Up & Down Converter

18-40GHz Outdoor Extension for 1-18GHZ UpDown Converter

MADE IN FRANCE

PARAMETER	Min	Typ	Max	Notes
DWNCONV NOISE FIGURE			24 dB (@max gain)	Same requirement 1-18G and 18-40G (sensitivity -70 dBm@1MHz BW)
SPURIOUS IMAGE, LEAKAGE		< -40 dBc	-20 dBc	Inside iBW (1 GHz) {Critical} Outside IBW (1 GHz)
IP3			N/A	
HARMONICS			N/A	
OPERATING TEMPERATURE RANGE	0° C		+40° C	100% humidity, no condensation
STORAGE TEMPERATURE RANGE	-25° C		+50° C	90% humidity, no condensation
RFin	Design for interface with the present UPDN18G using 25m Coaxial cable			
RFout	Design for interface with the present UPDN18G using 25m Coaxial cable			
CASE FORM FACTOR		AS SMALL AS POSSIBLE	TBC	To be confirmed on or before september 2025
WEIGHT		AS LIGHT AS POSSIBLE	TBC	Target <10kg To be confirmed on or before september 2025
ENVIRONMENTAL		MIL-PRF-28800F		Constraints considered during design. However, neither testing nor commitment on product's conformity
EMC TESTING	MIL-STD 461G (CE102, RE102)			OK
TEST REPORT	A test report shall be provided with an indoor and outdoor unit connected via a 25m cable.			OK Only ambient temperature testing for prototype
GAIN LINEARITY		± 0,2 dB		Gain linearity vs input power of in the linear operation zone of the amplifiers. Amplifier Linear zone should be considered up to 10 dB under the max output power. UDC40G outdoor internal Step Attenuator fixed.
POUT MONITORING	The outdoor UDC can implement a way to monitor the output power of final amplification stage to confirm transmission (absolute accuracy is not critical). This will be implemented with a coupler and a detector on the Tx path of the outdoor UDC that can be programmatically queried via the remote control interface.			Dynamic range Pmax to Pmax -30 or -35dB (TBC). Accuracy not guaranted. Usable on UDC40G 1-18GHz or 18-40 GHz TX outputs
MTBF	The UDC MTBF estimate by analysis shall be provided.			OK

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