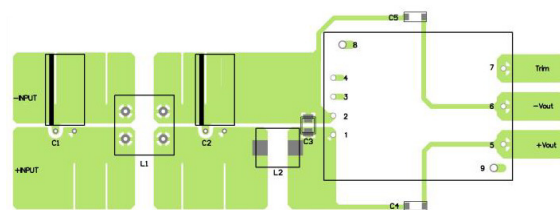
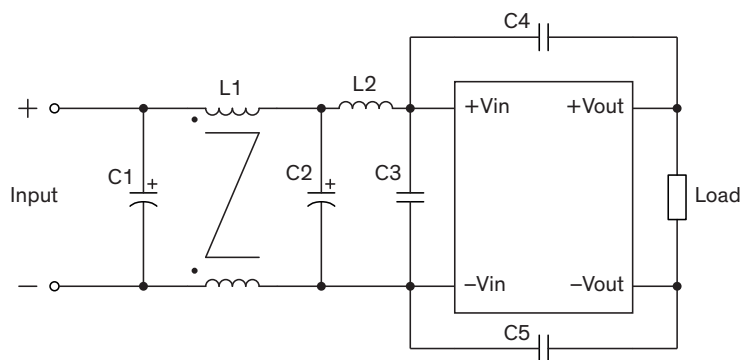


### EMI Consideration

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

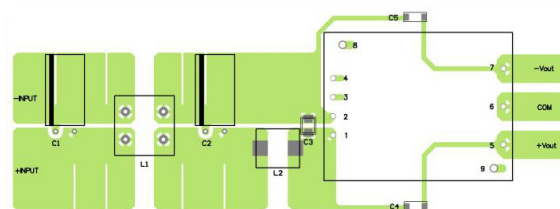
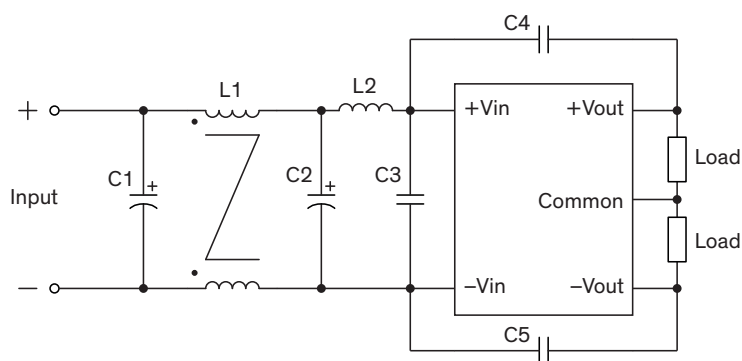
#### Single output models

#### 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	L2
TEN 30-36xxUIR TEN 40-36xxUIR	82 $\mu$ F / 100 V / KY Al Cap. (lie down)	2.2 $\mu$ F / 100 V 1210 MLCC	1000 pF / 3 kV 1808 MLCC	180 $\mu$ H TCK-194	1 $\mu$ H TCK-191
TEN 30-72xxUIR TEN 40-72xxUIR	47 $\mu$ F / 200 V / KXJ Al Cap. (lie down)	1 $\mu$ F / 250 V 1812 MLCC		500 $\mu$ H TCK-169	15 $\mu$ H TCK-192

TCK-169 datasheet: [www.tracopower.com/overview/tck-169](http://www.tracopower.com/overview/tck-169)

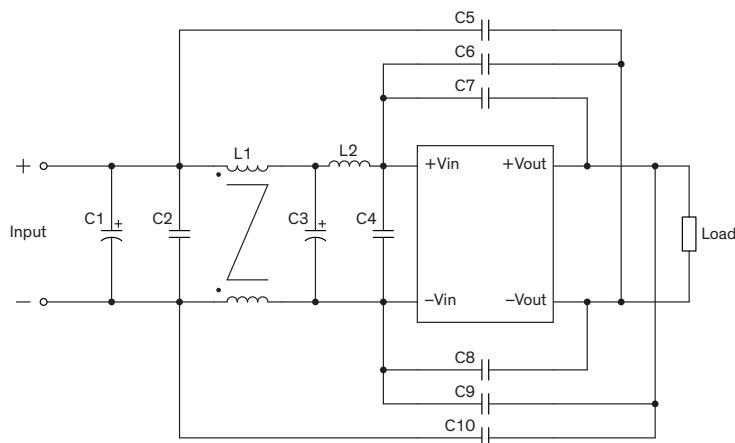
TCK-191 datasheet: [www.tracopower.com/overview/tck-191](http://www.tracopower.com/overview/tck-191)

