



Complete line of coaxial EMI electromagnetic spectrum management solutions, from components to complex assemblies.

Electromagnetic Integrated Solutions

Capabilities & Certifications



API Technologies has been the world's leading provider of custom, application-specific EMI filter solutions since 1968. Whether modifying an existing component or working from a clean-sheet approach, API will develop a new product or integrated assembly to help you address the mechanical, electrical, and/or power requirements of your next design.

Understanding how and where potential EMI and other problems exist in an electronic system can be an intimidating challenge. API's design process begins with an extensive library of standard components, which are frequently used to develop into custom assemblies, offering a more complete, high-performance solution.

Complete EMI Filtering Line

API offers the flexibility to filter EMI at the power source, at the I/O connection, in a barrier wall or on the PCB. Our industry-leading line includes inductors, glass and resin seal filters, SMT filters, filter plates, filtered connectors, power entry and power line filters, and military/aerospace multi-section filters.

Design and Testing Support

Integral to solving EMC problems is the ability to test for compliance. API conducts a wide range of EMC and environmental tests and will use the data in the design process. The result is the most comprehensive EMI evaluation and design resource available.

Products Built in Accordance with the Following Specifications

API Technologies also offers over 800 standard QPL products and DSCC part numbers including:

• Coaxial Filters

- » MIL-PRF-15733
- » MIL-PRF-28861
- » MIL-C-11015
- » DSCC 84084

• Power Filters

- » MIL-STD-461
- » MIL-STD-202
- » MIL-STD-105

• Ceramics Components and Capacitors

- » DSCC-87106
- » MIL-PRF-49470

• Specialty Connectors

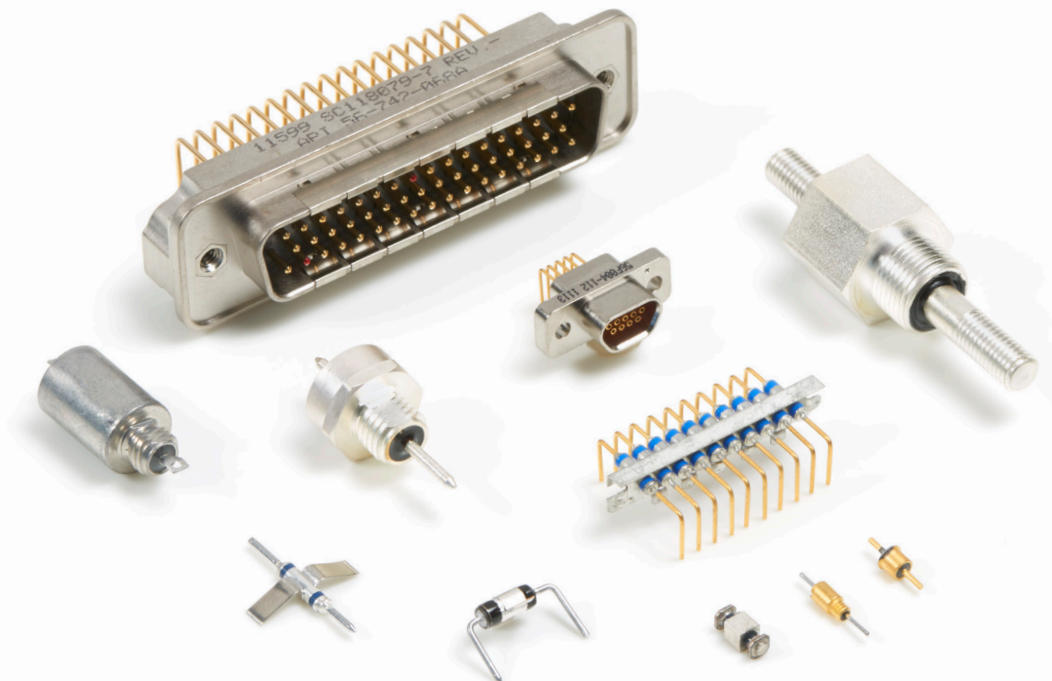
- » MIL-DTL-38999
- » MIL-DTL-83723
- » MIL-DTL-26482
- » MIL-DTL-24308
- » MIL-DTL-55116

