

1 Maximum Permissible Exposure

1.1 Maximum Permissible Exposure

1.1.1 Limit of Maximum Permissible Exposure

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1,842 / f	4.89 / f	(900 / f ²)*	6
30-300	61.4	0.163	1.0	6
300-1,500			F/300	6
1,500-100,000			5	6
Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1,500			F/1500	30
1,500-100,000			1.0	30
Note 1: f = frequency in MHz ; *Plane-wave equivalent power density				
Note 2: For the applicable limit, see FCC 1.1310				

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC KDB 680106 D01 RF Exposure Wireless Charging Apps v02 - Part 2 Section 2.109

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973	
Test Condition	Test Site No.	Test Engineer	Test Environment
RF Conducted	TH01-HY	Howard	20.2°C / 64%

1.4 The Worst Charging Condition

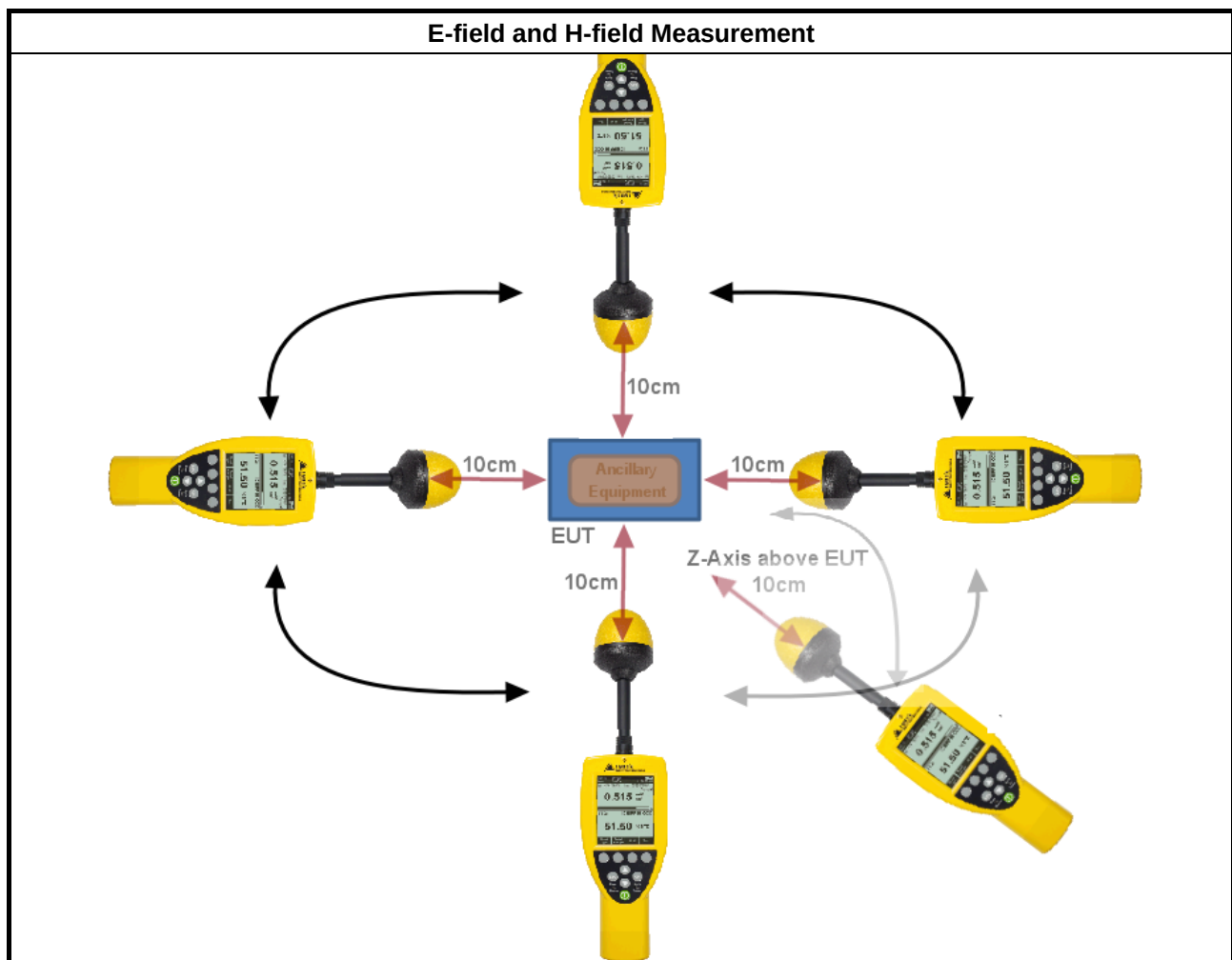
Ancillary Equipment	Charging Condition	Worst Charging Condition
smartphone	< 1% Battery Status	< 1% Battery Status
smartphone	50% Battery Status	

Note 1: For Wireless Power Consortium Qi specification, a lower operating frequency or high duty cycle result in the transfer of a higher amount of power and charging current.

1.4.1 Test Method

Test Method
☒ Performed aggregate both leakage E-field and H-field at surrounding the device from all simultaneous transmitting coils.
☒ During testing, the EUT was placed on a non-conductive table top and the ancillary equipment (e.g., mobile phone) was placed on the EUT for charging. Maximum E-field and H-field measurements were tested 10cm from each side of the EUT. Along the side of the EUT to center of E-field probe and H-field probe were positioned at the location to search maximum field strength.

1.4.2 Test Setup



1.4.3 Result of Maximum Permissible Exposure

Maximum Permissible Exposure				
Charging Condition	Separation	Probe from EUT Side	E-field (V/m)	H-field Limit (A/m)
< 1% Battery Status	10cm	Left	0.87	0.388
< 1% Battery Status	10cm	Right	0.71	0.392
< 1% Battery Status	10cm	Top	0.65	0.346
< 1% Battery Status	10cm	Bottom	0.52	0.411
< 1% Battery Status	10cm	Z-axis above EUT	4.38	0.476
Limit			614	1.630
Margin Limit (%)			0.71%	29.22%



2 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
B-Field Probe	Narda Safety Test Solutions GmbH	B-Field Probe 100 cm2	M-0652	50Hz~400KHz	Jun. 17, 2013	RF Conducted
Exposure Level Teste	Narda Safety Test Solutions GmbH	ELT-400	N-0210	100KHz~3MHz	Jun. 26, 2013	RF Conducted
Probe EF	Narda Safety Test Solutions GmbH	0391 E-Field	D-0667	0.1MHz ~ 3GHz	Jun. 24, 2013	RF Conducted
Broadband Field Meter	Narda Safety Test Solutions GmbH	NBM-550	E-0847	0.1MHz ~ 3GHz	Jun. 07, 2013	RF Conducted

Note: Calibration Interval of instruments listed above is one year.