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Date Sheet No. Version No.

Written by S.O.KANG Checked by Confirmed by Authorized by

Subject: USHR-700L

Booster Uplink Gain limit

1. UL max gain

max UL gain < - 34dB - RSSI + MSCL ["FCC 20.21 (i) technical requirement,(C) Booster gain limit"p78]

2. RSSI value

RSSI = DL output power – DL gain

3. MSCL value

Distance between service antenna and mobile phone was assumed 1 meter. CCIR model was applied to coupling loss calculation.

Lfs =
$$32.45+20Log10$$
 (dkm)+ $20Log10$ (fMHz) [free space path loss model : CCIR]
= $32.45 + 20Log10$ (0.001km=1m) + $20Log10$ (698MHz)
= $32.45 + (-60) + 56.85$
= 29.3

4. UL gain

■ Band 12

DL input(RSSI)[dBm]	DL Gain[dB]	MSCL[dB]	UL Gain[dB]	UL Atten Value[dB]	DL-UL Gain[dB]	비고
-44	OFF	-	OFF	-	-	
-45	47	-29 (-29.3@698MHz)	37	23	10	
-50	52		42	18	10	
-59	61		51	9	10	3 dB is applied for
-60	61		52	8	9	
-68	61		60	0	1	margin.
-80	61		60	0	0	
-90	61		60	0	0	
-100	61		60	0	0	

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■ Band 13

DL input(RSSI)[dBm]	DL Gain[dB]	MSCL[dB]	UL Gain[dB]	UL Atten Value[dB]	DL-UL Gain[dB]	비고
-44	OFF	-	OFF	-	-	
-45	47		37	23	10	
-50	52		42	18	10	
-59	61		51	9	10	3 dB is applied for
-60	61	-29	52	8	9	margin.
-68	61	(-30.3@776MHz)	60	0	1	
-80	61		60	0	0	
-90	61		60	0	0	
-100	61		60	0	0	