

UEC RF-Microwave boasts over 15 years of experience in the space sector, specializing in deep space, cislunar, GEO, MEO, and LEO payloads. Our expertise encompasses both commercial and classified satellites, ensuring we meet various qualification standards, including Mil-PRF-38534 Class H and radiation-hardened Class K. UEC is committed to providing RF solutions that ensure mission success and longevity.

Heritage

Band (GHz)	Supply Voltage	Noise Figure	Gain/ Power	Designator	Year	Mission (Years)	Class
DC - 2	+5 V	3.5 dB	50 dB	Limiting Amp	2006	3	H
2 - 6	+5 V	3.0 dB	50 dB	Limiting Amp	2006	3	H
6 - 18	+5 V	3.5 dB	50 dB	Limiting Amp	2006	3	H
1.62 - 1.65	+12 V		27 dB	Transmitter	2009	3	H
5.845 - 6.725	+12 V		34 dB	Transmitter	2009	3	H
13.75 - 14.5	+12 V		31.5 dB	Transmitter	2009	3	H
1.52 - 1.565	+12 V		18 dB	Receiver	2009	3	H+
3.4 - 4.2	+12 V		38 dB	Receiver	2009	3	H+
10.95 - 12.75	+12 V		43 dB	Receiver	2009	3	H+
3.4 - 4.2	+12 V	3.8 dB		LNA	2014	12	K
8 - 8.4	+12 V	6.0 dB	40 dBm	Power Amp	2019	12	H
9.1	+5 V			Switched Amp	2019	12	K
2 - 6	+5 V			Switched Amp	2019	12	K
13 - 20	+5 V			Switched Amp	2019	12	K

In Development

Band (GHz)	Supply Voltage	Noise Figure	Gain/ Power	Designator	Year	Mission (Years)	Class
1.95 - 4	+12 V		30 dBm	Power Amp	2025	3	H
10 - 15	+12 V		30 dBm	Power Amp	2025	3	H
25 - 31	+12 V		30 dBm	Power Amp	2025	3	H
1.9 - 4	+12 V		30 dBm	Power Amp	2025	5	H
18 - 31	+12 V		30 dBm	Power Amp	2025	5	H
1.91 - 4	+12 V	3.0 dB	30 dBm	LNA	2025	5	H
18 - 31	+12 V	4.0 dB	25 dBm	LNA	2025	5	H
7.91 - 8.4	+12 V			Converter	2025	3	LEO

MIL-PRF-38534 Requirements

Level 1, QPL Class K: UEC possesses a track record in delivering essential components for life support, mission-critical situations, and meeting the needs of single-string and single-point failure requirements.

Level 2, QPL Class H: UEC engineers and manufactures RF modules tailored for general-purpose spaceflight applications, adhering to MIL-STD-883 specifications.

Level 3, QPL Class G, D, E, L: UEC has the capability to manufacture hardware in accordance with MIL-STD requirements, but with a streamlined qualification testing process suitable for less critical applications.

COTS, QPL Class F: Cost efficiency is paramount in commercial space applications. UEC can produce components designed to comply with MIL-STD requirements while maintaining a Commercial-Off-The-Shelf (COTS) price target.