TCK-192 datasheet: [www.tracopower.com/overview/tck-192](http://www.tracopower.com/overview/tck-192)

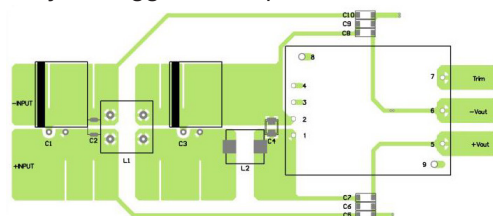
TCK-194 datasheet: [www.tracopower.com/overview/tck-194](http://www.tracopower.com/overview/tck-194)

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

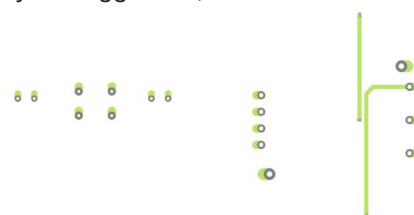
#### Single output models



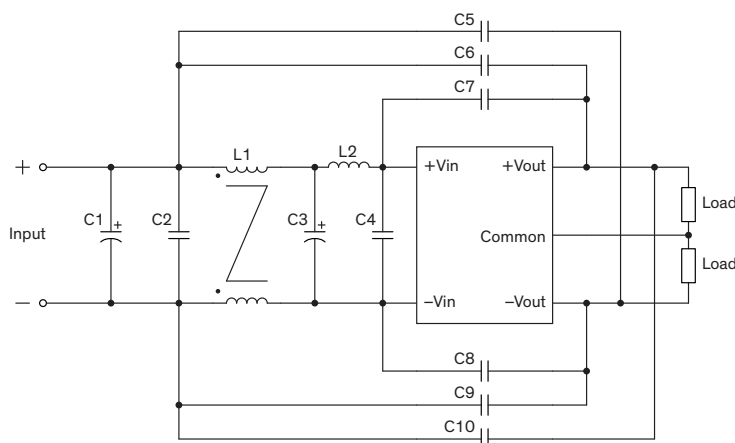
PCB layout suggestion, Top View



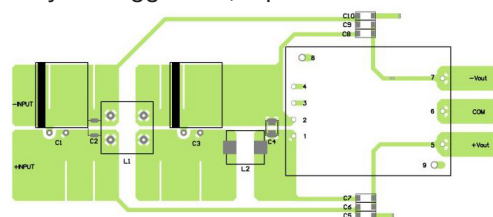
PCB layout suggestion, Bottom View



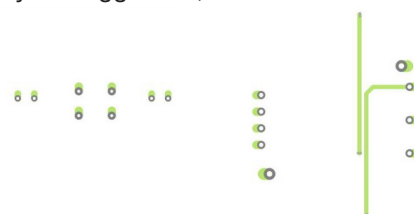
#### Dual output models



PCB layout suggestion, Top View



PCB layout suggestion, Bottom View



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

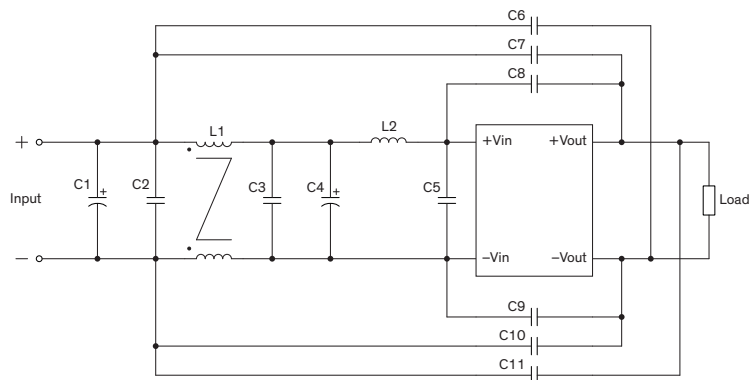
Model	C1, C3	C2, C4	C5, C10	C6, C9	C7, C8	L1	L2
TEN 30-36xxUIR TEN 40-36xxUIR	220 $\mu$ F / 100 V KZN Al Cap. (lie down)	2.2 $\mu$ F 100 V 1210 MLCC	220 pF 3 kV 1808 MLCC	1000 pF 3 kV 1808 MLCC	150 pF 3 kV 1808 MLCC	285 $\mu$ H TCK-103	2.2 $\mu$ H TCK-195

