K&L Microwave has designed, tested, and qualified a UHF diplexer for space applications. The diplexer design utilizes high Q cavities for low loss in the transmit (TX) and receive (RX) channels. The TX path has been tested for 60 watts of power handling from a space-level vacuum (1 X 10^{-7} torr) through critical attitude (approximately 0.1 to 1 torr) in a Mars gas atmosphere, which requires about 20 percent better power handling than critical altitude in Earth atmosphere. Additionally, the RX channel maintains over 100 dB of TX isolation for supporting the low sensitivity receiver and the passbands have less than 2.0db insertion loss. The design has also been optimized to keep the package as small and lightweight as possible.

Please contact K&L Microwave to receive further information about this product or to discuss your space flight filter requirements.