

WKF461-3 EMI FILTER

FEATURES:

- Compliant MIL-STD-461D method CE102
- 0~50VDC input, typical 28V
- Low dropout voltage High efficient
- Up to 30dB attenuation at 500KHz

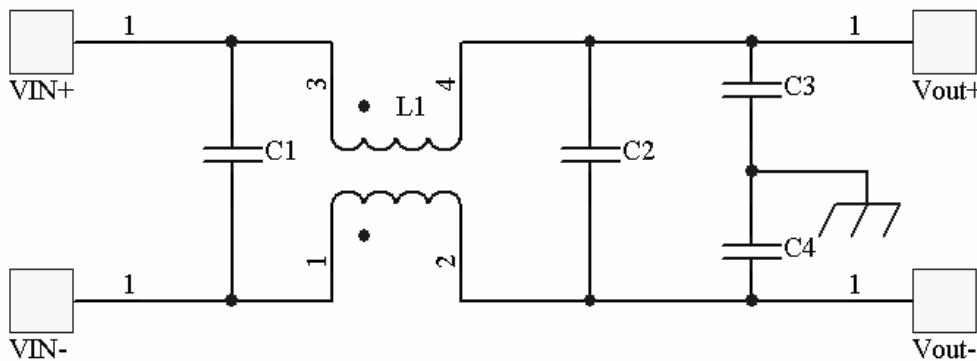


DESCRIPTION:

EMI filter modules have been designed to reduce the input line reflected ripple current of the following WEIKING's high frequency switch-mode DC/DC converters, which must meet MIL-STD-461D< electro-Magnetic emission and susceptibility requirement for military equipment and subsystems>, CE102 levels of conducted power line noise.

EMI filter was designed and manufactured based on MIL-PRF-38534<general specification for hybrid integrated circuits> and its specification in details, which also tested and processed based on MIL-STD-883 <test methods and procedures for microelectronics>.

BLOCK DIAGRAM:



ABSOLUTE MAXIMUM RATINGS:

Output power:	50W
Pin-Solder Temperature (10s):	300°C
Operating Temperature(T_C):	-55°C ~ 105°C(M)/-40°C ~ 85°C(E/I)
Storage Temperature range:	-55°C ~ 125°C

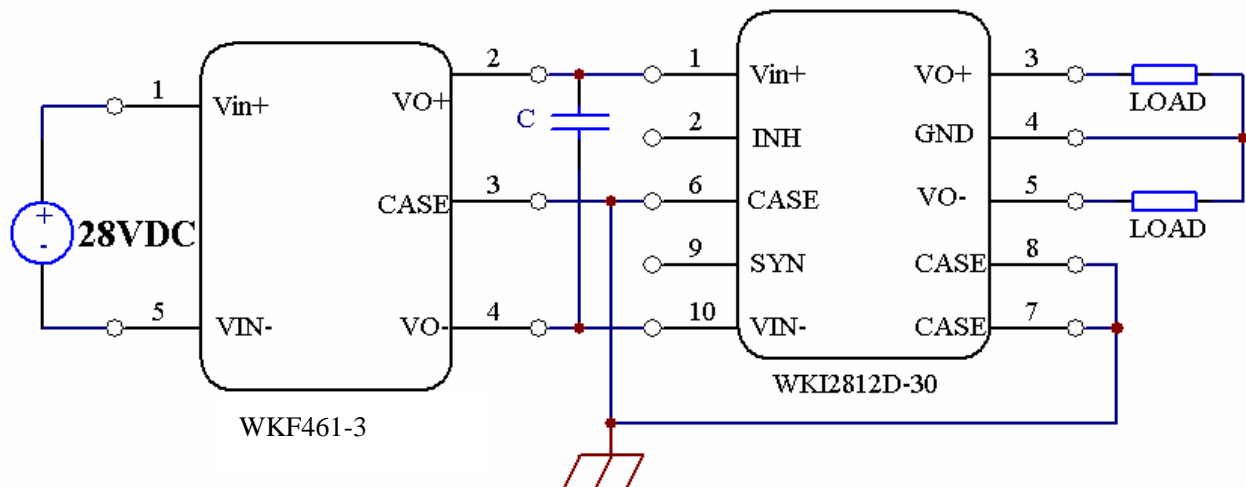
THE ELECTRICAL CHARACTERISTICS:

