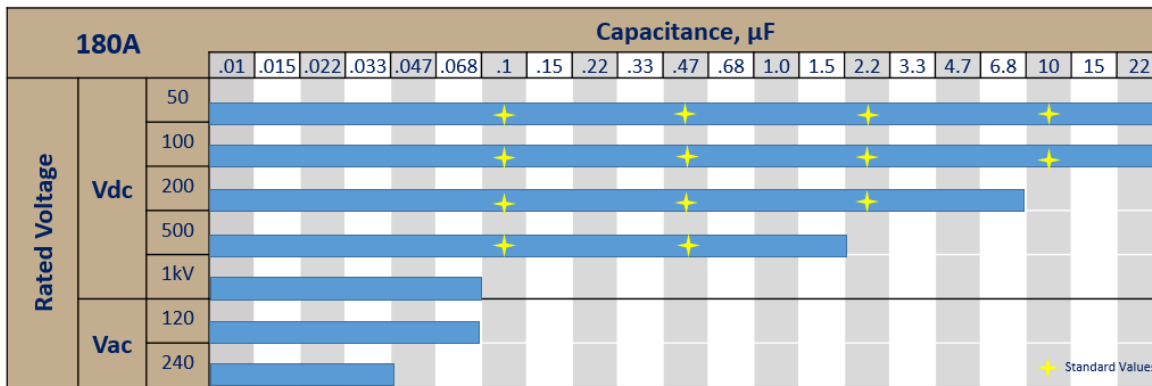


High Current Pi Filter – 180 Ampere



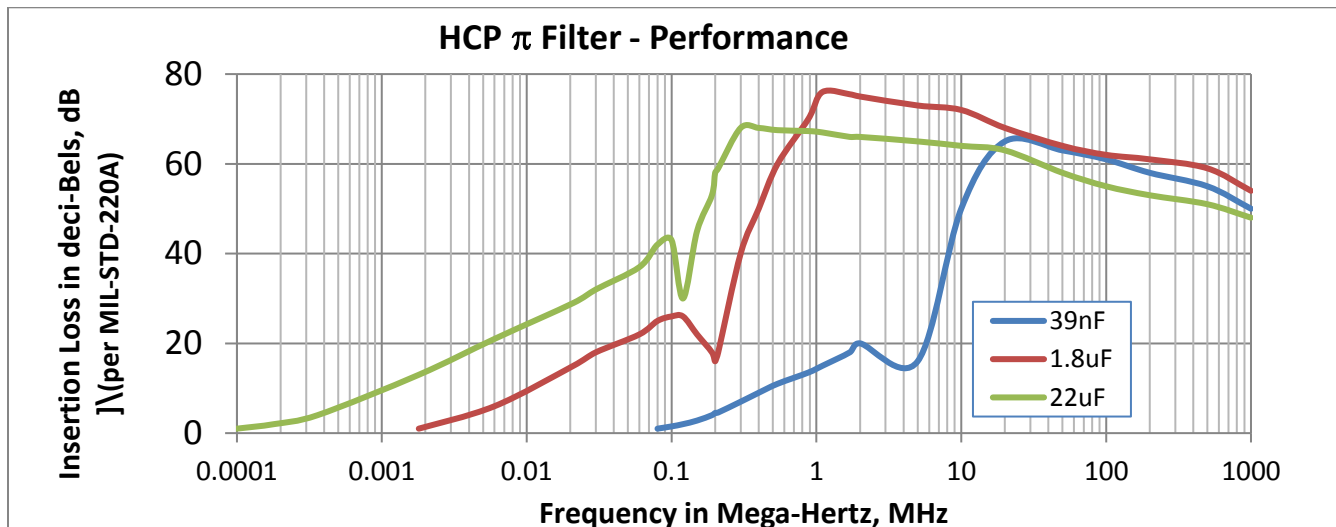
- ✓ Excellent EMI filtering
- ✓ Compact and Lightweight
- ✓ “Pi” Type Filter
- ✓ Bolt-Style Electrode Attachment
- ✓ High Shock & Vibration
- ✓ CDR and JAN Reliability levels available
- ✓ O-ring Bulkhead Seal

Voltage & Capacitance



Insertion Loss

Actual Insertion Loss Performance Varies According to Configuration. See below for possible configurations.

