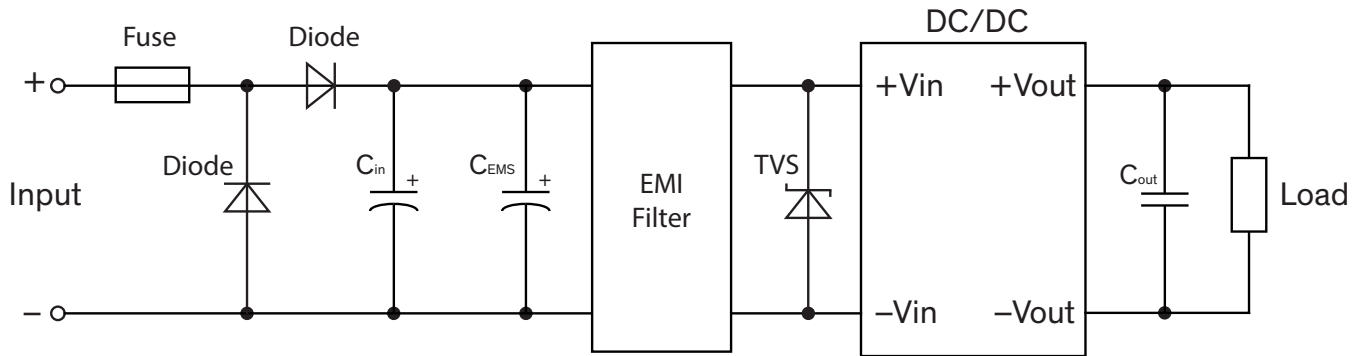


Suggested components to comply with EN 55032 Conducted and Radiated Emissions Class B limits

Model	C1, C4	C2, C3, C5, C6	C7, C8, C9	L1, L2
TEN 40-72xxWIR	33 μ F / 250 V Al. Cap. (lie down) Chemi-con KXJ	1 μ F / 250 V 1812 MLCC	2200 pF TDK CD series, Y1	22 μ H TCK-098

TCK-098 datasheet: www.tracopower.com/products/tck098.pdf

Suggested filter to comply with EN 50155 Immunity



Suggested components to comply with EN 50155 Immunity

Model	Fuse	Diodes	C _{EMS}	TVS	C _{OUT}
TEN 40-24xxWIR	8 A Fast-Acting	200 V 1 – 1.5 × Fuse rating	Nippon chemi-con KY series 220 µF / 100 V	SMDJ58A 58 V / 3000 W peak pulse power	0.1 µF / 50 V X7R MLCC
TEN 40-48xxWIR	4 A Slow-Blow	200 V 1 – 1.5 × Fuse rating	Nippon chemi-con KY series 220 µF / 100 V	SMDJ120A 120 V / 3000 W peak pulse power	0.1 µF / 50 V X7R MLCC
TEN 40-72xxWIR	3.15 A Slow-Blow	200 V 1 – 1.5 × Fuse rating	Nippon chemi-con KXJ series 150 µF / 200 V 2 pcs in parallel	SMDJ90A 90 V / 3000 W peak pulse power 2 pcs in series	0.1 µF / 50 V X7R MLCC

Suggested components to comply with interruptions and supply change over

Input Voltage	24 VDC	48 VDC	72 VDC	96 VDC	110 VDC
C _{in min} 10 ms Hold up	2500 µF	610 µF	280 µF	160 µF	120 µF
C _{in min} 30 ms Hold up	7300 µF	1810 µF	830 µF	470 µF	360 µF