Coaxial Filters and Interconnects

- **Three Terminal Chips**
 - » Non-polar with superior filtering characteristics
 - » Capacitance up to 220,000 pF
- **Power, Square and Mini Surface Mount Filters**
 - » Small, square mechanical geometry enhances soldering to a PCB
 - » Capacitance 47 pF to .01 μ F
- **Miniature and Large Diameter Solder-in and Press-in Filters**
 - » Solder-in, knurled press-in and 2-56 threaded spanner
 - » Wide range of solder-in bushings with a variety of circuits C, L, and Pi
 - » Qualified to MIL-C-11015 and MIL-PRF-15733
 - » Capacitance up to 30,000 pF
- **Resin and Hermetically Sealed Filters**
 - » Built in accordance with MIL-PRF-15733 or MIL-PRF-28861
 - » Capacitance values to 5.2 μ F
 - » Temperature characteristics: NPO, X7R, Y5V, Z5U available
 - » Voltage ratings (max) to 500 VDC/240 VAC @ 400 Hz
 - » Current ratings (max) to 25 amps
- **High Current/High Voltage Filters**
 - » Rugged bolt-in style for easy installation
 - » Available in C and Pi circuits
 - » Current ratings up to 100 amps
 - » Continuous voltage ratings up to 2,500 VDC/240 VAC (400Hz)
- **Filter Plates**
 - » Economical method of meeting EMC requirements
 - » 0.100" and 2mm centers allow for easy termination
 - » Effective insertion loss from 1 MHz to 18 GHz with proper installation
 - » Capacitance: Pi 68 pF to 5,000 pF, feed-through 10 pF to 4,000 pF
- **D-Sub Filtered Connectors**
 - » Ground planes shield the box even at the connector port
 - » Filters located in the connectors provide additional space on PCB board
 - » Capacitance values from 85 pF to 4,000 pF
 - » Insertion loss range 1 MHz to 18 GHz and beyond

Applications:

- Power supplies
- Signal lines
- Medical equipment
- Telecommunications equipment
- Aerospace applications
- Industrial control systems
- DC motors
- Microwave filters
- Defense applications
- Telecommunications





Power Filters

• Power Entry Modules

- » Meets over-voltage of IEC 664 category II and complies with IEC 950
- » Ideally suited for products that must conform to FCC part 15 regulations
- » Voltage rating from DC to 250 VAC, 60Hz
- » Insertion loss range from 100 KHz to 30 MHz

• Power Line Filters and 3 Phase Power Line Filters

- » Ideally suited for products that must conform to FCC part 15 regulations
- » Excellent attenuation for high voltage impulse
- » Voltage rating up to 250 VDC or VAC, 60 Hz
- » Leakage current 0.35 mA to 3.0 mA max

• Commercial Filters

- » Incorporate specified circuit breakers and mounting handles
- » Design for CISPR22/24 and EN55022/24 regulations
- » Maximum voltage ratings up to 400 VDC and 240 VAC standard
- » RoHS compliant

• Defense/Aerospace Power Filters

- » Available to meet MIL-PRF-15733, MIL-STD-461, and MIL-STD-1399 standards
- » High common and differential mode attenuation
- » Conducted filtering from 10 KHz to 1 GHz
- » Standard designs up to 100 amps
- » Voltage rating 115-250 VAC and 400 VDC up to 400 Hz

• Feed-Through Filters

- » Bolt-in style, surface mount
- » Custom interfacing, contact pins, wire leads, multiple outlets
- » Voltage rating to 1000 VDC and 240 VAC
- » Capacitance 4.7 μ F max (class Y2 and Y4 available)

• EMP/HEMP Filter

- » Insulation resistance, DWV tested prior to discharge resistor and MOV installation
- » Temperature rise less than 25°C
- » Filters rated for 16A and 30A meet modified E3 pulse test
 - » Meets MIL-STD-188-125, E1 and E2 pulse requirements
- » Custom designs available

