

MtronPTI today introduced UFDX9999-002, a C-band Diplexer/Splitter Assembly supporting satellite applications. Having MtronPTI integrate the diplexer with the splitter, enabled our customer to reduce the board space of the Diplexer/Splitter assembly by 25%. The Diplexer/Splitter Assembly incorporates highly selective bandpass filters and a splitter for simultaneous transmit and receive with the full-duplex operation, low loss, and outstanding isolation between the uplink and downlink bands.

The passbands, temperature range, and power handling can be customized for each application. The diplexer is compact, lightweight, and offers constant VSWR over the temperature across the bands. MtronPTI's products support rugged, high-performance communication links that require full-duplex operation in airborne, land, maritime and deep space applications.

MtronPTI offers a broad line of precision crystal resonators, oscillators, filters, and Integrated Microwave Assembly solutions. MtronPTI is an ISO 9001:2015 and AS9100 Rev. D certified organization.

Features:

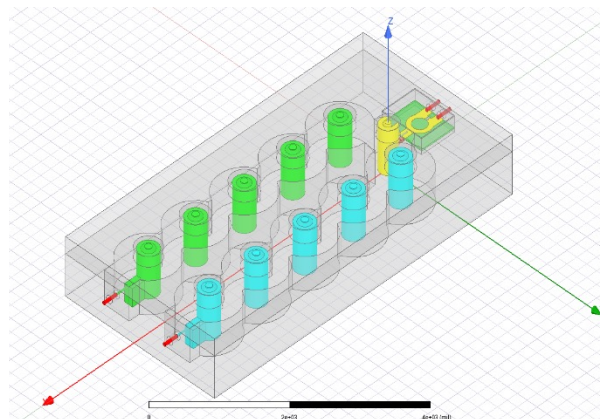
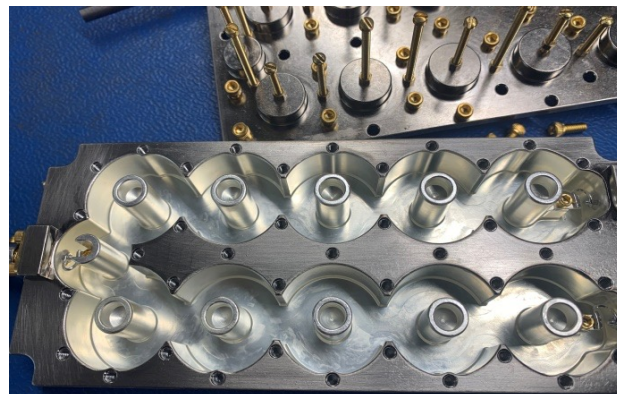
- Integrated assembly with splitter: Board Space Savings
- Low Uplink and Downlink Signal Loss >70dB Isolation
- Low Insertion Loss – 4dB MAX including splitter loss
- Small Size Low weight
- Custom operating temperatures available

Applications:

- Unmanned Aircraft System (UAS)
- SATCOM
- Electronic Warfare Datalink
- Deep Space Satellite Communication Link



Operational Bandwidths	Uplink Band = 6670-7070MHz Downlink Band = 7320-7920 MHz
Insertion Loss	4dB maximum; Includes splitter loss
Passband Ripple	0.1 dB max.
Rejection: 5000 to 5800MHz and 9000 to 12000MHz	>= 50dB
Power Handling	10W CW RF power
Duplexer Isolation	>=70dB
Power Divider Isolation	>= 25dB
VSWR	1.45 max
Phase Balance	6degrees max.
Weight	0.4kg max
Dimensions	3.8" (W) x 2.5" (L) x 1.25" (H) max.
External Surfaces	Nickel Plated.
Mounting Provisions	Supports custom provisions.
Coplanarity of bottom surface	0.010 inches max.
RF Connectors	Female SMA.
Operating temperature	Custom operating temperatures available.



C-Band Diplexer/Splitter Assembly Representative Simulations

