

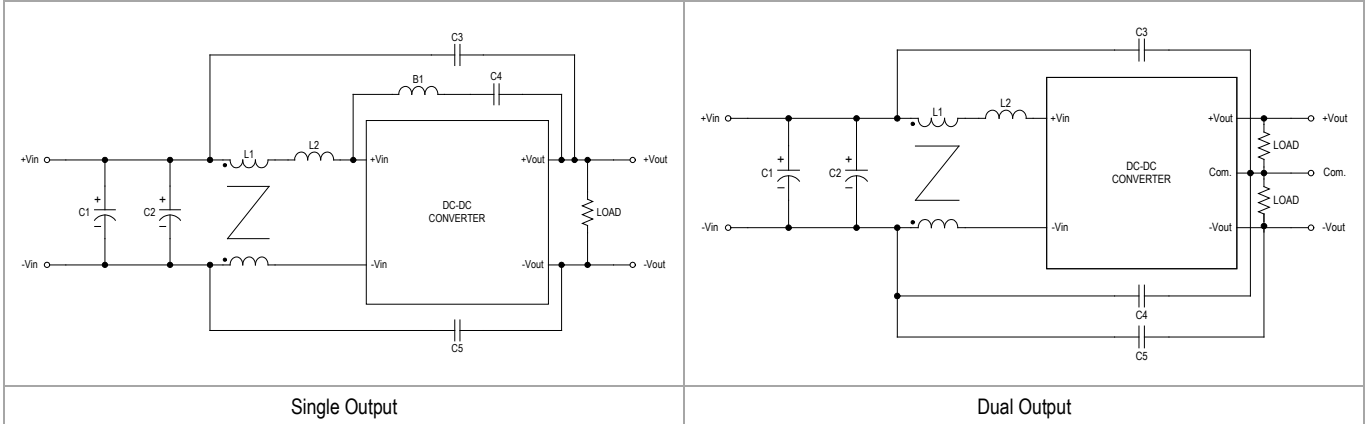


**MINMAX<sup>®</sup>**

MKW180 Series - EMC Notes

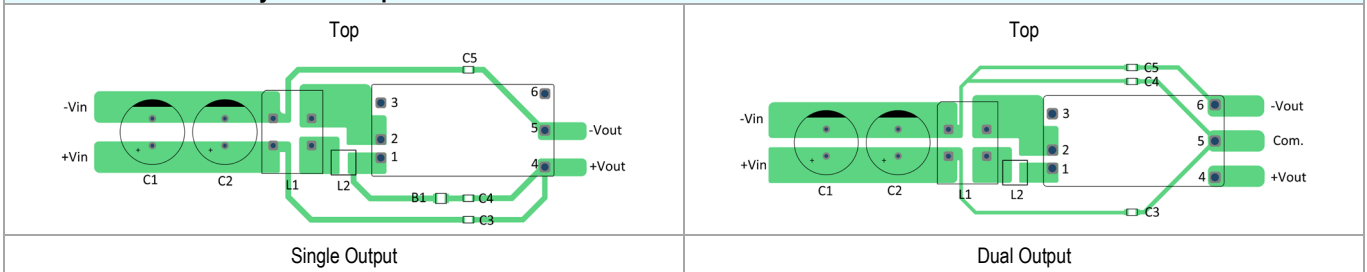
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class A



