

# Texas Spectrum Electronics, Inc



For over three decades, Texas Spectrum Electronics has been providing the military, aerospace and industrial communities with Electromagnetic Interference (EMI) products. TSE has become recognized as a manufacturer of quality EMI/RFI filters, feed-thru capacitors and other related components helping to solve Electromagnetic Compatibility (EMC) problems.

## DC-DC CONVERTER FILTERS

### APPLICATIONS



DC/DC Converters are high density, state-of-the-art products designed to operate at high frequencies. All switched mode power converters generate EMI noise as a result of their high frequency. EMI can be detrimental to the proper operation of the system. The effects of a converter ripple current on the system can be greatly reduced by incorporating a TSE Filter. Some converter manufacturers build filters into their converter package.

Even though built-in filters are present, the user still finds it difficult to meet International and FCC standards. Many converter manufacturers recommend the addition of external components to meet EMI requirements. TSE converter filters reduce (or eliminate) conducted noise (EMI) in both common & differential (normal) modes.



**The TSE circuit type most often used is Circuit 03** as shown on the following page. Circuit 01 will have reduced Insertion Loss (IL) but is less expensive. Circuit 02 has more IL than 01 but contains added capacitance, which can be detrimental in some applications. Circuit 04 has the most IL available but also has added capacitance. After choosing a circuit type, determine the operating voltage and current, then order by part number as specified on the following page. Many options including configuration, voltage, current & terminals are available and TSE services are always available to assist you.

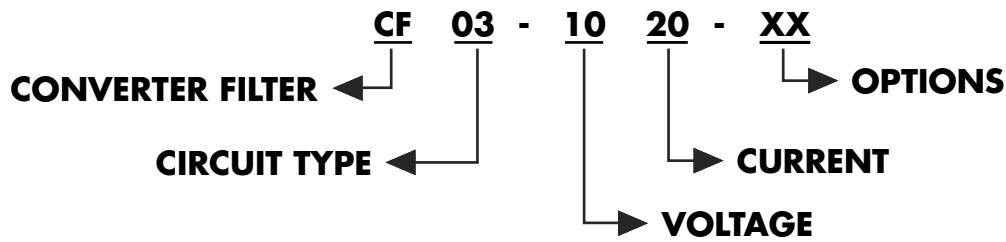
### FEATURES

- Use with High Frequency DC/DC Converters
- Common and Differential Mode Filtering
- Helps Meet International and FCC Requirements
- Wide Range of Current, Voltage Ratings & Options



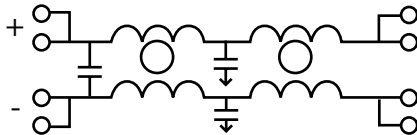
|                                       |                            |
|---------------------------------------|----------------------------|
| ■ Voltage Rating Line-to-Line         | 50VDC or 100VDC            |
| ■ Withstanding Voltage Line-to-Ground | 1500 VDC                   |
| ■ Operating Temperature Range         | -40°C to +85°C             |
| ■ DC Resistance Terminal-to-Terminal  | 0.01 OHMS Max.             |
| ■ Current Ratings                     | 1,2,5,10,20 AMPS           |
| ■ Insertion Loss, 50 OHM              | See Graphs                 |
| ■ Case Material                       | UL94V-O & Tin Plated Steel |