Applications:

- Cellular base stations
- Ground and air weapon systems
- Power amplifiers and servers
- Industrial equipment
- High-current switch mode power supplies
- Traffic control systems
- Ground-based applications
- Radars
- Airborne communication systems
- Ruggedized computers

Ceramic Capacitors

• Switch Mode Power Supply Capacitors

- » Ideal for DC-DC power supply applications
- » Capacitor assemblies with low ESR/ESL
- » Leaded configuration safeguards the device against thermal and mechanical stresses
- » Capacitance values of 0.01 μF to 47 μF , MIL-PRF-49470 QPL
- » BP, BX, BR, or BQ ceramic available
- » Lead options: SMT (J or L leads) or through-hole

• Tubular Capacitors

- » High ratio of capacitance to volume
- » Small, lightweight, reliable, high dielectric strength
- » Used in EMI filtering and multi-pin connectors
- » Feed-through and Pi type configurations available
- » 0.081" to 0.122" diameter
- » 50 V to 200 V

• Discoidal Capacitors

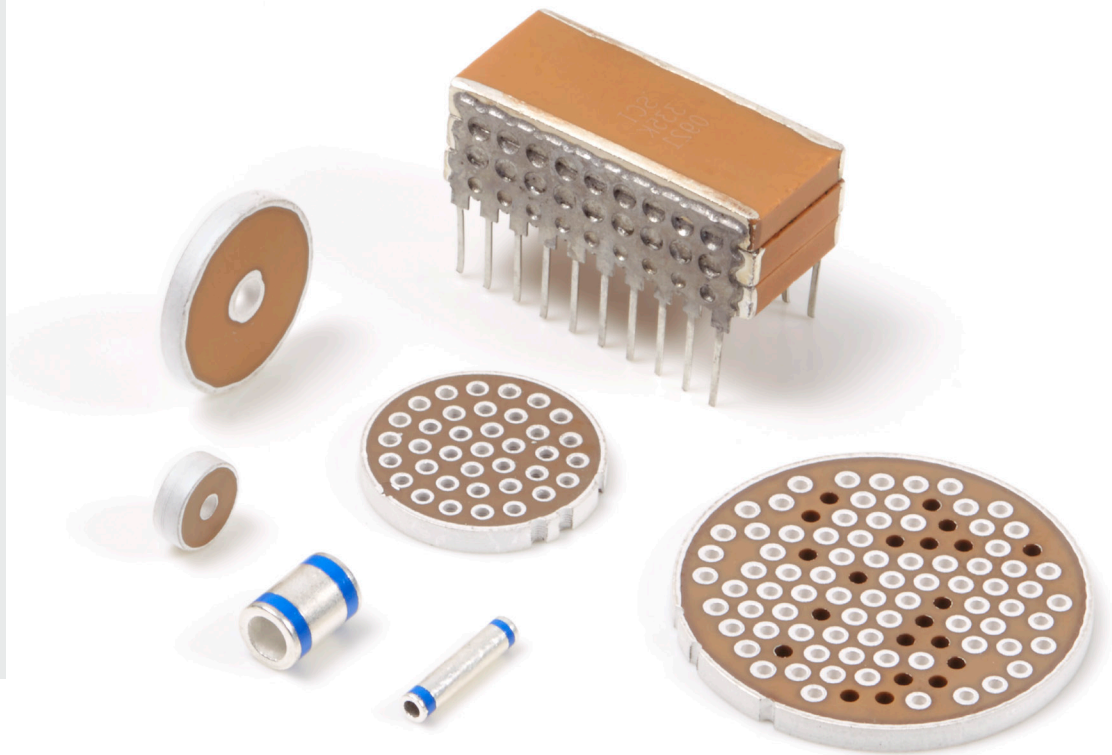
- » Low inductance, non-polar
- » Filtering and decoupling of high-frequency applications
- » AC to 240 V; DC to 500 V
- » Reliable, low profile, multi-layered designs
- » 0.059" to 0.600" diameter
- » NPO, X7R, and Z5U ceramic available

