



ANNEX G Probe Calibration Certificate

Probe 7825 Calibration Certificate

CALIBRATI	LUCE DIVISION	HIC MRA CNA	校准 CALIBRATION
Add: No.52 HuaYuanBei Ro Tel: +86-10-62304633-2117		ing, 100191, China	CNAS L0570
E-mail: emf@caict.ac.cn	http://www.caict.ac.cr	n	10070000
Client CTTL	-	Certificate No:	J23Z60393
CALIBRATION C	ERTIFICATE		
Object	EX3DV4 -	SN · 7825	
	LAUDIT		
Calibration Procedure(s)	FF-Z11-00	4-02	
		Procedures for Dosimetric E-field Probes	3
-			
Calibration date:	September	r 27, 2023	
This calibration Cartificate docu	monte the traceability to	national standards, which realize the physical up	nits of measurements(SI) The
		obability are given on the following pages and ar	
measurements and the uncertain	inues with confidence pr	obability are given on the following pages and a	e part of the certificate.
	usted in the closed labor	ratory facility: environment temperature(22±3)℃ a	nd humidity<70%
All calibrations have been condi	ucted in the closed labor	ratory facility, environment temperature(2213) C a	nd humany 0 %.</td
Colibration Equipment used (MI	PTE aritical for calibratio	an)	
			ed Calibration
Primary Standards			ed Calibration Jun-24
	ID# Ca	al Date(Calibrated by, Certificate No.) Schedule	
	ID # Ca 101919	al Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435)	Jun-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91	ID # Ca 101919 101547	Il Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435)	Jun-24 Jun-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91	ID # Ca 101919 101547 101548	al Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435)	Jun-24 Jun-24 Jun-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator	ID # Ca 101919 101547 101548 18N50W-10dB	Il Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212)	Jun-24 Jun-24 Jun-24 Jan-25
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB 18N50W-20dB	Il Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846	Il Date(Calibrated by, Certificate No.) Scheduli 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555	Il Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23)	Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 549	Il Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23)	Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 549 SN 1744	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.DAE4-1555_Aug23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24 Aug-23 Scheduled Calibration Jun-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24 Aug-23 Scheduled Calibration Jun-24 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 SN 220	I Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24 Aug-23 Scheduled Calibration Jun-24 Jan-24 May-25
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB 18N50W-20dB SN 3846 SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-1555_Aug23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 May-24 Aug-24 Jan-24 Aug-23 Scheduled Calibration Jun-24 Jan-24 May-25 May-25
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator Reference 20dBAttenuator OCP DAK-3.5	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.DAE4-1555_Aug23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062) 18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_,	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 May-24 Aug-24 Jan-23 Scheduled Calibration Jun-24 Jan-24 May-25 May-25 Jan-24 Jan-23
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator Reference 20dBAttenuator OCP DAK-3.5	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-1555_Aug23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062)	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator Reference 20dBAttenuator OCP DAK-3.5	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040	Il Date(Calibrated by, Certificate No.) Schedul 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.DAE4-1555_Aug23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062) 18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_,	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator OCP DAK-3.5	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB 18N50W-20dB SN 3846 SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040 Name Yu Zongying Yu Zongying	Id Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X005435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-1555_Aug23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062) 18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_ Function Signatu Signatu	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator OCP DAK-3.5	ID # Ca 101919 101547 101548 18N50W-10dB 18N50W-20dB SN 3846 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040 Name	Id Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X005435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061) 11-May-23(SPEAG, No.OCP-DAK3.5-1040_ 18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_ Function Signation	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator OCP DAK-3.5 Calibrated by: Reviewed by:	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB 18N50W-20dB SN 3846 SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040 Name Yu Zongying Lin Hao	Id Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.DAE4-1555_Aug23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-549_Jan23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04061) 11-May-23(SPEAG, No.OCP-DAK3.5-1040_ SAR Test Engineer SAR Test Engineer	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23 Jan-24
Primary Standards Power Meter NRP2 Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 10dBAttenuator Reference 20dBAttenuator Reference Probe EX3DV4 DAE4 DAE4 DAE4 Secondary Standards SignalGenerator MG3700A Network Analyzer E5071C Reference 10dBAttenuator Reference 20dBAttenuator Reference 20dBAttenuator	ID # Ca 101919 101547 101547 101548 18N50W-10dB 18N50W-20dB 18N50W-20dB SN 3846 SN 3846 SN 1555 SN 1555 SN 549 SN 1744 ID # 6201052605 MY46110673 BT0520 BT0267 SN 1040 Name Yu Zongying Yu Zongying	Id Date(Calibrated by, Certificate No.) Schedule 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X05435) 12-Jun-23(CTTL, No.J23X005435) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00212) 19-Jan-23(CTTL, No.J23X00211) 31-May-23(SPEAG, No.EX-3846_May23) 24-Aug-23(SPEAG, No.DAE4-1555_Aug23) 24-Jan-23(SPEAG, No.DAE4-1555_Aug23) 30-Aug-22(SPEAG, No.DAE4-1744_Aug22) Cal Date(Calibrated by, Certificate No.) 12-Jun-23(CTTL, No.J23X05434) 10-Jan-23(CTTL, No.J23X00104) 11-May-23(CTTL, No.J23X04061) 11-May-23(CTTL, No.J23X04062) 18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_ Function Signatu Signatu	Jun-24 Jun-24 Jun-24 Jan-25 Jan-25 Jan-24 Jan-25 Jan-24 Aug-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-24 Jan-25 Jan-24 Jan-24 Jan-25 Jan-24 Jan-25 Jan-25 Jan-25 Jan-25 Jan-24 Jan-25 Jan-23









Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caiet.ac.cn http://www.caiet.ac.cn

Glossary:

olocouly.	
TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i
	$\theta=0$ is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

- Methods Applied and Interpretation of Parameters:
- NORMx,y,z: Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z* frequency_response (see Frequency Response Chart). This
 linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the
 frequency response is included in the stated uncertainty of ConvF.
- DCPx, y, z: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- Ax, y,z; Bx, y,z; Cx, y,z; VRx, y,z:A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Certificate No:J23Z60393

Page 2 of 22







Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

DASY/EASY – Parameters of Probe: EX3DV4 – SN: 7825

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm(µV/(V/m) ²) ^A	0.69	0.66	0.69	±10.0%
DCP(mV) ^B	109.7	112.0	114.9	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max Dev.	Max Unc ^E (<i>k</i> =2)
0	cw	X	0.0	0.0	1.0	0.00	223.6	±2.3%	±4.7%
		Y	0.0	0.0	1.0		221.4		
		Z	0.0	0.0	1.0		226.6		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.74	61.65	7.38	5	60	±2.9%	±9.6%
		Y	1.71	61.52	7.34	10.00	60		
		Z	1.87	62.56	8.26		60	1	
10353-AAA	Pulse Waveform (200Hz, 20%)	X	0.81	60.00	5.43		80	±2.0%	±9.6%
		Y	0.82	60.00	5.49	6.99	80	8. S. P.	
		Z	0.97	60.49	6.25		80		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	22.00	76.00	9.00		95	±1.8%	±9.6%
		Y	24.00	76.00	9.00	3.98	95		
		Z	2.00	66.00	7.00		95		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	0.25	60.00	3.68		120	±1.3%	±9.6%
		Y	0.25	60.00	3.82	2.22	120		
		Z	0.35	60.00	4.72	1	120	1	
10387-AAA	QPSK Waveform, 1 MHz	X	0.47	60.00	7.93		150	±2.5%	±9.6%
		Y	0.50	60.00	8.08	1.00	150	1	
		Z	0.55	60.00	7.56	1	150	1	
10388-AAA	QPSK Waveform, 10 MHz	X	0.88	60.00	8.07		150	±1.2%	±9.6%
		Y	0.96	60.18	8.64	0.00	150	1	
		Z	0.96	60.00	7.83		150	1	
10396-AAA	64-QAM Waveform, 100 kHz	X	1.63	61.61	13.03		150	±1.3%	±9.6%
		Y	1.66	61.81	13.19	3.01	150	1	
		Z	1.71	61.12	12.00		150	1	
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	x	3.26	64.04	12.86		150	±3.3%	±9.6%
		Y	3.44	64.23	13.20	0.00	150	1	
		Z	3.24	63.32	12.10		150	1	

