

**EXHIBIT K****RF LOSSES NARRATIVE**

This exhibit summarizes the RF losses associated with the satellite system radiofrequency signal paths by frequency band. For each band, the narrative explains the individual component contributions to total attenuation and the technical basis for the observed losses. The purpose of this exhibit is to provide a clear, engineering-based explanation of the RF losses incorporated into the overall system performance analysis.

The UHF signal path consists of three primary passive elements: Coax 1, a hybrid coupler, and Coax 2. Coax 1 contributes approximately 0.5 dB of RF loss. The hybrid coupler introduces the dominant loss in the chain at approximately 3.2 dB. Coax 2 contributes an additional 0.5 dB of RF loss. The total cascaded loss for the UHF path is therefore approximately 4.2 dB. The hybrid coupler is responsible for most of the attenuation, while the coaxial segments contribute relatively minor distributed loss typical of short RF feedlines at UHF.

The S-band configuration mirrors the UHF architecture but with slightly higher coaxial losses. Coax 1 contributes approximately 0.75 dB of loss, the hybrid coupler again introduces approximately 3.2 dB of RF loss, and Coax 2 contributes an additional 0.75 dB. The total cascaded loss in the S-band path is therefore approximately 4.7 dB. The incremental increase relative to UHF is attributable to higher frequency-dependent attenuation in the coaxial cables, while the hybrid coupler loss remains constant.

The X-band path consists solely of a coaxial segment contributing approximately 4.0 dB of RF loss. No hybrid coupler or additional cascaded elements are reflected in this configuration. The entire 4.0 dB attenuation is therefore attributable to coaxial feedline loss, which is consistent with the significantly higher frequency of operation and the corresponding increase in conductor and dielectric losses at X-band.