FB100-10 Filter Module

100V, 10A

Product Data Sheet

DESCRIPTION:

The FB100-10 Filter Module is designed to reduce the conducted differential-mode and common-mode noise on input lines of DC/DC power modules. It provides high insertion loss through-out the frequency range regulated by FCC and CISPR for conducted emissions.

FEATURES:

- Minature Size: 2.00in x 1.125in x 0.50in (50.8mm x 28.6mm x 12.7mm)
- Optimized for use with RO SuperVerter fixed frequency DC to DC power modules
- Printed circuit board mountable
- Allows power modules to meed FCC and EN55022 (CISPR22)

ADDITIONAL FEATURES:

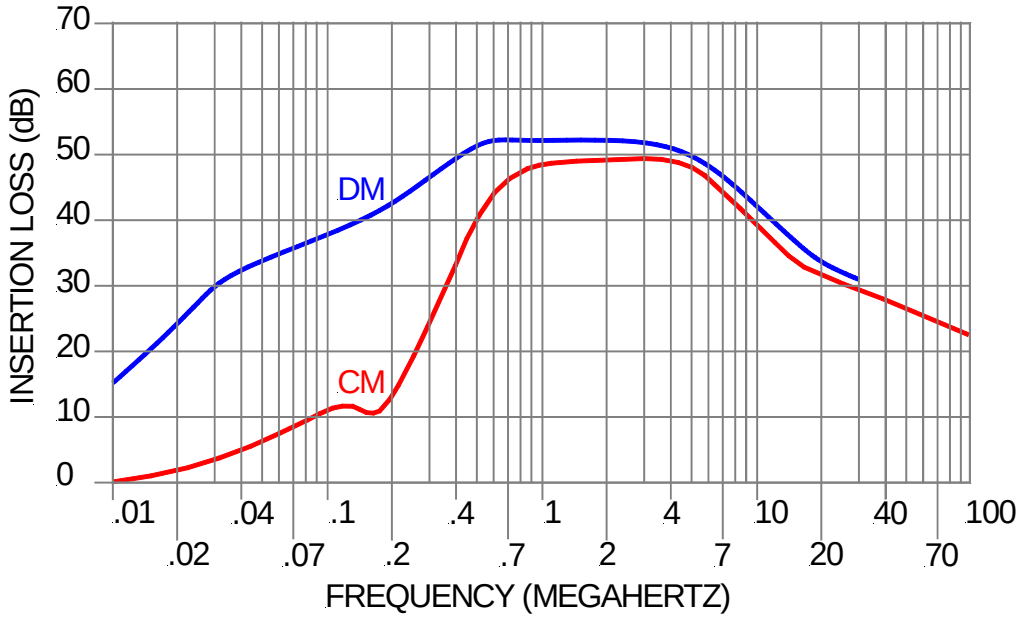
- Designed to meet UL1959; CSA C22.2 No. 950-95; VDE 0805
- Isolation voltage: 1500Vdc
- Maximum input voltage: 100V
- Operating case temperature range: -40 to 70°C
- Storage temperature: -40 to 100°C
- Calculated MTBF TBD hours at case temperature 65 degree C (Bellcore Standard).
- Short Leads: 0.23in (5.8mm)

TYPICAL CHARACTERISTECS:

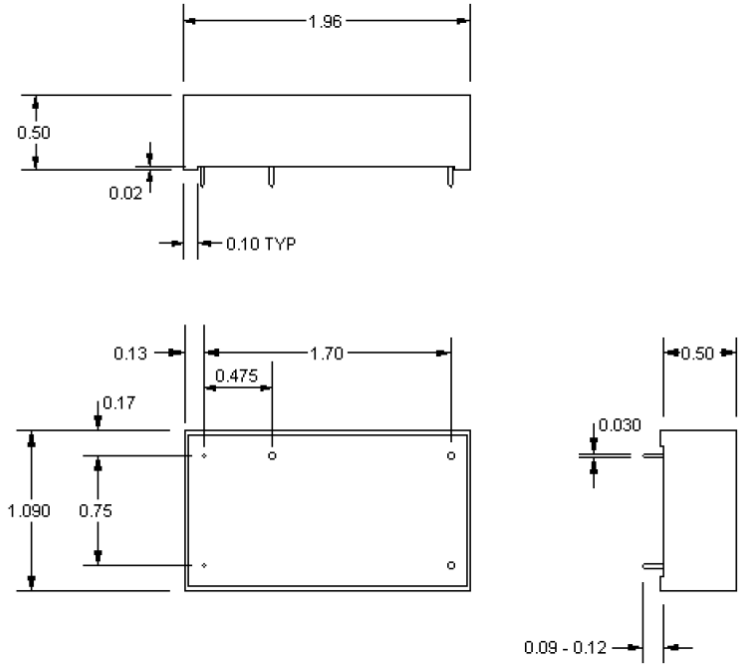
- Resistance per leg: Typ. 0.015 Ohm
- Common-mode insertion loss: 40dB at 500kHz
- Differential-mode insertion loss: 52dB at 500kHz