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

Certificate No:J23Z60393

Page 3 of 22

 ^A The uncertainties of Norm X, Y, Z do not affect the E²-field uncertainty inside TSL (see Page 5).
 ^B Numerical linearization parameter: uncertainty not required.
 ^E Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.









Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

DASY/EASY – Parameters of Probe: EX3DV4 – SN: 7825

Sensor Model Parameters

	C1 fF	C2 fF	α V-1	T1 ms.V ⁻²	T2 ms.V ⁻¹	T3 ms	T4 V ⁻²	T5 V-1	Т6
Х	6.35	46.30	32.55	0.92	0.00	4.90	0.27	0.00	1.01
Y	7.56	54.73	32.26	1.34	0.00	4.90	0.36	0.00	1.01
z	6.62	47.62	31.25	4.39	0.00	4.90	0.48	0.00	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	101.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

Certificate No:J23Z60393

Page 4 of 22



CAICT





Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

DASY/EASY – Parameters of Probe: EX3DV4 – SN:7825

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (<i>k</i> =2)
750	41.9	0.89	9.37	9.37	9.37	0.19	1.18	±12.7%
900	41.5	0.97	8.97	8.97	8.97	0.21	1.23	±12.7%
1450	40.5	1.20	8.20	8.20	8.20	0.12	1.27	±12.7%
1750	40.1	1.37	7.80	7.80	7.80	0.27	0.95	±12.7%
1900	40.0	1.40	7.50	7.50	7.50	0.31	0.92	±12.7%
2000	40.0	1.40	7.52	7.52	7.52	0.26	1.03	±12.7%
2300	39.5	1.67	7.36	7.36	7.36	0.63	0.67	±12.7%
2450	39.2	1.80	7.09	7.09	7.09	0.52	0.80	±12.7%
2600	39.0	1.96	6.91	6.91	6.91	0.67	0.69	±12.7%
3300	38.2	2.71	6.62	6.62	6.62	0.49	0.81	±13.9%
3500	37.9	2.91	6.48	6.48	6.48	0.41	1.03	±13.9%
3700	37.7	3.12	6.32	6.32	6.32	0.41	1.03	±13.9%
3900	37.5	3.32	6.22	6.22	6.22	0.35	1.35	±13.9%
4100	37.2	3.53	6.12	6.12	6.12	0.40	1.15	±13.9%
4200	37.1	3.63	6.03	6.03	6.03	0.35	1.35	±13.9%
4400	36.9	3.84	5.94	5.94	5.94	0.30	1.52	±13.9%
4600	36.7	4.04	5.86	5.86	5.86	0.55	1.10	±13.9%
4800	36.4	4.25	5.76	5.76	5.76	0.55	1.12	±13.9%
4950	36.3	4.40	5.56	5.56	5.56	0.50	1.20	±13.9%
5250	35.9	4.71	5.02	5.02	5.02	0.45	1.35	±13.9%
5600	35.5	5.07	4.40	4.40	4.40	0.55	1.25	±13.9%
5750	35.4	5.22	4.55	4.55	4.55	0.45	1.40	±13.9%

^c Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequency up to 6 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than \pm 1% for frequencies below 3 GHz and below \pm 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Certificate No:J23Z60393

