

Table 2. Performance.

Artificial Source requirement	Requirement	Performance
Signal type	Continuous wave or Frequency comb.	Continuous wave
		Frequency comb.
	White noise	White noise
Transmitter Two-horn	Band-3	Band-3
	Band-7/-6	Band-7/-6
Frequency coverage	85 - 350 GHz	
Stage-I : Band-3	84 - 116 GHz	67 - 125 GHz
Stage-II: Band-7/-6	211 - 373 GHz	
Frequency spacing Only in Frequency comb.	20-30 GHz	25 GHz
Frequency accuracy/stability	$\leq 1kHz$	$\leq 1kHz$
Transmitter power to antenna	-30 dBm	$> -15dBm$ Power is adjustable by 25 dB attenuator
Transmitter Antenna gain	10 dB	10 dB
Transmitter antenna beam-width @ -3dB	50 deg.	50 deg.
Noise power density	-135 dBm/Hz	-121 dBm/Hz Power is adjustable by 25 dB attenuator
Polarization	Linear	Linear
Polarization rotation angle	$\pm 45degree$	$\pm 60degree$ >360 deg. rotatable
Polarization rotation accuracy	0.5 degree	0.002 degrees
Polarization extinction ratio (cross-pol)	$\geq 30dB$	$> 30dB$
Window film thickness	$25\mu m$	$25\mu m$
Lowest operation temperature	$-20^{\circ}C$	$-20^{\circ}C$

** Horn elevation angle is -4 degrees. The beam shaping with a absorber will be possible for an interference removal.