INSERTION LOSS

(with 50Ω source and load impedances)



OUTLINE DRAWING

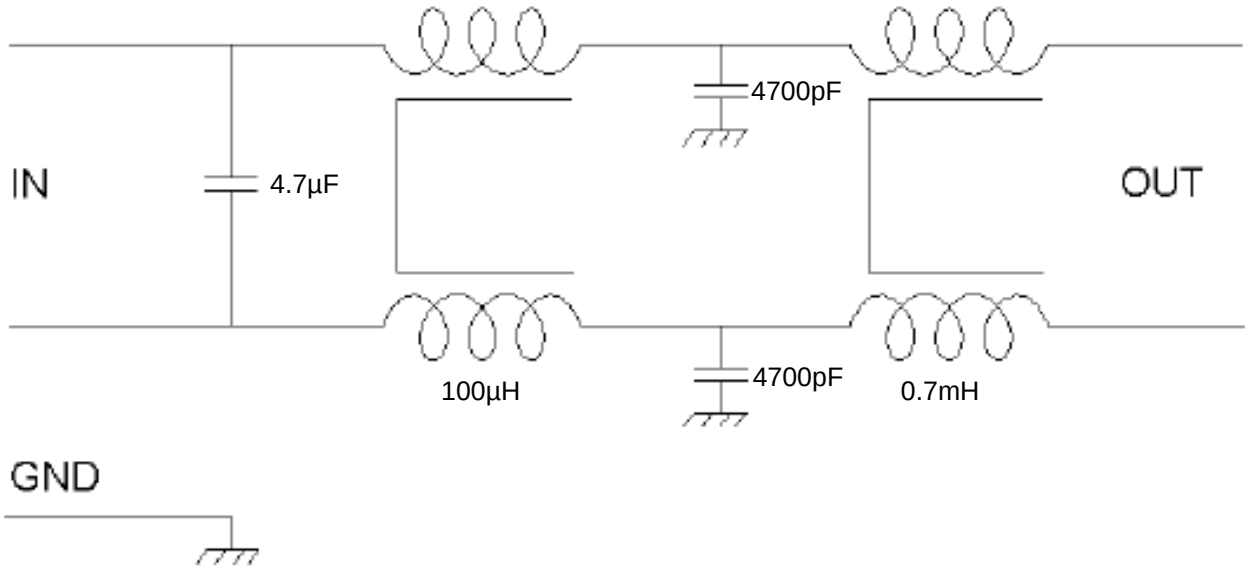


Tolerances:

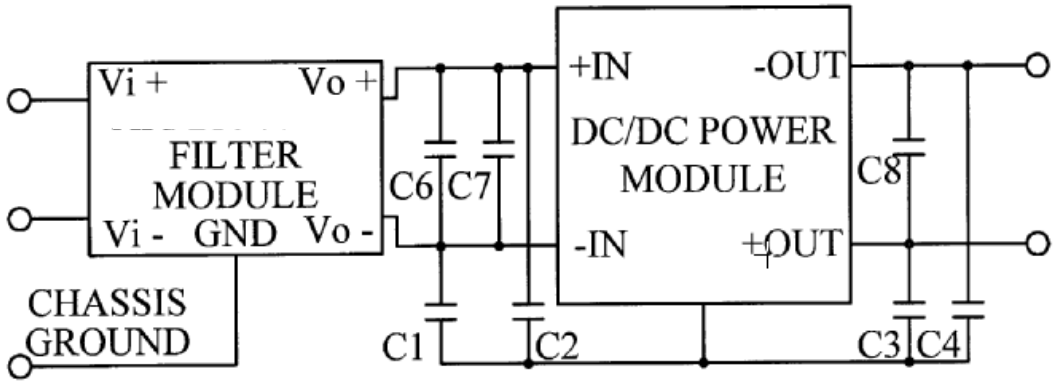
x.xx: ± 0.005

x.xxx: ± 0.015

SCHEMATIC



APPLICATION RECOMMENDATIONS



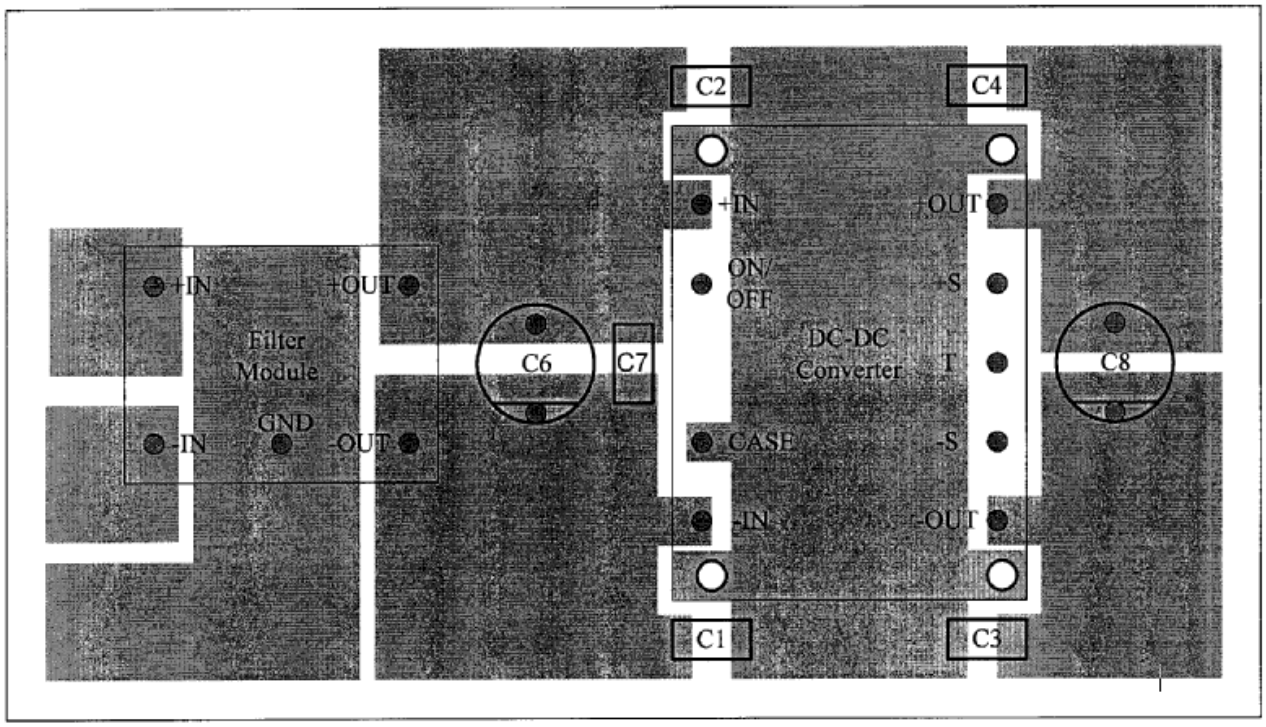
NOTE 1: C1 through C4 can be 0.01uF to 0.1uF.

NOTE 2: C6 ceramic capacitor can be 0uF to 4.7uF.

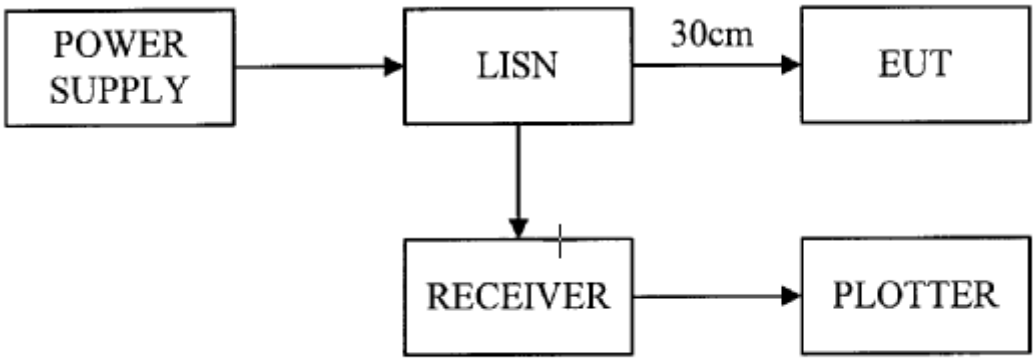
NOTE 3: C7 aluminum electrolytic capacitor.

NOTE 4: C8 aluminum electrolytic capacitor.

RECOMMENDED PCB LAYOUT



SETUP FOR MEASURING CONDUCTED EMI



TEST RESULTS

Data not available yet.

(a) Differential Mode

Data not available yet.

(b) Common Mode

Fig. 1. SV28-28-200 (Vi=28V, V0=28V, Io=8.6A) with filter and external circuit to meet FCC/VDE class B. C1 through C4 is 0.068µF, C6 is 3.3µF, C7 and C8 are 220µF.