

SAR TEST DATA SUMMARY

	Ambient TEMPERATURE (°C)	22.5
	Relative HUMIDITY (%)	56.0
	Atmospheric PRESSURE (kPa)	97.5
Mixture Type:	800MHz Brain	800MHz Muscle
Dielectric Constant:	42.5	56.2
Conductivity:	0.86	0.95
Closest Distance (between E-Probe & Phone): 1.5 cm		

Measurement Results (Analog Head & Hand SAR)

FREQUENCY		Mixture Type	Modulation	POWER (dBm)	Phantom Position	Antenna Position	SAR (W/kg)
MHz	Ch.						
824.04	991	BRAIN	AMPS	25.5	Left Ear	IN	1.03
824.04	991	BRAIN	AMPS	25.5	Left Ear	OUT	1.25
836.49	383	BRAIN	AMPS	25.5	Left Ear	IN	1.18
836.49	383	BRAIN	AMPS	25.5	Left Ear	OUT	1.45
848.97	799	BRAIN	AMPS	25.5	Left Ear	IN	1.10
848.97	799	BRAIN	AMPS	25.5	Left Ear	OUT	1.42
836.49	383	MUSCLE*	AMPS	25.5	Flat w/ Hand	IN	1.66*
836.49	383	MUSCLE*	AMPS	25.5	Flat w/ Hand	OUT	1.84*
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				Brain 1.6 W/kg (mW/g) averaged over 1 gram		* Hand 4.0 W/kg (mW/g) averaged over 10 grams	

NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration.
- *The phone was tested for SAR on the hand with the phantom containing muscle material, and a surgical glove containing brain material to simulate loading in the normal operating position. The SAR value of the hand is averaged over 10 grams of muscle tissue. All modes of operation were investigated and the worst-case are reported.
- Battery Type ☒ Standard ☐ Extended ☐ Slim
Radiated measurements indicate that the extended-life and slim batteries produces a lower EIRP, therefore the standard-life battery is used.
- Power Measured ☒ Conducted ☐ EIRP ☐ ERP
- SAR Measurement System ☒ SPEAG ☐ IDX
- SAR Configuration ☒ Head ☐ Body ☒ Hand


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Figure 14. Head SAR Test Setup



Figure 15. Hand SAR Test Setup

SAR TEST DATA SUMMARY (Continued)

	Ambient TEMPERATURE (°C)	22.5
	Relative HUMIDITY (%)	56.0
	Atmospheric PRESSURE (kPa)	97.5
Mixture Type:	1800MHz Brain	1800MHz Muscle
Dielectric Constant:	40.4	54.2
Conductivity:	1.82	1.85
Closest Distance (between E-Probe & Phone): 1.5 cm		

Measurement Results (PCS Head & Hand SAR)

FREQUENCY		Mixture Type	Modulation	POWER (dBm)	Phantom Position	Antenna Position	SAR (W/kg)
MHz	Ch.						
1851.25	025	BRAIN	CDMA	23.0	Left Ear	IN	1.09
1851.25	025	BRAIN	CDMA	23.0	Left Ear	OUT	0.794
1880.00	600	BRAIN	CDMA	23.0	Left Ear	IN	0.832
1880.00	600	BRAIN	CDMA	23.0	Left Ear	OUT	0.552
1908.75	1175	BRAIN	CDMA	23.0	Left Ear	IN	0.512
1908.75	1175	BRAIN	CDMA	23.0	Left Ear	OUT	0.284
1851.25	025	MUSCLE*	CDMA	23.0	Flat w/ Hand	IN	0.843*
1851.25	025	MUSCLE*	CDMA	23.0	Flat w/ Hand	OUT	0.874*
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				Brain 1.6 W/kg (mW/g) averaged over 1 gram		* Hand 4.0 W/kg (mW/g) averaged over 10 grams	

NOTES:

3. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration.
4. *The phone was tested for SAR on the hand with the phantom containing muscle material, and a surgical glove containing brain material to simulate loading in the normal operating position. The SAR value of the hand is averaged over 10 grams of muscle tissue. All modes of operation were investigated and the worst-case are reported.
3. Battery Type ☒ Standard ☐ Extended ☐ Slim
Radiated measurements indicate that the extended-life and slim batteries produce a lower EIRP, therefore the standard-life battery is used.
4. Power Measured ☒ Conducted ☐ EIRP ☐ ERP
5. SAR Measurement System ☒ SPEAG ☐ IDX
6. SAR Configuration ☒ Head ☐ Body ☒ Hand


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Figure 16. Head SAR Test Setup