Page 5 of 22



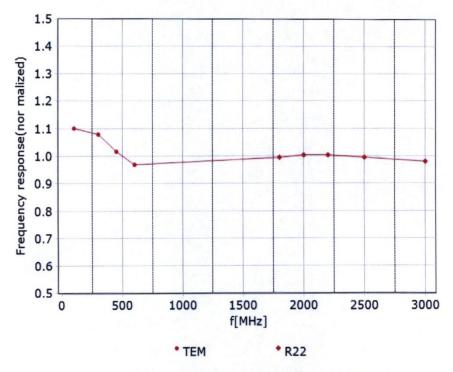
<u>CAICT</u>





Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (k=2)

Certificate No:J23Z60393

Page 6 of 22



<u>CAICT</u>



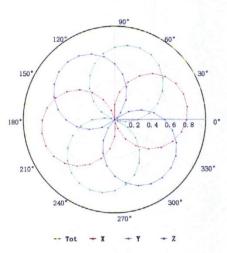


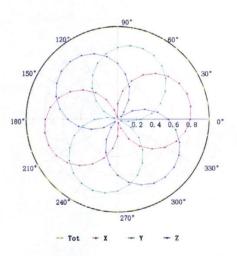
Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

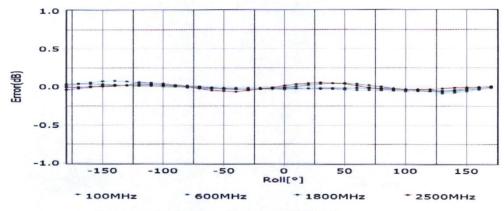
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM

f=1800 MHz, R22

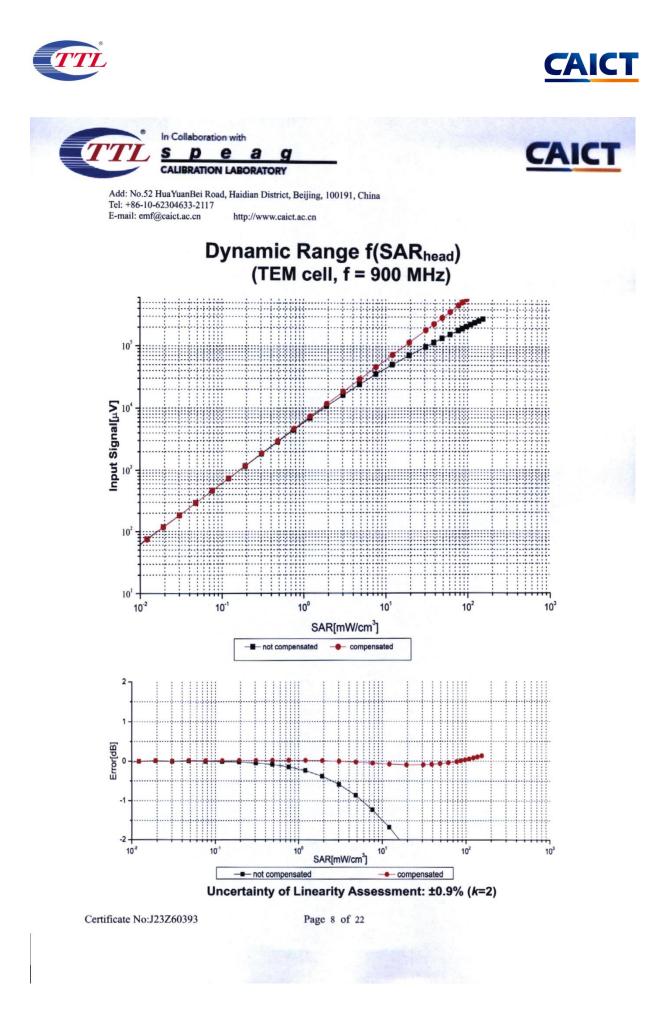






Uncertainty of Axial Isotropy Assessment: ±1.2% (k=2)