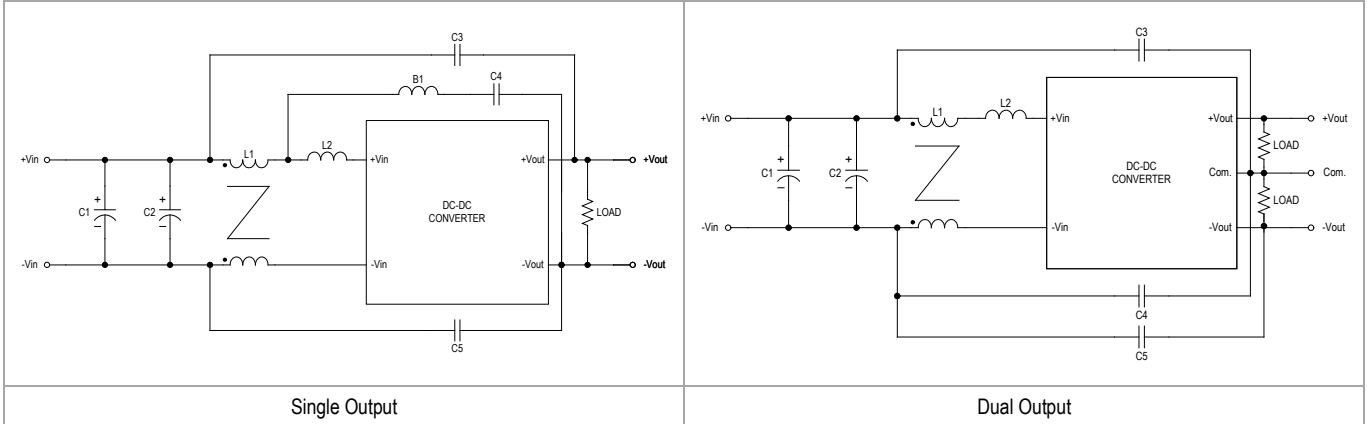
Model	C1, C2	L1	L2	B1	C3	C4	C5
MKWI80-24SXX	1200µF/50V CHEMI-CON KY Series	1mH/15A 7448031501	1µH/10A 74437349010	30Ω/3A 742792310	1000pF/2kV 1206 X7R	470pF/2kV 1206 X7R	1500pF/2kV 1206 X7R
MKWI80-24DXX	1200µF/50V CHEMI-CON KY Series	1mH/15A 7448031501	1µH/10A 74437349010	---	470pF/2kV 1206 X7R	1000pF/2kV 1206 X7R	470pF/2kV 1206 X7R

## Recommended PCB Layout with Input Filter



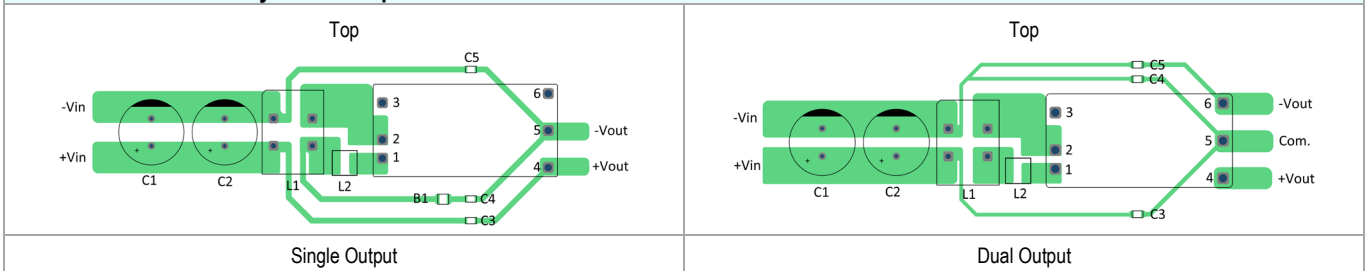
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class A



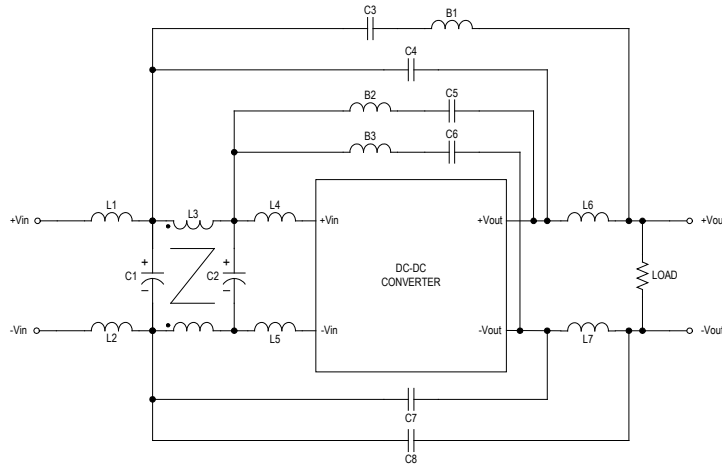
Model	C1, C2	L1	L2	B1	C3	C4	C5
MKWI80-48S05	470µF/100V CHEMI-CON KY Series	1mH/15A 7448031501	10µH/5A 74439346100	30Ω/3A 742792310	1000pF/2kV 1206 X7R	100pF/2kV 1206 X7R	220pF/2kV 1206 X7R
MKWI80-48S12 MKWI80-48S15 MKWI80-48S24	470µF/100V CHEMI-CON KY Series	1mH/15A 7448031501	10µH/5A 74439346100	30Ω/3A 742792310	1500pF/2kV 1206 X7R	100pF/2kV 1206 X7R	470pF/2kV 1206 X7R
MKWI80-48S48 MKWI80-48S54	470µF/100V CHEMI-CON KY Series	1mH/15A 7448031501	10µH/5A 74439346100	---	1200pF/2kV 1206 X7R	---	680pF/2kV 1206 X7R
MKWI80-48DXX	470µF/100V CHEMI-CON KY Series	1mH/15A 7448031501	1µH/10A 74437349010	---	470pF/2kV 1206 X7R	1000pF/2kV 1206 X7R	470pF/2kV 1206 X7R