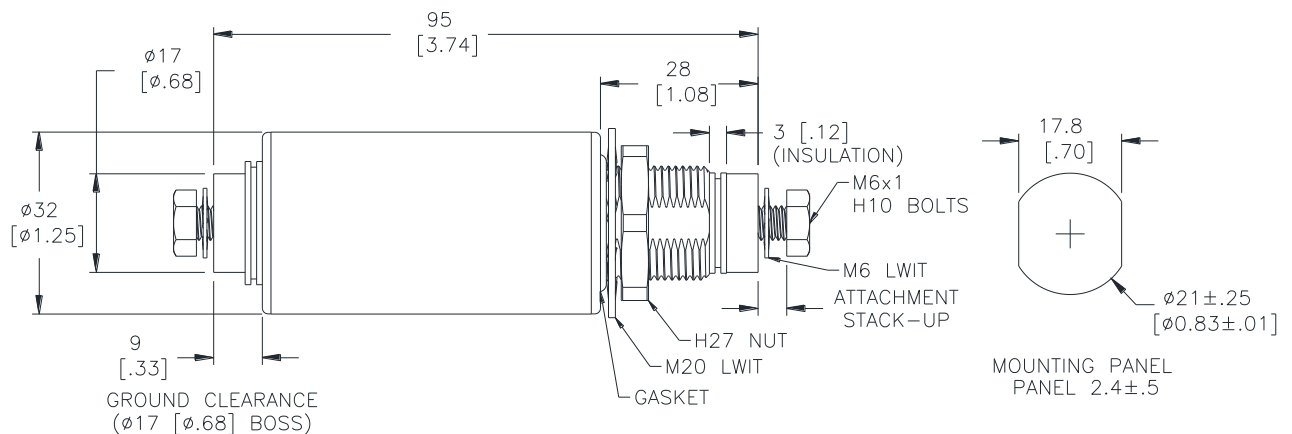


Specifications

(Units to MIL-C-49467, MIL-C-55681, MIL-C-123 or customer SCD available in E-Series)

Parameter	Value	Description / Specification / Method
Current	180 Amperes	
Insertion Loss	See Performance Curve on page 1	Per Capacitor Value
RF Current	10A _{rms}	
Insulation Resistance	100ΩF (100MΩ Maximum) at 25°C	MIL-STD-202 Method 302
Dielectric Withstand	250% Rated Voltage (50mA 5s)	MIL-STD-202 Method 301
Dissipation Factor	3% Maximum	MIL-STD-202 Method 306
Voltage Drop	20 mVdc - 26mV (60Hz)	Wire to Wire
Operating Temp	-55°C to +125°C	18A@125°C to 180A@90°C
Temperature Rise	25°C Typical at 180A (at sea level)	
Heat Rise Constant	4.4 to 8.0	C ₁ 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: 120 in-lbs (13 N·m) Pull: 800lbs (360kg)	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



Materials

Component	Material	Finish
Body and Mounting Nut	Aluminum	Electroless Nickel
Bolts and hardware	Stainless Steel	Passivated
Electrode	Copper Alloy	Tin
Insulator	CPVC	none

Mounting



Installation Torque Recommendations

Electrode Lug Nut Torque: 120 in-lbs (13 N·m)
Mounting Panel Nut Torque: 350 in-lbs (40 N·m)

INSTALLATION NOTE:

Always place current-carrying wire lug or busbar directly against the flat electrode face of the HCP180. Do not use any hardware (lockwashers, extra nuts, etc.) between the current-carrying conductor and this flat electrode face.

Part Number

Device	Current	Capacitance	Tolerance	Voltage	Series
HCP	180	XXXX	X	XX	X

Device	HCP High Current Pi 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%
Voltage	Rating Code: 05=50V, 10=100V, 20=200V, 50=500V
Series	Optional series designator
Example:	HCP1801004Z10 = Feedthrough Pi Filter / 180A / 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
- ✓ Cover exposed electrode nuts
- ✓ Observe temperature, current, & voltage limits
- ✓ Always install lug or busbar directly against center boss/flat