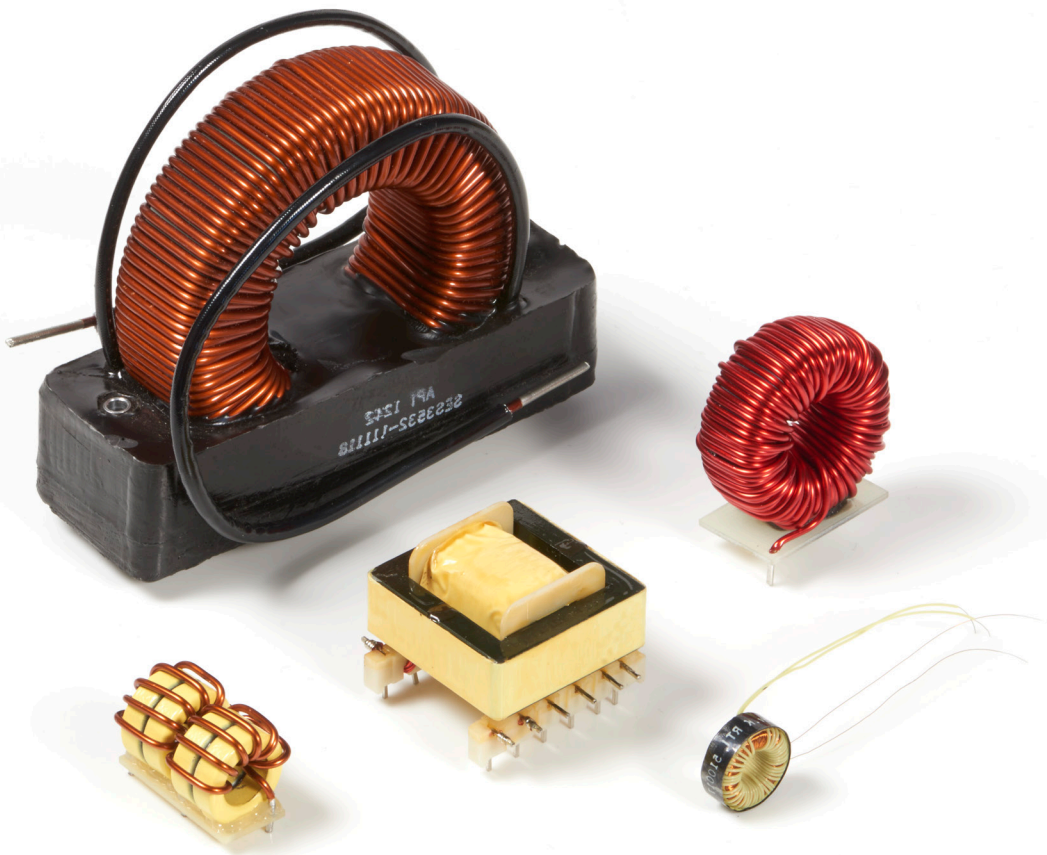
• Planar Array Capacitors

- » Low profile, decreased assembly time over stand-alone elements
- » Designs for MIL-spec circular and d-sub connectors
- » Capable of meeting various geometric and electrical configurations
- » Complete electrical and mechanical testing
- » Capacitance values up to 1 μF
- » Voltage rating up to 500 VDC
- » Dielectric withstanding voltage up to 500 VDC

Applications:

- High frequency applications
- EMI filtering and multi-pin connectors
- Medical devices
- EMI/RFI suppression filters
- Commercial applications
- Defense applications
- Power supplies
- Converters
- Multi-line designs
- Industrial control processes





Applications:

- Energy management
- Telecommunication systems
- Automation control
- Motor controls
- Line filters
- Switch mode power supplies
- DC-DC converters
- RF power applications
- Defense applications
- Power supplies