## Recommended PCB Layout with Input Filter



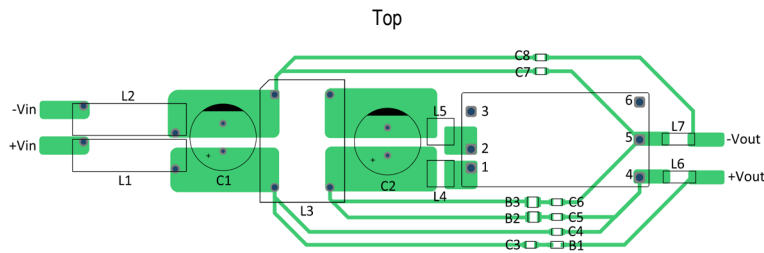
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



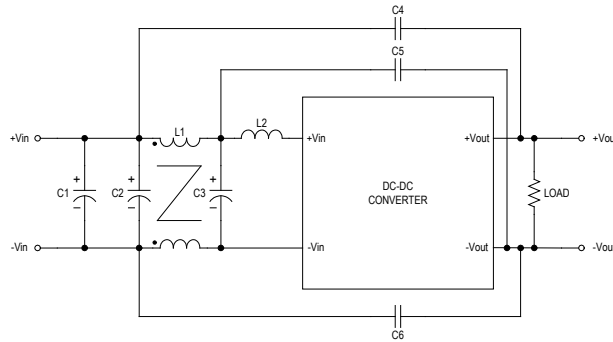
Model	L1, L2	C1, C2	L3	L4, L5	C3	B1	C4, C5, C7	B2, B3	C6	C8	L6, L7
MKWI80-24S05	10 $\mu$ H/10A 744711010	1200 $\mu$ F/50V CHEMI-CON KY Series	12mH/10A 7448051012	1.5 $\mu$ H/11A 744311150	560pF/2kV 1206 X7R	600 $\Omega$ /2.5A 74279221601	100pF/2kV 1206 X7R	30 $\Omega$ /3A 742792310	220pF/2kV 1206 X7R	330pF/2kV 1206 X7R	91 $\Omega$ /17A 7427931

## Recommended PCB Layout with Input Filter



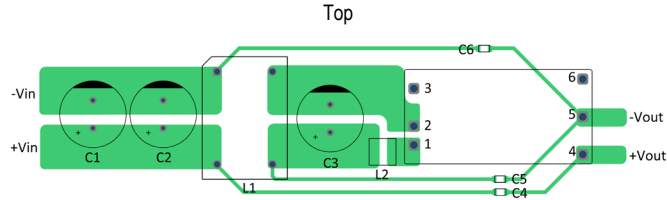
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



