Far-field distances in test chambers from mmWave Test Solutions

MMWAVE TEST SOLUTIONS

AC1120-240 chamber

Absorber tip-to-tip length: 216 cm
Absorber tip-to-tip width: 89 cm
Horn/reflector placed 10 cm from target wall absorber tips
115 mm absorber height

	Frequency (GHz)	12	18	28	39	57	60	71	77	90	110
	Wave Ratio*	4.6	6.9	10.7	15.0	>20	>20	>20	29.5	>20	>20
	Incidence Angle **	**Max. antenna size (in millimeter) for Far-Field measurements**									
DUO3 (20 cm from back wall)	64 degree	152	124	100	85	70	68	63	60	56	50
DUO4 (27 cm from back wall)	63 degree	150	122	98	83	69	67	61	59	55	49
DUO5 (35 cm from back wall)	62 degree	146	119	96	81	67	65	60	58	53	48

*** Wave Ratio describes how many wavelengths vs one absorber pyramid height. A low Wave Ratio may require a better Incident Angle.**

**** Incidence Angle describes the angle from nominal incidence (perpendicular to the absorber) to the DUT. Lower numbers are better.**

AC1120-180 chamber

Absorber tip-to-tip length: 156 cm
Absorber tip-to-tip width: 89 cm
Horn/reflector placed 10 cm from target wall absorber tips
115 mm absorber height

	Frequency (GHz)	12	18	28	39	57	60	71	77	90	110
	Wave Ratio*	4.6	6.9	10.7	15.0	>20	>20	>20	>20	>20	>20
	Incidence Angle **	**Max. antenna size (in millimeter) for Far-Field measurements**									
DUO3 (20 cm from back wall)	55 degree	125	102	82	70	58	56	52	50	46	41
DUO4 (27 cm from back wall)	53 degree	122	100	80	68	56	55	50	48	45	40
DUO5 (35 cm from back wall)	51 degree	118	96	77	65	54	53	48	46	43	39

*** Wave Ratio describes how many wavelengths vs one absorber pyramid height. A low Wave Ratio may require a better Incident Angle.**

**** Incidence Angle describes the angle from nominal incidence (perpendicular to the absorber) to the DUT. Lower numbers are better.**

AC888-180 chamber
Absorber tip-to-tip length: 156 cm
Absorber tip-to-tip width: 66 cm
Horn/reflector placed 10 cm from target wall absorber tips
115 mm absorber height

	Frequency (GHz)	**12**	**18**	**28**	**39**	**57**	**60**	**71**	**77**	**90**	**110**
	Wave Ratio*	4.6	6.9	10.7	15.0	>20	>20	>20	>20	>20	>20
	Incidence Angle **	**Max. antenna size (in millimeter) for Far-Field measurements**									
DUO3 (20 cm from back wall)	62 degree	125	102	82	70	58	56	52	50	46	41
DUO4 (27 cm from back wall)	61 degree	122	100	80	68	56	55	50	48	45	40
DUO5 (35 cm from back wall)	59 degree	118	96	77	65	54	53	48	46	43	39

*** Wave Ratio describes how many wavelengths vs one absorber pyramid height. A low Wave Ratio may require a better Incident Angle.**

**** Incidence Angle describes the angle from nominal incidence (perpendicular to the absorber) to the DUT. Lower numbers are better.**

AC1224 2-2-3 (240 x 240 x 360)
Absorber tip-to-tip length: 336 cm
Absorber tip-to-tip width: 216 cm
Horn/reflector placed 10 cm from target
115 mm absorber height

	Frequency (GHz)	**12**	**18**	**28**	**39**	**57**	**60**	**71**	**77**	**90**	**110**
	Wave Ratio*	4.6	6.9	10.7	15.0	>20	>20	>20	>20	>20	>20
	Incidence Angle **	**Max. antenna size (in millimeter) for Far-Field measurements**									
DUO5 (35 cm from wall)	53 degree	191	156	125	106	87	85	78	75	70	63

*** Wave Ratio describes how many wavelengths vs one absorber pyramid height. A low Wave Ratio may require a better Incident Angle.**

**** Incidence Angle describes the angle from nominal incidence (perpendicular to the absorber) to the DUT. Lower numbers are better.**