Magnetics, Inductors, Transformers

- **Current Transformers**
 - » Load detector/high sensitivity current transformers available
 - » Wide primary current range of 3.5 amps to 800 amps
 - » 50 Hz to 100 kHz operating frequency
- **Power Inductors/Chokes**
 - » Precision wound, heavy-duty toroidal inductors
 - » Available in semi or full epoxy molded
 - » Up to 100 amps, standard
- **Switch Mode Power Supply Inductors**
 - » Available in medium-current and high-current toroid type
 - » Open winding, semi-encapsulated, and encapsulated construction
 - » 10 watts to 1,000 watts with low power losses
- **Lighting Chokes and Debuzzing Chokes**
 - » Precision wound heavy-duty toroidal inductors
 - » High-quality noise rejection filter
 - » 120 V models from 12.5 to 100 amps
 - » 240 V models from 8.3 to 60 amps
- **Toroidal Power Transformers**
 - » Convert power-level voltages from one level or phase configuration
 - » Lower mechanical leakage, lower electrical noise and mechanical hum
 - » Excellent as isolation step-down and high voltage step-up transformer, ferroresonant transformer and smoothing inductor
- **Laminate Power Transformers**
 - » Transform line voltage to any other voltage
 - » Economical "channel frame" construction
 - » Value ranges from 3 VA to 100,000 VA
- **Modem and Module Transformers**
 - » Impedance and line matching transformers
 - » Input/output transformer 160 mA loop current
 - » Input/output transformer 60 mA to 250 mA line current
- **Air Coils**
 - » Low self-capacitance, high self-resonant frequency
 - » Inductance in unaffected by the current it carries
 - » Designed to perform at frequencies as high as 1 GHz

Specialty Connectors

- **Circular Filtered Connectors**

- » Eliminates mounting hardware and prep work
- » Available in wall mount, jam nut and custom design connector styles
- » Operating temperature -55°C to +125°C
- » Voltage rating 200 VDC
- » Dielectric withstanding voltage rating 500 VDC

- **Mini-MIL Connectors**

- » Termination types: PC tail or solder cup
- » Receptacle types: flange mount or jam nut
- » Six shell sizes are available in either pin or socket contact genders
- » Shell materials: aluminum, stainless steel
- » Capacitance 1,000 pF to 20,000 pF
- » Pi and C circuits available

- **Audio Connectors**

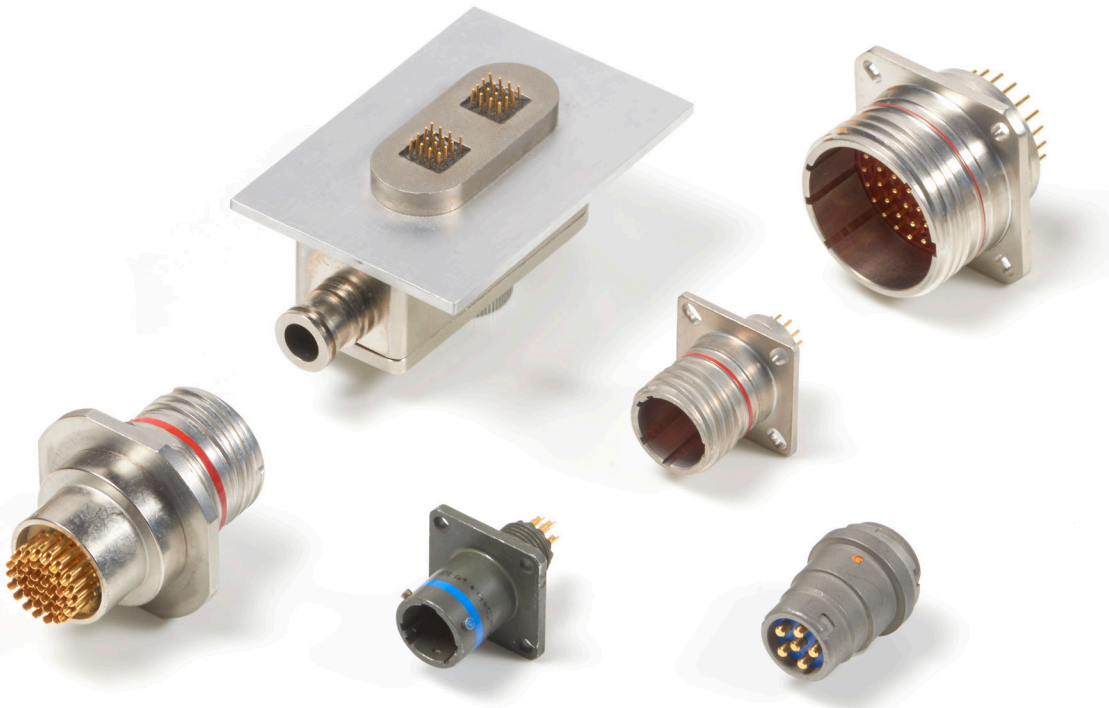
- » Easy retrofit or upgrade
- » Design flexibility and quality assurance
- » Standardized design for most contact arrangements
- » PC tail or solder cup terminations are available
- » Capacitance 1,000 pF to 5,000 pF
- » Pi and C circuits available