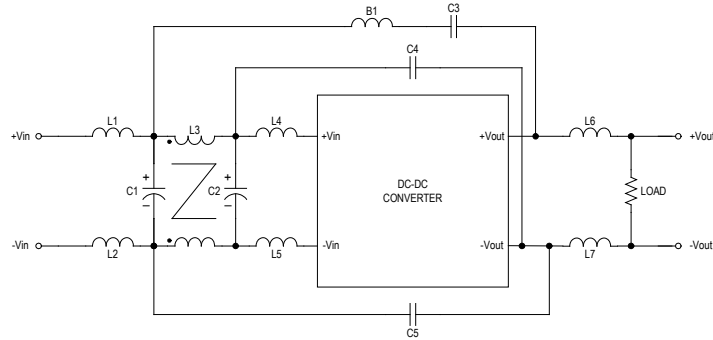
Model	C1, C2, C3	L1	L2	C4	C5	C6
MKWI80-24S12 MKWI80-24S15	1200 $\mu$ F/50V CHEMI-CON KY Series	12mH/10A 7448051012	1 $\mu$ H/10A 74437349010	100pF/2kV 1206 X7R	2200pF/2kV 1206 X7R	100pF/2kV 1206 X7R
MKWI80-24S24	1200 $\mu$ F/50V CHEMI-CON KY Series	12mH/10A 7448051012	1 $\mu$ H/10A 74437349010	220pF/2kV 1206 X7R	2200pF/2kV 1206 X7R	100pF/2kV 1206 X7R

## Recommended PCB Layout with Input Filter



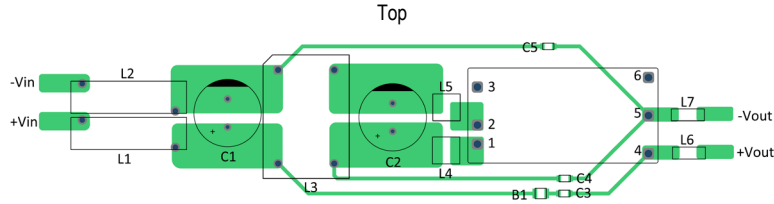
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



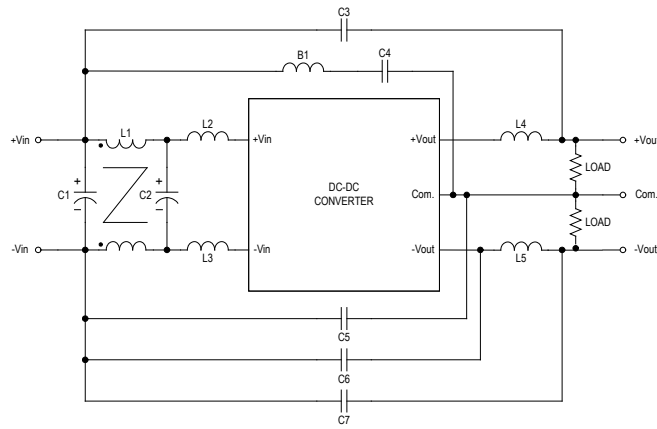
Model	L1, L2	C1, C2	L3	L4, L5	B1	C3	C4	C5	L6, L7
MKWI80-24S48	10 $\mu$ H/10A 744711010	1200 $\mu$ F/50V CHEMI-CON KY Series	12mH/10A 7448051012	1.5 $\mu$ H/11A 744311150	30 $\Omega$ /3A 742792310	680pF/2kV 1206 X7R	2200pF/2kV 1206 X7R	100pF/2kV 1206 X7R	91 $\Omega$ /17A 7427931
MKWI80-24S54	10 $\mu$ H/10A 744711010	1200 $\mu$ F/50V CHEMI-CON KY Series	12mH/10A 7448051012	1.5 $\mu$ H/11A 744311150	30 $\Omega$ /3A 742792310	330pF/2kV 1206 X7R	2200pF/2kV 1206 X7R	100pF/2kV 1206 X7R	91 $\Omega$ /17A 7427931

## Recommended PCB Layout with Input Filter



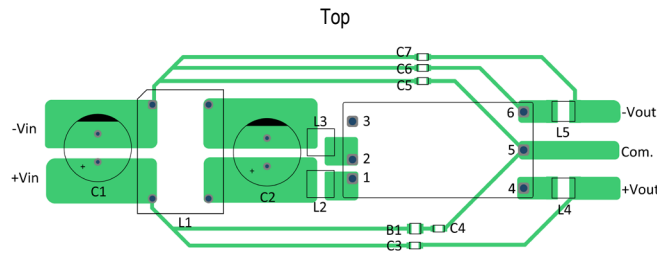
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



