



## Series MTB/MXB Bandpass Filters

### X-Band Radio Frequency Filter Solutions

The series MTB and MXB from CTS Corporation are ceramic monoblock bandpass filters that feature an extended frequency range beyond what the technology traditionally is capable of. Utilizing five and six resonators, respectively, the series MTB and MXB are optimized for **X-band operation** in the 6-12 GHz range. Combined with their high peak to average ratio power handling, the series MTB and MXB are ideal for linear satellite communication (SATCOM) as well as short and long pulsed radar applications.



#### **X-Band Operation**

The series MTB and MXB push the upper frequency limit of conventional ceramic dielectric filter technology significantly. With a functional frequency range of 6 to 12 GHz, the series MTB/MXB bandpass filters can operate in the X-band frequency spectrum, making them highly suitable for use in SATCOM and radar applications.



#### **Well-Proven Technology**

The series MTB and MXB are built on a well-proven technological foundation: The ceramic dielectric monoblock filter, pioneered by CTS Corporation. The technology offers high out-of-band rejection with very low insertion loss and high input power handling. As such, the technology is used for RF filtering in both transmitter and receiver applications, enabling clear and dependable communication.



#### **Universal Footprint**

The MTB and MXB filters retain the same footprint in spite of different overall dimensions across the model variations. This allows developers to use the same PCB layout for multiple platforms, particularly switched filter matrices. Like other CTS monoblock filters, CTS offers rapid customization of performance parameters. The series MTB/MXB are fully commercial products, but can be manufactured in the USA for ITAR compliance.

## Series MTB/MXB Bandpass Filters - Technical Specifications

Series MTB/MXB Unit	Resonators	Passband (GHz)	Avg. Power / Peak Power (W)	Max. Insertion Loss (dB)	Size L x W x H (mm)
<a href="#">MXB0761A</a>	Six	6.725-8.5	2/20	1.2	11.7 x 3.5 x 3.7
<a href="#">MTB0910A</a>	Five	8.9-9.3	2/20	3	9.0 x 2.7 x 3.1
<a href="#">MTB0950A</a>	Five	9.3-9.7	2/20	3	9.0 x 2.6 x 3.1
<a href="#">MTB0990A</a>	Five	9.7-10.1	2/20	3	9.0 x 2.5 x 3.1
<a href="#">MTB1030A</a>	Five	10.1-10.5	2/20	3	9.0 x 2.4 x 3.1
<a href="#">MTB1060A</a>	Five	10.2-11.0	2/20	2.5	9.0 x 2.4 x 3.1
<a href="#">MXB1172A</a>	Six	10.7-12.75	2/20	1.6	11 x 2.5 x 3.7

### CTS Radio Frequency Filter Expertise

CTS develops and manufactures high-end radio frequency (RF) filters used by various technologies to block out or filter certain signal frequencies. In 1982, CTS invented the ceramic monoblock, and ever since, our ceramic RF filters have been setting the industry standard in terms of lowest insertion loss, attenuation/rejection/isolation, Q-factor, size, power handling, and transition slope. Our portfolio includes bandpass filters, notch filters, lowpass filters, delay line filters, duplexers, and triplexers/multiplexers.

CTS bandpass filters (BPFs) offer reliable isolation of specified frequency ranges while attenuating every frequency above and below. In transmitter applications, band-pass filters function to narrow the bandwidth of the outgoing signal transmission, preventing it from interfering with other signals in crowded radio frequency environments. When used in conjunction with receivers, band-pass filters reject all frequencies outside the specified range, allowing only signals within the range to be heard and decoded.



### Contact Information

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