- **Rapid Mate Connectors**

- » Spring loaded filtered connectors
- » Rugged and reliable
- » Resists sand, dust, and water
- » Low, flexing mating force
- » Capacitance 10 pF to 5,000 pF
- » Pi and C circuits available

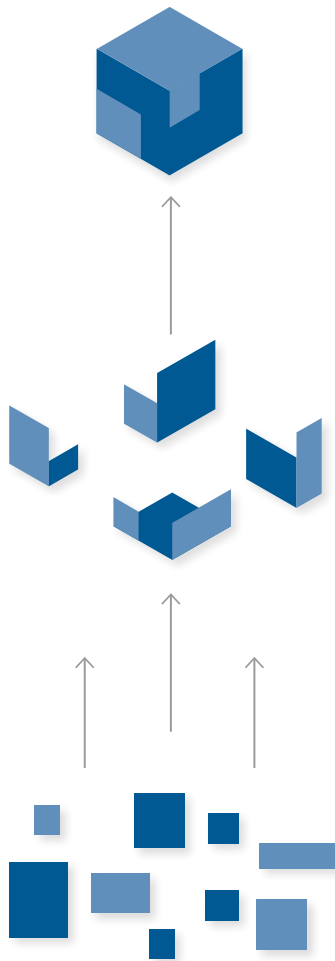
- **Specialty Unfiltered Connectors**

- » Built to MIL specifications
- » Custom shells to fit your available space
- » Multiple terminations available
- » Built to meet you various environmental requirements
- » Integral strain relief
- » Power, signal and coax line combinations



Applications:

- Avionics
- Defense applications
- Commercial applications
- Satellites
- Telecommunication systems
- Power supplies
- Electronic warfare
- Ground and air weapon systems
- Mining
- Oil and gas exploration



Value-Added Integration

From components to subsystem solutions

API provides rugged, reliable and efficient subsystems, assemblies and components for use in the most mission critical defense and military applications, supporting government programs throughout the world.

With diverse program experience and preferred supplier status with some of the industry's top prime contractors, our precision-engineered MIL-grade products are ideal for applications where uncompromised reliability and uninterrupted performance is required.



API Technologies is an innovative designer and manufacturer of high performance systems, subsystems, assemblies and components for technically demanding RF, microwave, millimeterwave, electromagnetic, power, and security applications. A high reliability technology pioneer with over 70 years of heritage, API's products are used by global defense, industrial, and commercial customers in applications spanning radar, electronic warfare, unmanned systems, missile defense, harsh environments, space, communications, medical, test and instrumentation, and more.

What We Do

RF and Microwave Signal Conditioning & Management

RF, microwave, millimeterwave, and power solutions to enable the wireless link across global defense, commercial, space and test applications.



Electromagnetic Spectrum Management

Electromagnetic and security solutions to mitigate interference and protect the safe transmission of data in high performance defense and mission critical applications.