## PART NUMBERING

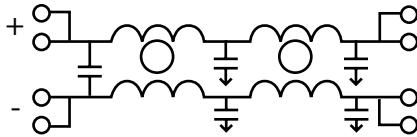


### CIRCUIT

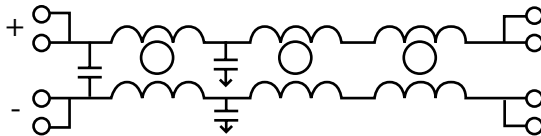
01



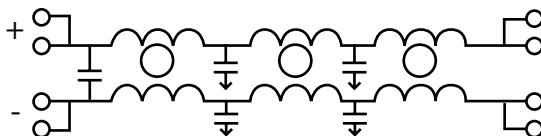
02



03



04



### VOLTAGE

05=50VDC  
10=100VDC

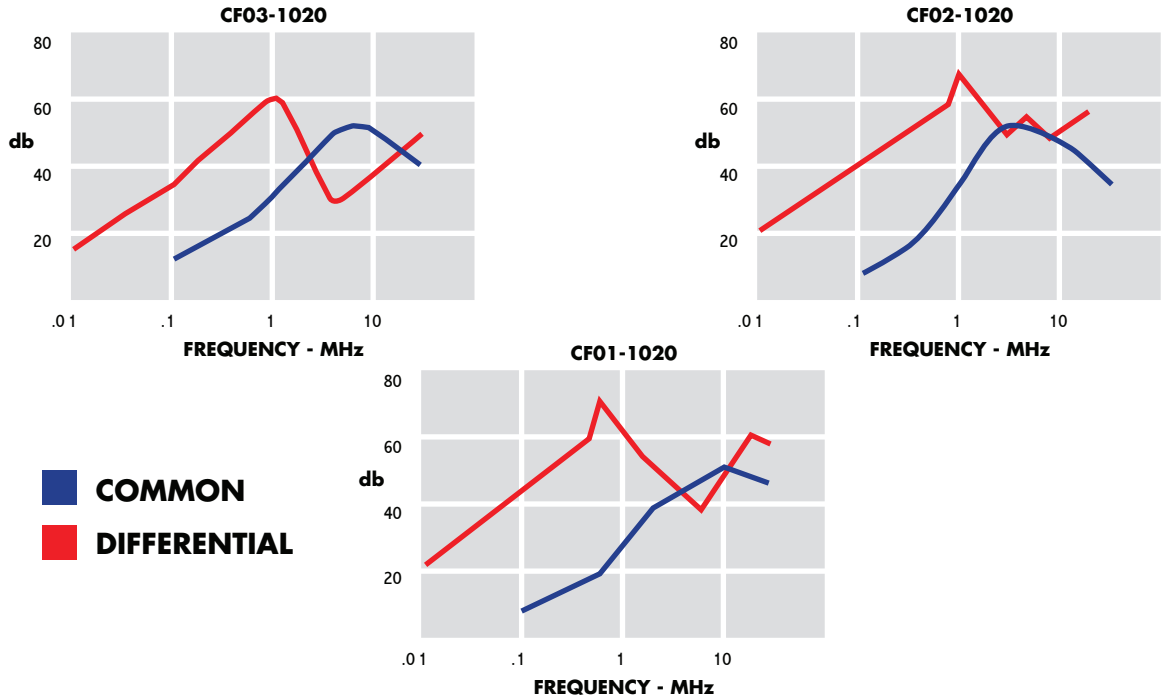
### CURRENT

01=1AMP  
02=2AMPS  
05=5AMPS  
10=10AMPS  
20=20AMPS

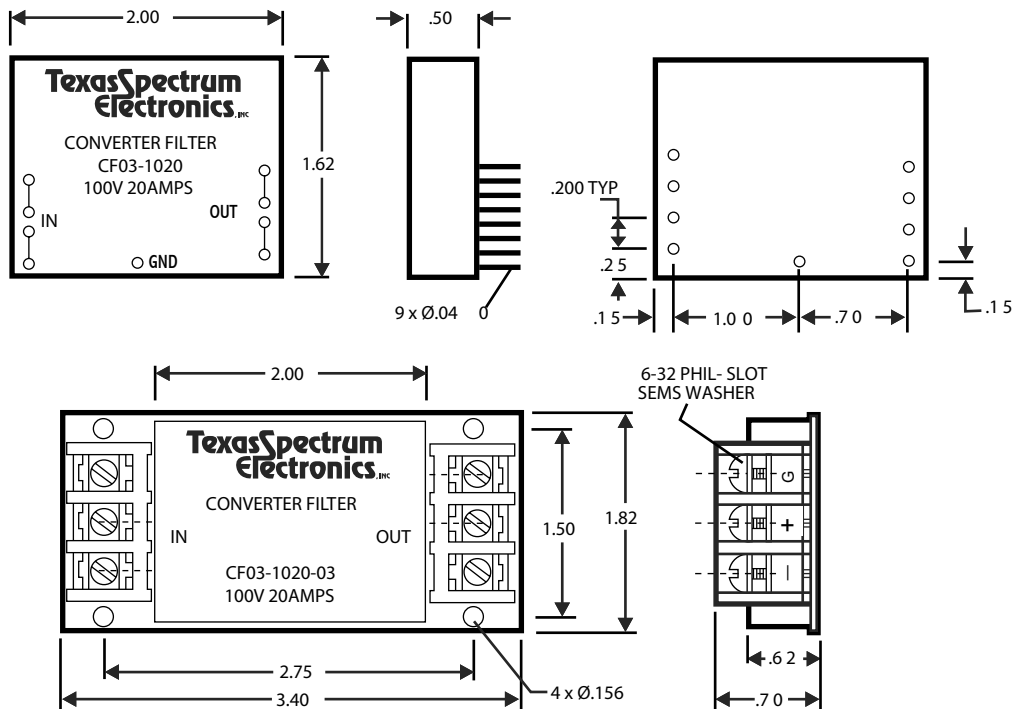
### OPTIONS

|                                  |                           |
|----------------------------------|---------------------------|
| 01=Terminal Block Input          | 04=Shielded Case          |
| 02=Terminal Block Output         | 05=Film Capacitors to GND |
| 03=Terminal Block Input & Output | 06=Suppressors            |

# INSERTION LOSS



# DIMENSIONS



# Texas Spectrum Electronics, INC

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- Custom EMI Filters
- Surge Suppression
- High Current Feed-Thru Capacitors
- Miniature EMI Filters
- DC/DC Converter Filters
- Filter Arrays
- Filter Connectors
- High Current Filtered Terminal Blocks
- Custom Assemblies

