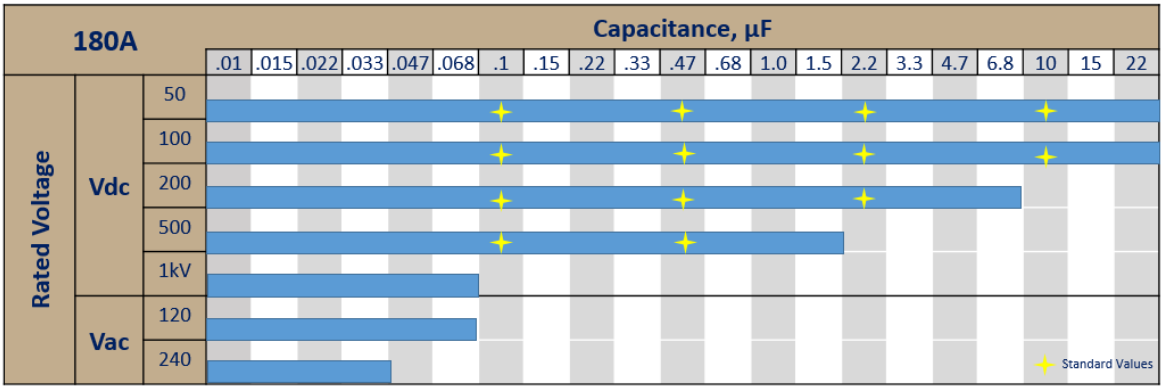
Product Specification
HCP180

High Current Pi Filter – 180 Ampere

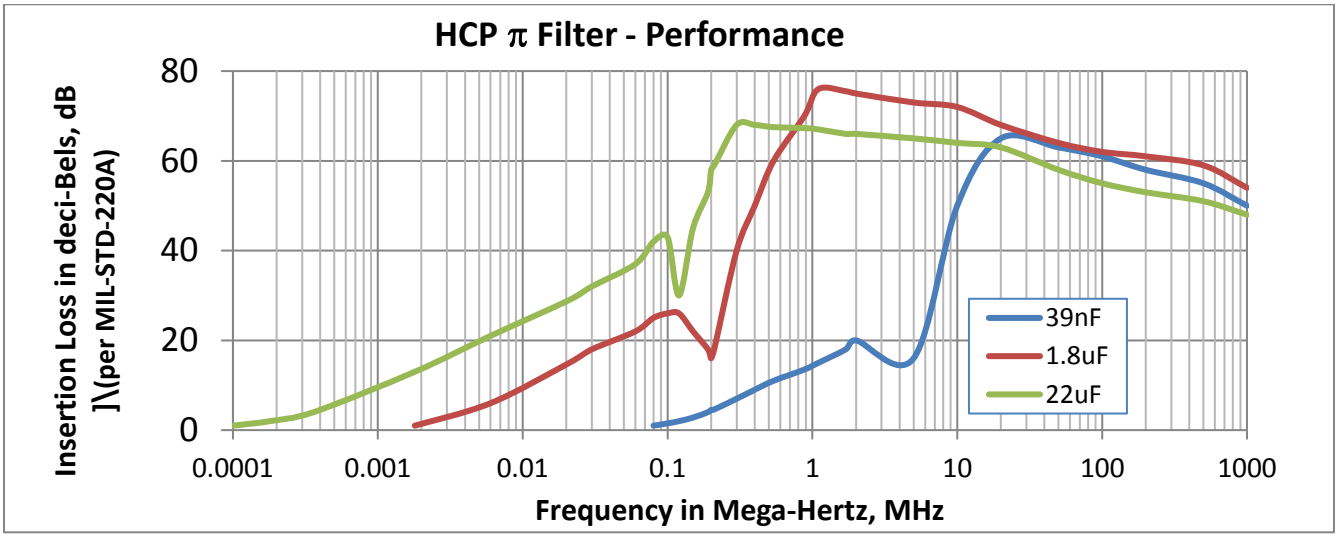
- ✓ Excellent EMI filtering
- ✓ Compact and Lightweight
- ✓ "Pi" Type Filter
- ✓ Bolt-Style Electrode Attachment
- ✓ High Shock & Vibration
- ✓ CDR and JAN Reliability levels available
- ✓ O-ring Bulkhead Seal

Voltage & Capacitance



Insertion Loss

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



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Westford, MA 01886
(978) 486-0582

Product Specification
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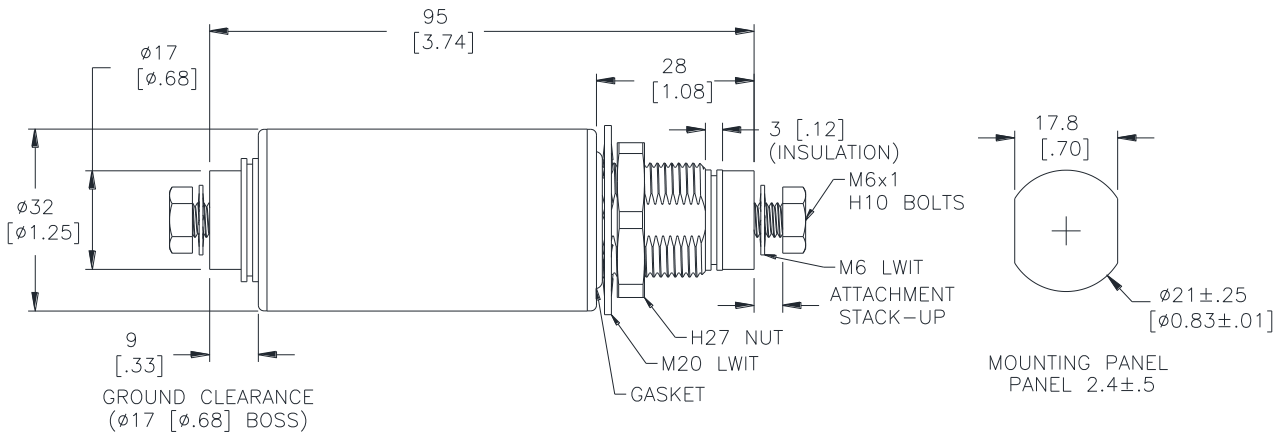
Specifications

(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

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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

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