

### High Current DC/AC Feedthrough Filter 55Amp



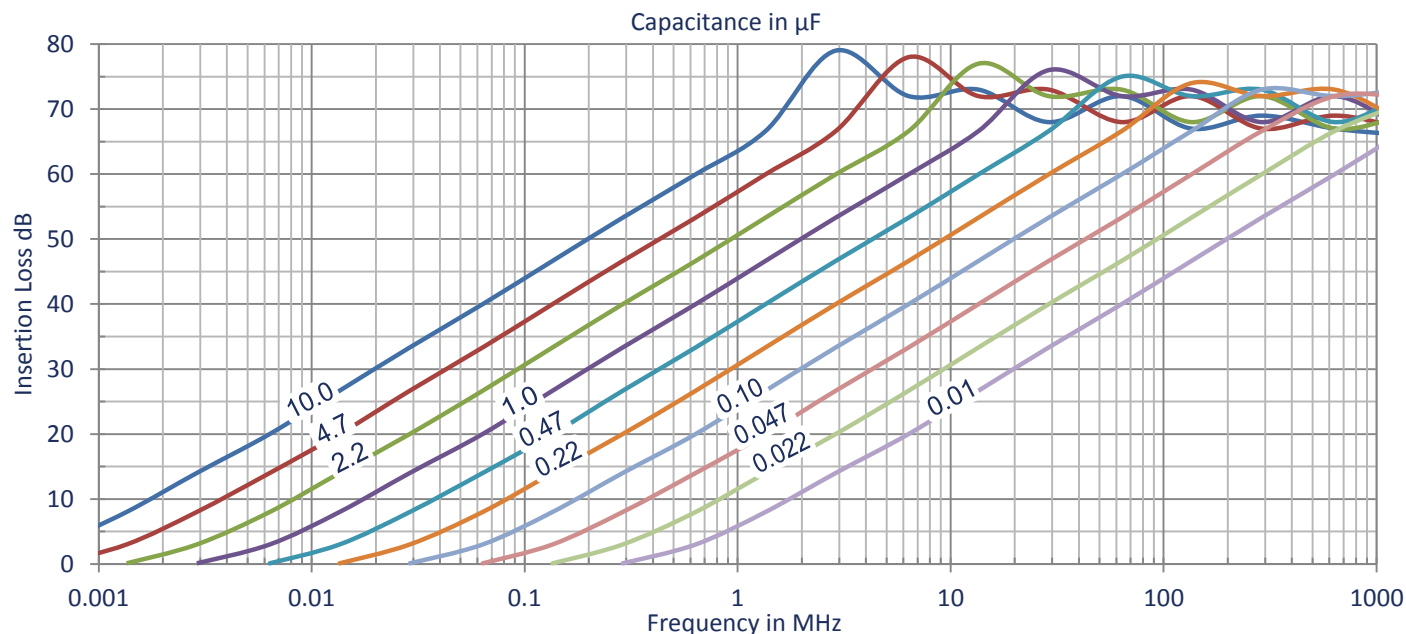
- ✓ Excellent EMI filtering
- ✓ Compact and lightweight
- ✓ "C" Type Filter
- ✓ Bolt-in style
- ✓ High Shock & Vibration
- ✓ CDR and JAN Reliability levels available

### Voltage & Capacitance

| 55A           |     |     | Capacitance $\mu\text{F}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------|-----|-----|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Rated Voltage | Vdc | 50  |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |     | 100 |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |     | 200 |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |     | 500 |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               | Vac | 120 |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|               |     | 250 |                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