Parameter	Conditions ^{a)}	WKF461-3			Unit
		MIN	TYP	MAX	
Output voltage	Ta=25°C Io=3A	0	28	50	V
input current	Ta=25°C	-	-	3	A
Dropout voltage	Ta=25°C Vin=28V _{DC} full load	-	0.2	0.5	V
Power dissipation	Ta=25°C Vin=28V _{DC} full load	-	-	1.5	W
Noise rejection	Ta=25°C Vin=28V _{DC} f=500kHz	30	50	-	dB
	Ta=25°C Vin=28V _{DC} f=1MHz	30	45	-	
Insulation resistance	≥100MΩ@500VDC(input-case; output-case)				

Note: a) Unless otherwise specified, T_A=25°C, V_{IN} = 28V_{DC}, 100% load.

APPLICATION NOTE:

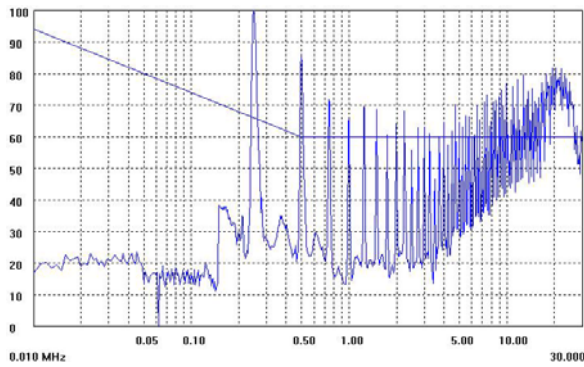
- Typical connection shown as below:



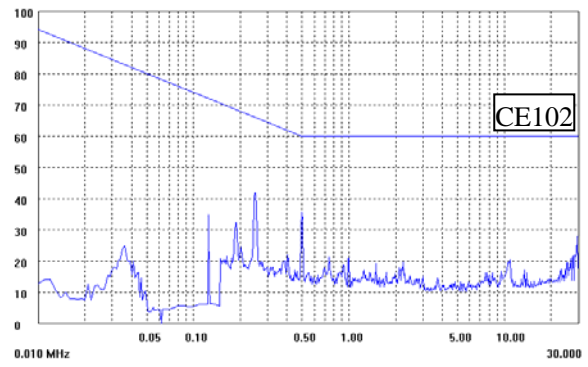
NOTE: C— for these converters , it is necessary to connect capacitor to insure stable operation. A capacitor across the filter of great more than 2~5μF/W.

TYPICAL PERFORMANCE CURVES:

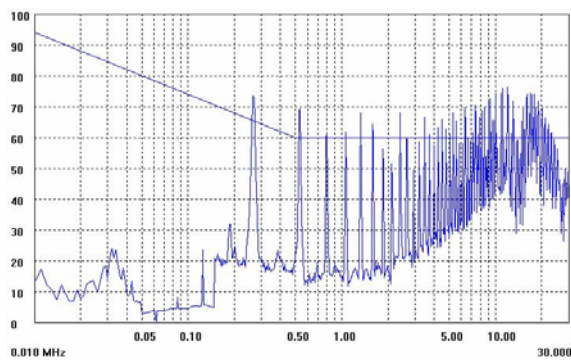
WKI2812S-20M no filter



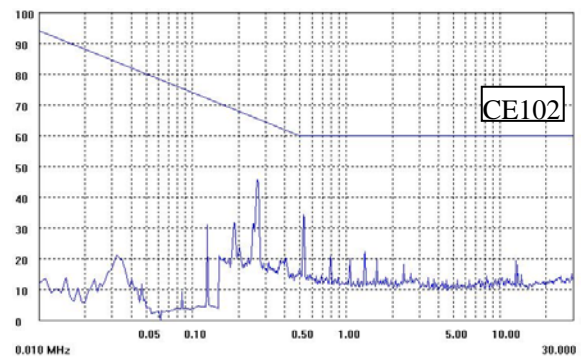
WKI2812S-20M+WKF461-3



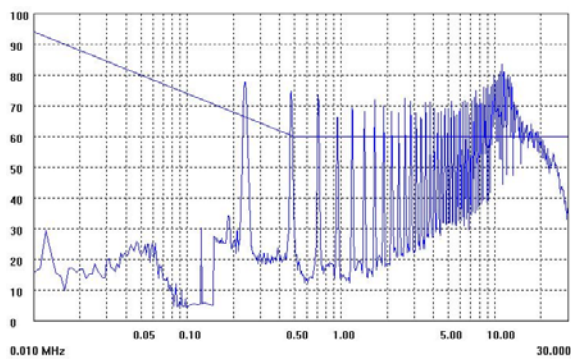
WKI2812D-15M no filter



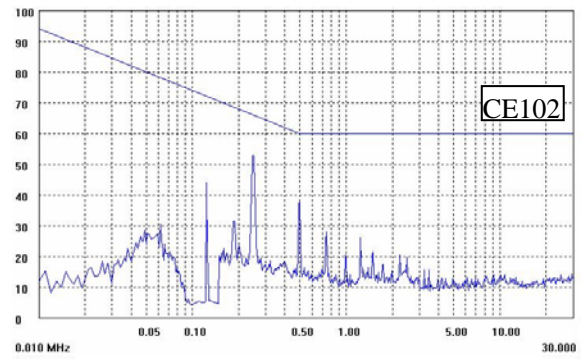
WKI2812D-15M+WKF461-3



WKI2812D-30M no filter



WKI2812D-30M+WKF461-3

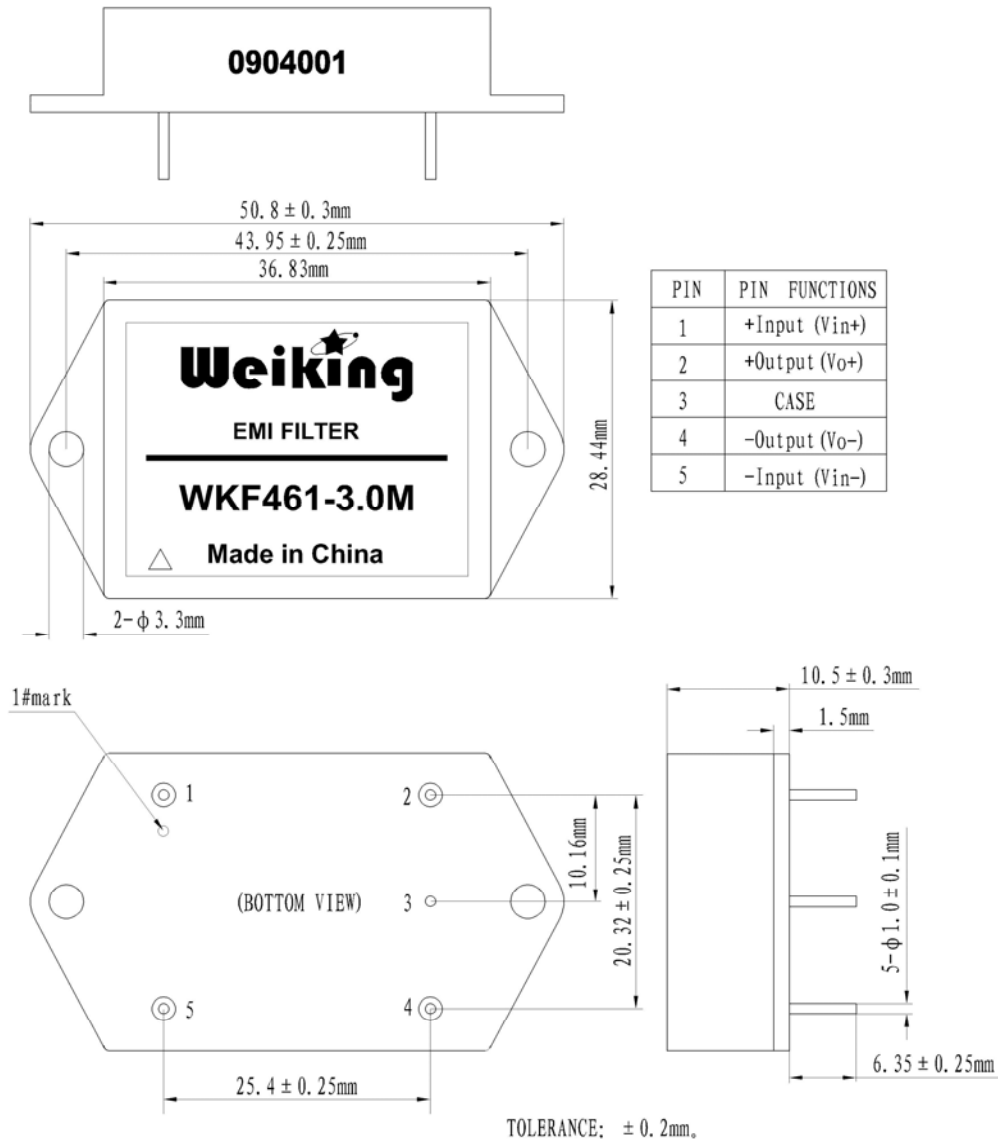


ENVIRONMENTAL SCREENING:

M/E:				
Num	TEST ITEMS	METHODS	REQUEST	CONDITIONS
1	Internal Visual	MIL-STD-883 Method 2017	100%	---
2	Temp-Cycle	MIL-STD-883 Method 1010	100%	-55°C to +125°C 10 times
3	Constant Acceleration	MIL-STD-883 Method 2001	100%	3000g, Y1, 1min
4	Burn-in	MIL-STD-883 Method 1015	100%	T _c :+105°C 160h (M)
				T _c :+85°C 96h (E)
5	Final Electrical Test	-	100%	+25°C