Figure 17. Head SAR Test Setup

SAR TEST DATA SUMMARY (Continued)

Ambient TEMPERATURE (°C) _____ 22.5
Relative HUMIDITY (%) _____ 56.0
Atmospheric PRESSURE (kPa) _____ 97.5

Mixture Type: 800MHz Muscle 1800MHz Muscle
Dielectric Constant: 56.2 54.2
Conductivity: 0.95 1.85

Measurement Results (Body SAR)

FREQUENCY		Modulation	POWER * (dBm)	Separation Distance (cm)**	Antenna Position	SAR (W/kg)
MHz	Ch.					
824.04	991	AMPS	25.5	2.54	IN	1.12
824.04	991	AMPS	25.5	2.54	OUT	1.21
836.49	383	AMPS	25.5	2.54	IN	1.31
836.49	383	AMPS	25.5	2.54	OUT	1.32
848.97	799	AMPS	25.5	2.54	IN	1.21
848.97	799	AMPS	25.5	2.54	OUT	1.29
1851.25	025	PCS CDMA	23.0	2.54	IN	0.936
1851.25	025	PCS CDMA	23.0	2.54	OUT	0.904
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Body 1.6 W/kg (mW/g) averaged over 1gm	

NOTES:

- All modes of operation were investigated and the worst-case are reported.
- Battery condition is fully charged for all readings.
- Battery Type ☒ Standard ☐ Extended ☐ Slim
- * Power Measured ☒ Conducted ☐ EIRP ☐ ERP
- SAR Measurement System ☒ SPEAG ☐ IDX
- SAR Configuration ☐ Head ☒ Body ☐ Hand
- ** Test Configuration ☒ Body Holster ☐ Without Body Holster

Note: Body holster contains no metallic components.


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Figure 18. Body SAR Test Setup

BODY-WORN TEST SETUP

Ear-Microphone Jack

Portable transmitting devices that have an ear-microphone jack must be evaluated for RF exposure in a body-worn configuration. The testing is performed with the use of a torso phantom filled with muscle equivalent tissue. The EUT is positioned with the keypad facing away from the phantom, and the Ear-Microphone wire attached to the phone jack, simulating the device placed in a shirt pocket or attached to a body holster. The SAR tests are then performed in both the antenna in and antenna out positions using the low, middle, and high channels to investigate the worst case SAR value (see Figure 11). Please note that body-worn configurations which have not been SAR tested may result in operating conditions that could exceed FCC RF exposure limits, therefore, users are cautioned to use tested and/or approved accessories.

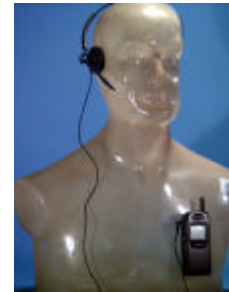


Figure 11.
Ear-Microphone Jack

A. Shirt Pocket Configuration

The shirt pocket configuration is used for devices designed to be body-worn, and small enough to be placed inside a shirt pocket. To simulate the worst-case configuration, the EUT is placed in a torso position on the phantom with the keypad facing away from the phantom, and the Ear-Microphone wire connected to the phone to simulate hands-free operation in a shirt-pocket configuration (see Figure 12).

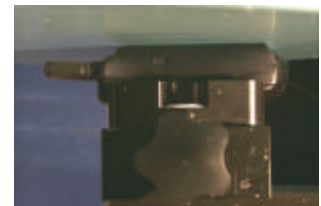


Figure 12.
Shirt Pocket Configuration

B. Body Holster Configuration

The body holster configuration is used for body-worn devices that have a body holster accessory. Typically, a holster or carrying case is provided or available as an accessory item for supporting headset and body-worn operations. SAR may vary depending on the body separation distance provided by the type of holster and batteries supplied for a phone. In most cases, the antenna may become closer to the user's body than next to the head. The design of the holster permits the phone to be positioned only with the keypad facing away from the phantom. Proper usage of the holster restricts the antenna to a specified distance away from the surface of the body. For this test the EUT is placed into the holster and the holster is positioned against the torso of the phantom in a normal operating position. The Ear-Microphone wire is then connected to the phone to simulate hands-free operation in a body holster configuration (see Figure 13).



Figure 13.
Body Holster Configuration

C. Other Configurations

If other operating configurations are possible (i.e.: pants pocket, car adapter kit, etc), it will be indicated to users in the instruction manual about untested conditions and the possibility of exceeding FCC RF exposure limits for such use or the use of third-party accessories. If there is a high potential for exceeding limits in certain unintended configurations, a warning statement will be included in the manual, warning the user to avoid such operating conditions.