✦ Standard Values

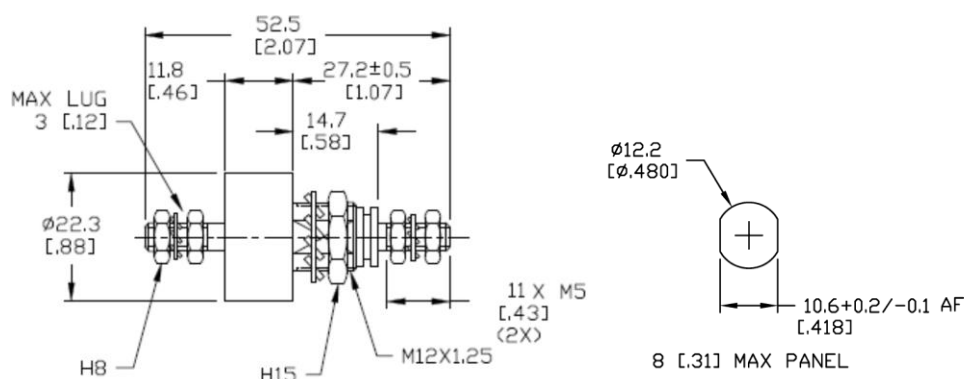
### Insertion Loss



### Specifications

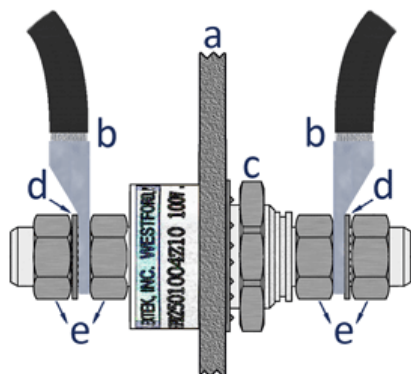
| Parameter                    | Value  | Description / Specification/ Method                        |
|------------------------------|--|--|
| Current                      | 55 Amperes                                       | 50, 55, 140, 175, 250, & 400 Amps available                |
| Insertion Loss               | See Performance Curve on page 1                  | Per Capacitor Value  |
| RF Current                   | 10A <sub>rms</sub>                               |  |
| Insulation Resistance        | 100ΩF (100MΩ Maximum) at 25°C                    | MIL-STD-202 Method 302                                     |
| Dielectric Withstand Voltage | 250% Rated Voltage (50mA 5s)                     | MIL-STD-202 Method 301                                     |
| Dissipation Factor           | 3% Maximum                                       | MIL-STD-202 Method 306                                     |
| Voltage Drop                 | 18mV   | Wire to Wire   |
| Operating Temp               | -55°C to +125°C                                  | 5A@125°C to 55A@90°C                                       |
| Temperature Rise             | 19.9°C Typical at 55A                            |  |
| Heat Rise Constant           | 9.8 to 20  | C <sub>1</sub> in formula $\Delta T = C_1 \times W^{0.85}$ |
| Storage Temperature          | -55°C to +105°C                                  |  |
| Fungus                       | Non-Nutrient                                     | MIL-HDBK-454A  |
| Corrosion (metal finish)     | 5% NaCl / 35°C / 48 hrs                          | MIL-STD-202 Method 101D / Cond B                           |
| Humidity                     | 98%RH 25°C-65°C                                  | MIL-STD-202 Method 106E                                    |
| Shock                        | 30g – 11ms                                       | MIL-STD-202 Method 213B / Cond A                           |
| Terminal Strength            | Torque: 14 in-lbs (5.6N·m)<br>Pull: 50lbs (23kg) | MIL-STD-202 Method 211A / Cond A & E                       |
| Reliability(MTBF)            | 500,000 hrs                                      | MIL-HDBK-217F Cond - N2 A(IF) 70°C 50%V                    |

### Mechanical Specifications



| Component   | Material     | Finish |
|-------------|--------------|--------|
| Metal Parts | Copper Alloy | Nickel |
| Insulator   | FR4 or Nylon | -      |

## Mounting



- a. Mounting Panel
- b. Lug / Wire
- c. Mounting Nut
- d. Lock Washer
- e. Electrode Lug Nut

### Installation Torque Recommendations

**NOTE:** Electrode Nuts (e) must be tightened using the Two-Wrench Method...Place an open end wrench on the electrode nut closest to the mounting panel (a) and a calibrated torque wrench on the outer electrode nut on the same side...Tighten nuts against one another.

The “two wrench method” will prevent any torque from developing between the electrode and the HPR body.

Electrode Lug Nut (e) Torque: 14 in-lbs (1.6 N·m)

Mounting Panel Nut (c) Torque: 60 in-lbs (6.7 N·m)

## Part Number

| Device | Current | Capacitance | Tolerance | Voltage | Series |
|--------|---------|-------------|-----------|---------|--------|
| HPR    | 055     | XXXX        | X         | XX      | X      |

**Device** HPR High Current Feedthrough Filter

**Current** Current rating in amperes

**Capacitance** in picofarads, first two digits are significant, last two digits are number of zeros  
e.g. 2203 = 22,000pF / 4704 = .47μF

**Tolerance** Capacitor Code: Z= +80%/-20% (Standard), M= +/-20%, K= +/-10%, J= +/-5%

**Voltage** Rating Code: 05=50V, 10=100V, 20=200V, 50=500V

**Example:** HPR0551004Z10 = Feedthrough Filter / 55A / 0.10uF / +80%/-20% / 100Vdc

## Safety Tips

- ✓ The filter should be mounted in a grounded shielding panel
- ✓ Tighten the electrode nuts to the torque specified with the two wrench method
- ✓ Cover exposed electrode nuts
- ✓ Observe temperature, current, & voltage limits