6	Seal (Fine and Gross)	MIL-STD-883 Method 1014	100%	Fine Leak, Cond. A1
				Gross Leak, Cond. C1
7	External Visual	MIL-STD-883 Method 2009	100%	---
I:				
Num	TEST ITEMS	METHODS	REQUEST	CONDITIONS
1	Internal Visual	MIL-STD-883 Method 2017	100%	---
2	Burn-in	MIL-STD-883 Method 1015	100%	T _c +85°C 48h
3	Final Electrical Test	-	100%	+25°C
4	External Visual	MIL-STD-883 Method 2009	100%	---

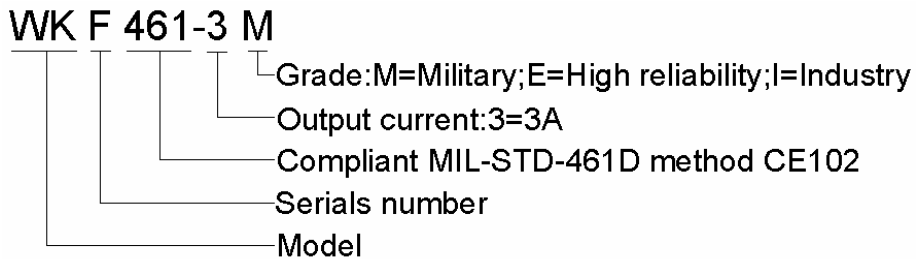
DIMENSIONS & CONNECTIONS:

Volume: $\leq 15\text{cm}^3$ Weight: $\leq 40\text{g}$ Material: 10#steel



ORDERING INFORMATION:

Model no specification:



Mark specification:

Serial Number: 0904 001, example indicates this product has been manufactured in the 4th week of 2009, and the sequence number is 001.