

Project Number: 02I1265-1

APPLICANT:	Hyundai Curitel Inc. San 136-1, Ami-Ri, Bubal-Eup, Ichon-Si Kyoungki-do, 467-701, Korea
TRADE NAME:	HYUNDAI
MODEL:	DX-22B
FCC ID:	PP4DX-22B
EUT Type:	Dual mode cellular phone (AMPS/CDMA)
DEVICE CATEGORY:	PORTABLE DEVICES
EXPOSURE CATEGORY:	GENERAL POPULATION/UNCONTROLLED EXPOSURE

SYSTEM VALIDATION DATA

Ambient temperature (°C): 24 ; Relative Humidity (%): 54					Date: April 19, 2002	
Liquid depth (cm): 15.1		Dipole: D900V2 SN: 108			Measured By: Sunny Shih	
Liquid	Liquid Temp [°C]	Parameters	Target Value	Measured Value	Deviation [%]	Limit [%]
Head 900 MHz	20	ϵ_r	41.5	41.6	0.24	± 5
		σ	0.97	0.94	-3.1	± 5
	20	1 g SAR	10.8	10.8	0	± 10
Note: Please refer to Attachment for the result presentation in plot format.						

MEASUREMENT RESULTS

Ambient conditions - Ambient temperature (°C): 23; Relative Humidity (%): 54								
LIQUID VERIFY								
Type of liquid: Head 835 MHz						Measured date: April 19, 2002		
Liquid Temp. [°C]		Parameters	Target Value	Measured		Deviation [%]	Limit [%]	
20.2		ε _r	41.5	43.0		+3.6	±5	
		σ	0.90	0.87		-3.3	±5	
SAR MEASUREMENT								
Model: DX-22B (Modulation: AMPS; Crest factor: 1)						Measured date: April 19, 2002		
Phantom Section - Left Head						Depth of liquid: 15.1 cm		
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)
Channel	MHz	Antenna	EUT Position	Before	After			
0991	824.04	fixed	Touch	27.2	27.2	--	0.862	1.6
0991	824.04	fixed	Touch	27.2	27.15	20.4	0.720	1.6
0991	824.04	fixed	Tilt	27.2	27.2	--	0.718	1.6
0991	824.04	fixed	Tilt	27.2	27.14	20	0.584	1.6
Phantom Section - Right Head								
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)
Channel	MHz	Antenna	EUT Position	Before	After			
0991	824.04	fixed	Touch	27.2	27.2	--	0.780	1.6
0991	824.04	fixed	Touch	27.2	27.18	21	0.748	1.6
0991	824.04	fixed	Tilt	27.2	27.2	--	0.695	1.6
0991	824.04	fixed	Tilt	27.2	27.15	21.0	0.461	1.6

SAR MEASUREMENT								
Model: DX-22B; Modulation: CDMA; Crest factor: 1						Measured date: April 19, 2002		
Phantom Section - Left Head						Depth of liquid: 15.1 cm		
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)
Channel	MHz	Antenna	EUT Position	Before	After			
1013	824.71	fixed	Touch	25.5	25.4	--	0.542	1.6
1013	824.71	fixed	Touch	25.5	25.3	20.2	0.467	1.6
1013	824.71	fixed	Tilt	25.5	25.4	--	0.461	1.6
1013	824.71	fixed	Tilt	25.5	25.35	20.1	0.382	1.6
Phantom Section - Right Head								
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)
Channel	MHz	Antenna	EUT Position	Before	After			
0777	848.31	fixed	Touch	25.5	25.4	--	0.505	1.6
0777	848.31	fixed	Touch	25.5	25.35	21	0.430	1.6
0777	848.31	fixed	Tilt	25.5	25.4	--	0.433	1.6
0777	848.31	fixed	Tilt	25.5	24.35	21.1	0.320	1.6

Ambient conditions - Ambient temperature (°C): 23; Relative Humidity (%): 56									
LIQUID VERIFY									
Type of liquid: Muscle 835 MHz						Measured date: April 22, 2002			
Liquid Temp. [°C]		Parameters		Target Value		Measured		Deviation [%]	Limit [%]
20.7		ϵ_r		55.2		55.4		+0.36	±5
		σ		0.97		0.94		-3.0	±5
SAR MEASUREMENT									
Model: DX-22B; Modulation: AMPS; Crest factor: 1						Measured date: April 22, 2002			
Phantom Section: Flat (Body)						Depth of liquid: 15.1 cm			
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)	
Channel	MHz	Antenna	Sep. [mm]	Before	After				
0991	824.04	fixed	With holster	27.2	27.2		0.446	1.6	
0991	824.04	fixed	With holster	27.2	27.15	20.6	0.334	1.6	
Model: DX-22B; Modulation: CDMA; Crest factor: 1									
Phantom Section: Flat (Body)									
Frequency		EUT Set-up conditions		Conducted power [dBm]		Liquid Temp [°C]	SAR (W/kg)	Limit (W/kg)	
Channel	MHz	Antenna	Sep. [mm]	Before	After				
1013	824.71	In	With holster	25.5	25.5		0.307	1.6	
1013	824.71	In	With holster	25.5	24.35	20.5	0.148	1.6	