NEW PRODUCTS

CLEARPLEX® WAVEGUIDE FILTER
- Available BPF bands 1, 2, 4 and 7
  (additional bands in development)
- Duplexer bands available 2 and 7
- Average Power: ~ 50 Watt at certain bands
- Peak Power: Exceeds 500 Watt at certain bands
- Low Insertion Loss: < 1.5 dB
- Sharp Rejection Points: Up to -80 dB
- Excellent PIM Levels: -110 dBm typical
- Flexible integration; connectorized or SMT

BAND STOP FILTER (BSF)
- Up to 30 Watts average 300 Watts peak
- Block lengths from 28mm to 132mm
- 700MHz to 2600MHz frequency range
CTS is the inventor of monoblock ceramic filter technology. We hold over 70 patents covering all aspects of monoblock filter design and manufacturing. Ceramic monoblock filters offer major advantages over competing technologies such as coaxial resonator filters.

- Lower price
- Smaller size
- Higher reliability (MTTF > 400 years)
- "Best-in-class" performance

CTS monoblock filters can be optimized for specific applications, opening the way for truly customizing product development. We have been on the forefront of these developments from the very beginning; providing the largest selection of monoblock filters in the industry.

Select a filter that closely matches your needs and contact us. We can customize that filter to your specific performance requirements and have samples delivered within 4 weeks.

Current R&D projects are focusing on high power, capability of displacing air-cavity filters in many high performance monoblock filter designs, which are capable of handling power ratings between 10W and 30W, with up to 200W peaks. The main application of the Actiplex™ product line is to provide front-end filters for base station with power ratings between 10W and 20W, with up to 200W peaks - an economical alternative to standard air-cavity filters.

ActiPlex™ — A "disruptive" filtering technology that can enable designs of single board, multi-band micro cell base station or multi-band remote radio head architectures.

- ActiPlex™ is a system enabler for designers using a family of duplexers and filters that gives superior performance with premium space savings, enabling smaller base station platforms.
  - Higher reliability (MTTF > 400 years)
  - Improved filter symmetry resulting in superior signal-to-noise performance
  - Low insertion loss
  - Power - support applications up to 1,000 watts
  - Better reliability (MTTF >400 years)
  - Ease in handling and assembly

Optimized Ripple

"An economical alternative to standard air-cavity filters"

CTS offers over 15 standard duplexers and 50 standard band pass filters with industry leading low ripple performance. Repeaters cascade filters and amplifiers in order to boost the RF signal. Most repeaters cascade filters in series with an amplifier in between to achieve the rejection that is required. Points to consider:

- Ripple and rejection are additive when filters are in series
- Too little rejection will cause signal distortion
- Too much ripple will reduce the distance a repeater will transmit due to the introduction of more loss into the system

CTS low ripple filters offer superior electrical performance:

- Low ripple - as low as 0.3dB over the entire passband reduces distortion and dropped calls due to amplified signal from cascaded filters and amplifiers
- "Best in class" ripple-to-rejection performance ratios
- Frequency ranges from 900MHz to 6GHz
- Monoblock construction - better reliability (MTTF >400 years), ease in handling and assembly

"Industry leading low ripple performance"

CTS has high performance filters designed specifically for TCAS and InMarSat. TCAS is an aircraft collision avoidance system designed to reduce the incidence of midair collisions. TCAS transponders operate at 1030MHz and 1090MHz.

InMarSat is a publicly owned company that owns and operates a constellation of satellites providing mobile communications to maritime, aeronautical and land-based customers. Operating frequencies are 1525MHz – 1559MHz and 1090MHz.

"Low Insertion Loss"

CTS has over 100 standard monoblock RF filters designs for your broadband wireless needs. We offer the best selection of size, frequency and performance, including frequencies as high as 5.8GHz.

Broadcast wireless markets:

- LTE
- WiFi mesh networks
- Extended frequency up to 6GHz:
  - LTE
  - Various global bands
  - WiFi mesh networks

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"Low Insertion Loss"
LAUNCHING INNOVATIVE PRODUCTS INTO THE FUTURE

**Frequency Control Products**
- Quartz Crystals
- Clock Oscillators
- Timing Modules
- Semiconductor ICs

**Resistor Products**
- ClearONE™ Terminators
- Chip Resistor Arrays
- Current Sensing
- Ultra High Resistance

**EMC Products**
- Surface Mount Filters
- Feed Through Filters
- Filtered Terminal Blocks
- Variable Trimmer Capacitors
- Coaxial Resonators
- Custom EMI Filter Plate Assemblies
- Ceramic Disc Capacitors

**Electrocomponents**
- Potentiometers
- Encoders
- Mini-Joysticks
- Rotary Switches
- DIP Switches
- Trimmer Potentiometers
- Sensors and Controls
- Custom Assemblies

**Ceramic Components**
- Monoblock Filters
- Monoblock Duplexers
- ClearPlex® Waveguide Filters

**Thermal Management Solutions**
- Heat Sinks
- Fansinks
- ZIF Circuit Card Retainers