CAICT



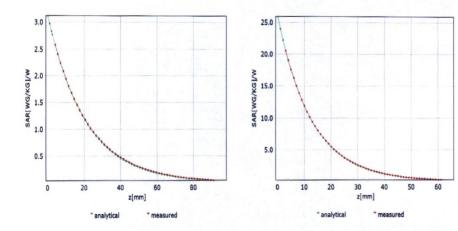


Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304633-2117 E-mail: emf@caict.ac.cn http://www.caict.ac.cn

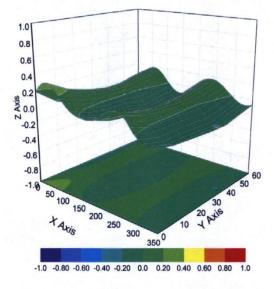
Conversion Factor Assessment

f=750 MHz,WGLS R9(H_convF)

f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±3.2% (k=2)

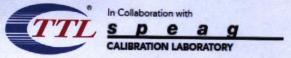
Certificate No:J23Z60393

Page 9 of 22





CAICT





Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR	UncE
0		CW	CW	(dB) 0.00	(k=2) ± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10020	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10029	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10038	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.10	± 9.6 %
10039	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10042	CAB	IS-91/EIA/TIA-553 FDD (FDMA/FDM, FI/4-DQFSK, Hainate)	AMPS	0.00	± 9.6 %
10044	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 9
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Pull Slot, 24)	DECT	10.79	± 9.6 9
10049	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 9
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10058	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 9
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 3.5 Wbps)	WLAN	3.60	± 9.6 %
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 9
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 9
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.00	± 9.6 9
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 16 Mbps)	WLAN	9.38	± 9.6 9
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 °
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 30 Mbps)	WLAN	10.12	± 9.6 9
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 46 Mbps)	WLAN	10.24	± 9.6 9
10009	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 9
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.63	± 9.6 9
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.92	± 9.6 9
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 16 Mbps)	WLAN	10.30	± 9.6 °
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 °
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 °
10078	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	11.00	± 9.6 9
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 °
10081	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 °
10082	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	
10090	CAC	UMTS-FDD (HSDPA)	WCDMA		± 9.6 9
10097	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 9
	CAC			3.98	
10099		EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 9
	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 9
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %





_	TT	<u>In Collaboration with</u> <u>Speag</u>			
		CALIBRATION LABORATORY			IC
	Add	: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China			
	Tel:	+86-10-62304633-2117			
	E-m	ail: emf@caict.ac.cn http://www.caict.ac.cn			
0102	CAB	TE EDD (SC EDMA 100% DD 20 MUL CA CANA)	175 500		
0102	DAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD LTE-TDD	6.60	± 9.6 %
0104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.29	± 9.6 %
0105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
0108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
0109	CAG		LTE-FDD	6.43	± 9.6 %
0110	CAG		LTE-FDD	5.75	± 9.6 %
0111 0112		LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.44	± 9.6 %
0113		LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
0114	CAG		WLAN	8.10	± 9.6 %
0115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
0116	CAG		WLAN	8.15	± 9.6 %
0117	CAG		WLAN	8.07	± 9.6 %
0118	CAD		WLAN	8.59	± 9.6 %
0119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	WLAN LTE-FDD	8.13	± 9.6 %
0141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
0142	CAD		LTE-FDD	5.73	± 9.6 %
0143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
0144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
0145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
0146	CAC		LTE-FDD LTE-FDD	6.41	± 9.6 % ± 9.6 %
0149	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
0150	CAE		LTE-FDD	6.60	± 9.6 %
0151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
0152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
0153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
0154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD LTE-FDD	5.75 6.43	± 9.6 % ± 9.6 %
0156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
0157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
0158	CAE		LTE-FDD	6.62	± 9.6 %
0159	CAG		LTE-FDD	6.56	± 9.6 %
0160	CAG		LTE-FDD LTE-FDD	5.82	± 9.6 % ± 9.6 %
0161	CAG		LTE-FDD	6.58	± 9.6 %
0166		LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
0167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
0168		LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD		± 9.6 %
0169		LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
0170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.52	± 9.6 %
0172	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 04-QAM)	LTE-TDD	9.21	± 9.6 %
0173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
0176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
0177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD LTE-FDD	5.73	± 9.6 %
0179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
0180	CAG		LTE-FDD	6.50	± 9.6 %
0181	CAG		LTE-FDD	5.72	± 9.6 %
0182	CAG		LTE-FDD	6.52	± 9.6 %
0183	CAG		LTE-FDD	6.50	± 9.6 %
0184	CAG		LTE-FDD	5.73	± 9.6 %
0185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.51	± 9.6 %