TCK-103 datasheet: [www.tracopower.com/overview/tck-103](http://www.tracopower.com/overview/tck-103)

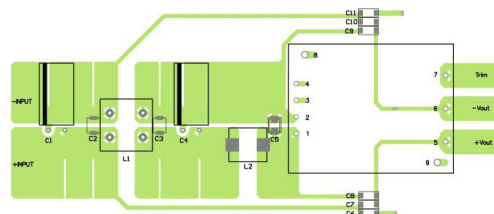
TCK-195 datasheet: [www.tracopower.com/overview/tck-195](http://www.tracopower.com/overview/tck-195)

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

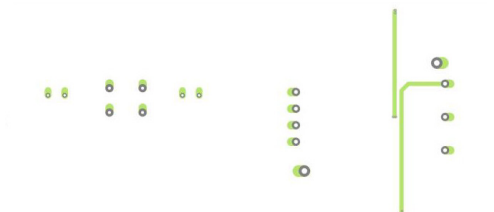
#### Single output models



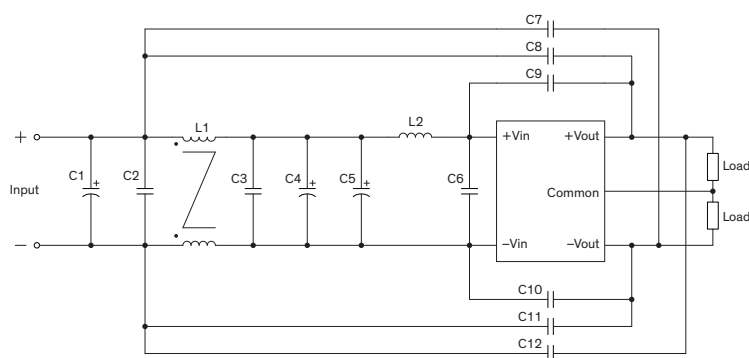
#### PCB layout suggestion, Top View



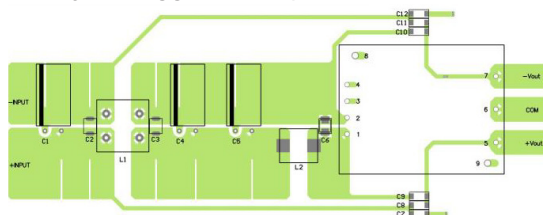
#### PCB layout suggestion, Bottom View



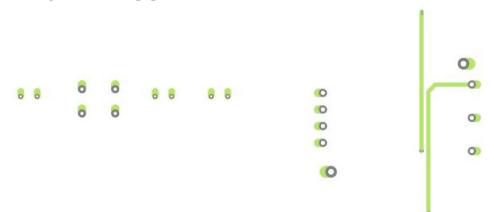
#### Dual output models



#### PCB layout suggestion, Top View



#### PCB layout suggestion, Bottom View



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

Model	C1	C4	C2, C3, C5	C6, C11	C7, C10	C8, C9	L1	L2
TEN 30-721xUIR TEN 40-721xUIR	150 μF 200 V KXJ Al Cap. (lie down)	47 μF 200 V KXJ Al Cap. (lie down)	1 μF 250 V 1812 MLCC	2'200 pF 3 kV 1808 MLCC	220 pF 3 kV 1808 MLCC	330 pF 3 kV 1808 MLCC	620 μH TCK-067	22 μH TCK-193
Model	C1	C4, C5	C2, C3, C6	C7, C8, C11, C12		C9, C10	L1	L2
TEN 30-722xUIR TEN 40-722xUIR	150 μF 200 V KXJ Al Cap. (lie down)	47 μF 200 V KXJ Al Cap. (lie down)	0.47 μF 250 V 1812 MLCC	220 pF 3 kV 1808 MLCC		330 pF 3 kV 1808 MLCC	620 μH TCK-067	22 μH TCK-193

TCK-067 datasheet: [www.tracopower.com/overview/tck-067](http://www.tracopower.com/overview/tck-067)

TCK-193 datasheet: [www.tracopower.com/overview/tck-193](http://www.tracopower.com/overview/tck-193)