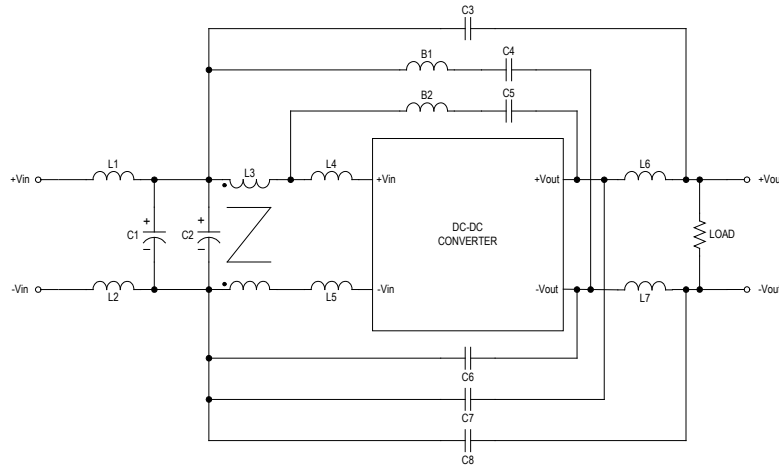
Model	C1, C2	L1	L2, L3	C3	B1	C4	C5, C6	C7	L4, L5
MKWI80-24D12	1200 $\mu$ F/50V	12mH/10A	1.5 $\mu$ H/11A	470pF/2kV	30 $\Omega$ /3A	220pF/2kV	100pF/2kV	1200pF/2kV	400 $\Omega$ /4.5A
MKWI80-24D15	CHEMI-CON KY Series	7448051012	744311150	1206 X7R	742792310	1206 X7R	1206 X7R	1206 X7R	74279224401

## Recommended PCB Layout with Input Filter



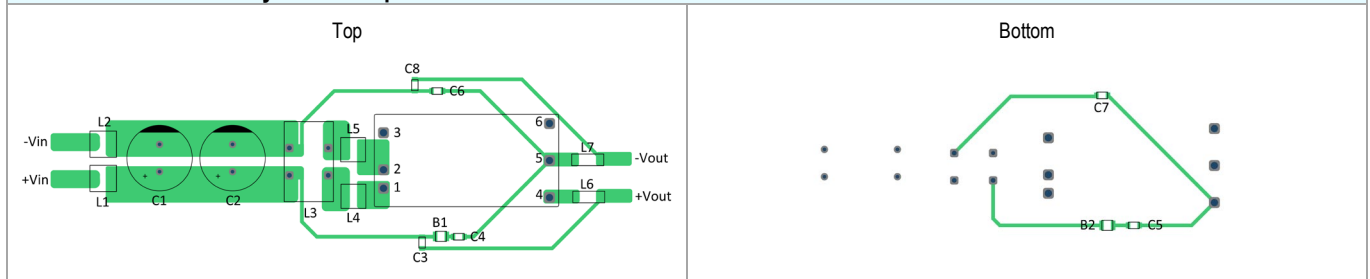
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



Model	L1, L2	C1, C2	L3	L4, L5	C3, C6, C8	B1, B2	C4, C5, C7	L6, L7
MKWI80-48S05	1.5 $\mu$ H/11A 744311150	470 $\mu$ F/100V CHEMI-CON KY Series	9mH/5A 7448030509	10 $\mu$ H/5A 74439346100	220pF/2kV 1206 X7R	30 $\Omega$ /3A 742792310	100pF/2kV 1206 X7R	91 $\Omega$ /17A 7427931

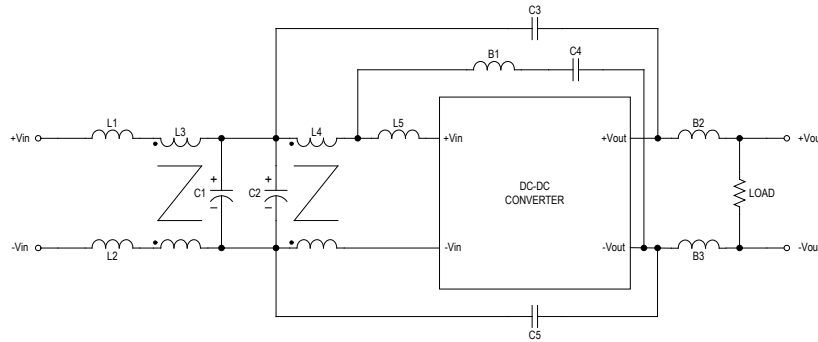
## Recommended PCB Layout with Input Filter