Certificate No:J23Z60393 Page 11 of 22





	T'I	In Colleboration with SDEB CALIBRATION LABORATORY		CA	ICT
	Add	No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China			
	Tel:	+86-10-62304633-2117 ail: emf@caiet.ac.cn http://www.caiet.ac.cn			
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)			
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD LTE-FDD	5.73 6.52	± 9.6 % ± 9.6 %
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	AAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195 10196	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	AAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK) IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN WLAN	8.10	± 9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.13	± 9.6 % ± 9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
0220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
0221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
0222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6%
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAD	UMTS-FDD (HSPA+) LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	WCDMA LTE-TDD	5.97 9.49	± 9.6 % ± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
0229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
0232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD LTE-TDD	9.21	± 9.6 %
0235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
0238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243 10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD LTE-TDD	9.46	± 9.6 %
0244	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
0245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD LTE-TDD	9.24	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.24	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261 10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD LTE-TDD	9.24	± 9.6 % ± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 10-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10265	CAG	LIL-100 (00-1014A, 100% RD, 1014112, 10-QAM)		0.02	1 1 0.0 /0 1
10265 10266 10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD LTE-TDD	10.07	± 9.6 %

Certificate No:J23Z60393

Page 12 of 22





-	17	In Collaboration with		CA	IC
	-	CALIBRATION LABORATORY			inc
	Add Tel:	: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China +86-10-62304633-2117			
		ail: emf@caict.ac.cn http://www.caict.ac.cn			
0269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
0270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	LTE-TDD	9.58	± 9.6 %
0275	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA WCDMA	4.87	± 9.6 %
0277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
0278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
0279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38) CDMA2000, RC1, SO55, Full Rate	PHS CDMA2000	12.18	± 9.6 %
0291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
0292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
0293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
0295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr. LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	CDMA2000 LTE-FDD	12.49	± 9.6 %
0298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
0299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
0300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
0301	CAC	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC) IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WIMAX WIMAX	12.03	± 9.6 %
0303	CAB	IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
0304	CAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	± 9.6 %
0305	CAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC) IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WiMAX WiMAX	15.24	± 9.6 %
0306	AAB	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 04QAM, POSC)	WIMAX	14.07	± 9.6 %
10308	AAB	IEEE 802,16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	± 9.6 %
0309	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3)	WiMAX	14.58	± 9.6 %
0310	AAB	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3 LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	UIMAX	14.57 6.06	± 9.6 %
10313	AAD	iDEN 1:3	IDEN	10.51	± 9.6 %
10314	AAD	IDEN 1:6	IDEN	13.48	± 9.6 %
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc) IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802.11g WIFI 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354 10355	AAA	Pulse Waveform (200Hz, 40%) Pulse Waveform (200Hz, 60%)	Generic	3.98	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz 64-QAM Waveform, 40 MHz	Generic Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 %
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	CDMA2000	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0) CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.76	± 9.6 %
10406	AAD	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10414 10415	AAA	WLAN CCDF, 64-QAM, 40MHz IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	Generic WLAN	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 MDps, 99pc dc) IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419 10422	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short) IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN WLAN	8.19	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %

Certificate No:J23Z60393

Page 13 of 22