

Advanced Materials and Solutions



About CTS Advanced Materials and Solutions (AMS)

CTS strives to deliver innovative solutions to enable an intelligent and seamless world. Our solutions enhance the body, home, and connections from deep sea to deep space.

Piezoelectric Components and Devices

Piezoelectric materials convert a mechanical signal into an electrical signal and vice versa. They are used as actuators, sensors or transducers.

Temperature Sensors

Temperature sensors monitor and control temperatures in critical applications where failure is not an option.

Radio Frequency Filters

RF filters are ceramic components that pass a specific range of signal frequencies (0.2 to 40GHz) and block out undesired frequencies commonly used in wireless communications or for sensing applications such as GPS or RADAR. Can support ITAR and cleared projects.

Electromagnetic Compatibility (EMC)

EMC products help block unwanted electrical signals from electronic equipment to ensure proper performance.

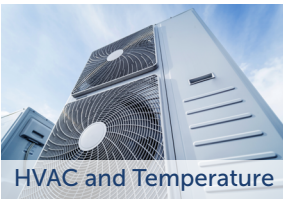
Sensors and Controls

Sensor and Control products provide information related to status, position, angle, speed or other data to a system.

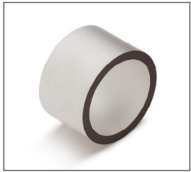
Frequency Control Products

Electronic devices used for data stream clocking through systems requiring precision radio frequency (RF) generation.

Our Applications

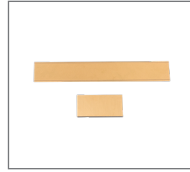


Piezoelectric Components and Devices



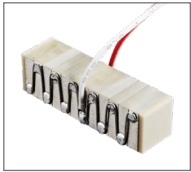
Bulk Ceramics

- Geometries for specific applications
- >30 materials
- Textured and lead-free options



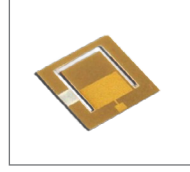
Single Crystal

- High performance materials
- Advanced shaping, etching
- Ø100mm boule



Multilayer

- High strain actuators
- Wide standard range
- Customizable



Thick Film

- High frequency ultrasound
- Printed piezo
- Flexible piezo elements



Piezo Devices

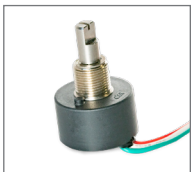
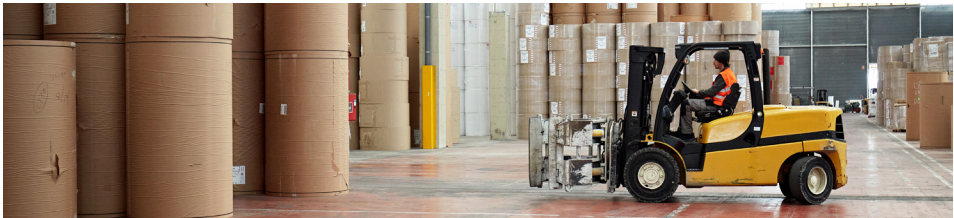
- Custom assemblies
- Mechanical and electrical
- Composites



Transducers

- In-house design or build-to-print
- Volume assembly
- UHF transducers

Sensors and Controls



Rotary Position Sensors

- Single & Multi-Turn
- Hall-effect & mechanical
- Mounting/sealing options



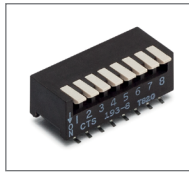
Rotary Potentiometers

- Single & Multi-Turn
- Multiple sizes
- Customizable
- IP67 available



Encoders

- Mechanical & Optical
- Ring encoders
- Shaft or bushing



DIP Switches

- Pitch 0.100" & 0.050"
- Slide, toggle, piano
- Bottom seal or top tape
- Customizable



Tactile Switches

- Multiple operating forces and sizes
- LED illuminated versions
- IP67 available