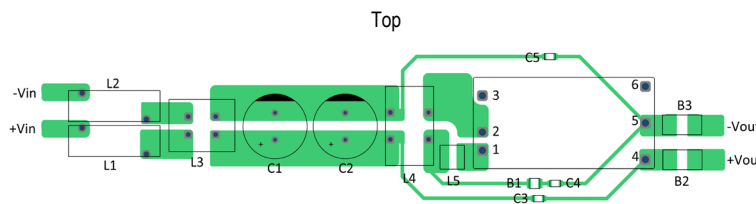
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



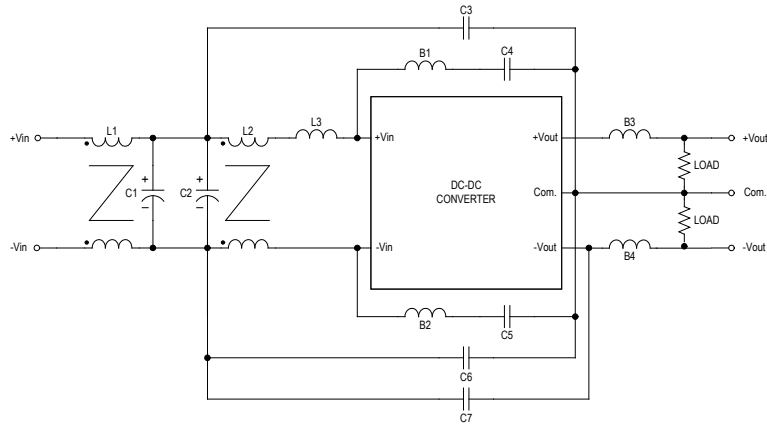
Model	L1, L2	L3	C1, C2	L4	L5	B1	C3, C5	C4	B2, B3
MKWI80-48S12									
MKWI80-48S15									
MKWI80-48S24	6 $\mu$ H/10A	65 $\mu$ H/5A	470 $\mu$ F/100V	9mH/5A	10 $\mu$ H/5A	30 $\Omega$ /3A	1500pF/2kV	100pF/2kV	12m $\Omega$ /8.5A
MKWI80-48S48	744710610	744842565	CHEMI-CON KY Series	7448030509	74439346100	742792310	1206 X7R	1206 X7R	7427512
MKWI80-48S54									

## Recommended PCB Layout with Input Filter



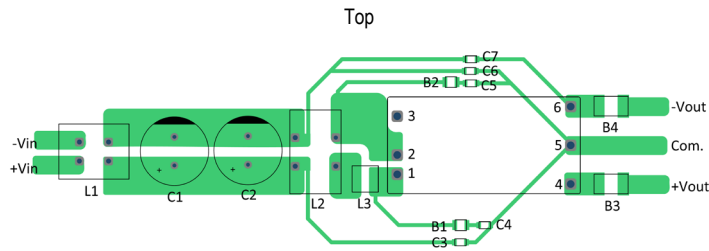
# MKWI80 Series - EMC Notes

## External Filter meets EMI Total solution (for Surge & EFT Filter) EN 55032, class B



Model	L1	C1, C2	L2	L3	C3	B1, B2	C4, C5, C6, C7	B3, B4
MKWI80-48D12	65μH/5A	470μF/100V	9mH/5A	1μH/10A	470pF/2kV	30Ω/3A	1000pF/2kV	12mΩ/8.5A
MKWI80-48D15	744842565	CHEMI-CON KY Series	7448030509	74437349010	1206 X7R	742792310	1206 X7R	7427512

## Recommended PCB Layout with Input Filter



# MKWI80 Series - EMC Notes

## External Filter meets EMS (for Surge & EFT) EN 55035, criteria A



Model	C1, C2
MKWI80-24XXX	1200 $\mu$ F/50V CHEMI-CON KY Series
MKWI80-48XXX	470 $\mu$ F/100V CHEMI-CON KY Series

## Recommended PCB Layout with Input Filter