Rotary Selector Switches

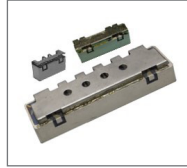
- Shaft or bushing
- Termination or lug
- IP67 available

RF Filters



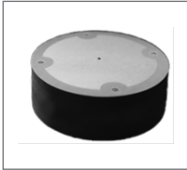
Duplexers and Duplexers

- Freq 0.2 - 6 GHz
- Power 0.1 - 200 Wpk
- Sizes 11.5 - 65mm long
- Universal footprint



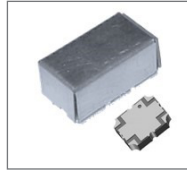
Bandpass Filters

- Freq 0.2 - 40 GHz
- Power 0.1 - 200 Wpk
- Sizes 4 - 65mm long
- Universal footprint



Custom Fabricated Ceramic Antennas

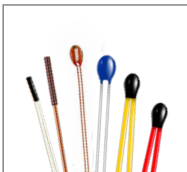
- Precision tolerances
- No tuning, Temperature stable
- Low loss, high Dk (11-88)



Low Pass Filters

- <0.5dB IL, >40dB Atten, 200Wpk
- Suppress 2nd - 5th harmonics
- Universal footprint

Temperature Sensors



Leaded Thermistors

- High Precision NTC or PTC
- Epoxy & Glass coating
- Commercial/ Mil Aero grades



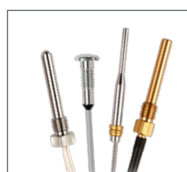
SMD Thermistors

- Sizes Available: 0402, 0603, 0805
- Tin / Tin-lead / Gold plating options
- Board level mounting



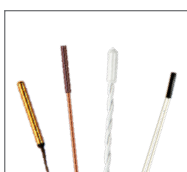
IP68 TPE Probe Assemblies

- IP68 compliant
- Waterproof
- Thermistor /Pt RTD sensor elements



Temperature Probe Assemblies

- Thermistor or Pt RTD
- Customizable housings and cable/connector options.



Miniature/Micro

- Small size down to 0.020"
- +/-0.05C° accuracy
- Bare thermistor or probe



Medical Products

- Disposable or Reusable
- +/-0.05C° accuracy
- YSI 400 series

Electromagnetic Compatibility (EMC)



Feedthrough (Bushing) Filters

- Highly Customizable
- L,C, Pi Available
- High Performance (Attenuation)



Mini & Sub-mini Filters

- Press-in and Solder mount styles
- Hermetically Sealed (optional)
- Light weight



Filter Terminal Blocks

- UL Recognized
- Custom positions (2-8)
- 12 AWG pins for high power
- Rated to -55C to 105C



Surface Mount Filters

- High power (20A)
- Round and Square Body
- Excellent Solderability



Filter Assemblies

- Custom positions (up to 2 rows)
- Custom assembly (Plate) design
- Custom capacitance and lead length per pin

Frequency Control Products



Crystals

- AEC-Q200 qualified
- Operating Temp -40C° to +150 C°
- Frequency range 32.768kHz; 1 - 160MHz



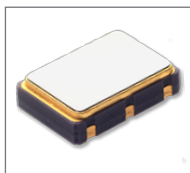
VCXO

- PLL reference
- Data stream modulation



OCXO

- Low phase noise floor
- Lowest power in the industry
- High shock survivability
- Precision RF source



Clock Oscillators (XOs)

- AEC-Q200
- Frequencies to 2.1GHz
- Configurable Solutions
- Low Jitter 200fs



TCXO/VCTXO

- IEEE 1588 Timing
- 5GPP performance
- Meets GPS timing requirement

About CTS Corporation

CTS is a leading designer and manufacturer of products that Sense, Connect, and Move. We manufacture sensors, actuators, and electronic components in North America, Europe, and Asia, and provide solutions to OEMs in the aerospace & defense, medical, industrial, communications, information technology, and transportation industries.

Contact

For more information visit:

www.ctscorp.com

Sales@ctscorp.com

<https://www.ctscorp.com/contact/sample-request/>

