

**Model Description**

<b>FCC ID</b> : APYHRO00207	<b>Model Name</b> : SH-04F
<b>Destination</b> : Japan Market only	<b>Brand Name</b> : NTT docomo
<b>Emission Type</b> : GSM ----- GXW : WCDMA ----- F9W	<b>Type of Equipment</b> : Cellular Phone / Bluetooth , ANT+, W-LAN and NFC/FeliCa enable

## RF-section

Items		
Cellular Phone	Technical Specification	<b>3GPP Release 8(GSM) Release 8(WCDMA) Release 9(LTE)</b>
	Frequency Band	WCDMA 2000MHz(band I) : Tx 1922.4 to 1977.6MHz Rx 2112.4 to 2167.6MHz 850MHz(band V) : Tx 826.4 to 846.6MHz Rx 871.4 to 891.6MHz 800MHz(band VI) : Tx 832.4 to 837.6MHz Rx 877.4 to 882.6MHz 800MHz(bandXIX) : Tx 832.4 to 842.6MHz Rx 877.4 to 887.6MHz NOTE: Band I, Band VI, and Band XIX do not operate in USA
		LTE 2000MHz(FDD1) B/W= 5MHz :Tx 1922.5 to 1977.5MHz Rx 2112.5 to 2167.5MHz B/W= 10MHz :Tx 1925.0 to 1975.0MHz Rx 2115.0 to 2165.0MHz B/W= 15MHz :Tx 1927.5 to 1972.5MHz Rx 2117.5 to 2162.5MHz B/W= 20MHz :Tx 1930.0 to 1970.0MHz Rx 2120.0 to 2160.0MHz 1800MHz(FDD3) B/W= 1.4MHz :Tx 1710.7 to 1784.3MHz Rx 1805.7 to 1879.3MHz B/W= 3MHz :Tx 1711.5 to 1783.5MHz Rx 1806.5 to 1878.5MHz B/W= 5MHz :Tx 1712.5 to 1782.5MHz Rx 1807.5 to 1877.5MHz B/W= 10MHz :Tx 1715.0 to 1780.0MHz Rx 1810.0 to 1875.0MHz B/W= 15MHz :Tx 1717.5 to 1777.5MHz Rx 1812.5 to 1872.5MHz B/W= 20MHz :Tx 1720.0 to 1775.0MHz Rx 1815.0 to 1870.0MHz 800MHz(FDD19) B/W= 5MHz :Tx 832.5 to 842.5MHz Rx 877.5 to 887.5MHz B/W= 10MHz :Tx 835.0 to 840.0MHz Rx 880.0 to 885.0MHz B/W= 15MHz :Tx 837.5MHz Rx 882.5MHz 1500MHz(FDD21) B/W= 5MHz :Tx 1450.4 to 1460.4MHz Rx 1498.4 to 1508.4MHz B/W= 10MHz :Tx 1452.9 to 1457.9MHz Rx 1500.9 to 1505.9MHz B/W= 15MHz :Tx 1455.4MHz Rx 1503.4MHz NOTE: LTE does not operate in USA
	Tx Power < The numbers are showing the value defined by 3GPP standard. >	WCDMA : Power Class 3 LTE : 23dBm±2dB
		GSM 850MHz : Power Class 4 (GSM/GPRS) 900MHz : Power Class 4 (GSM/GPRS) 1800MHz : Power Class 1 (GSM/GPRS) 1900MHz : Power Class 1 (GSM/GPRS)
	Transmission Technology	WCDMA : DS/CDMA, FDD, T/HCDMA LTE : SC/FDMA, FDD GSM : TDMA/FDD NOTE: LTE does not operate in USA
	Data Transmission	WCDMA : HSPA (HSDPA: Category10. HSUPA: Category6) LTE : Category4 GSM GPRS : GMSK GPRS Class: B, Multi-slot Class: 12(TX: Max 4slot / RX: Max 4slot, Total:5slot) NOTE: This handset is not use the features for EDGE
	Voice Codec	WCDMA : AMR LTE : No Voice GSM : AMR, EFR / FR / HR
	Antenna	Integrated Antenna: Inverted-L Type Antenna ----- See attached file "antenna.pdf"

Bluetooth	Technical Specification	Bluetooth Version 4.0												
	Frequency Band	TX 2402MHz to 2480MHz, RX 2402MHz to 2480MHz												
	Tx Power	Class1, Nominal 4dBm (Max +7dBm / min 0dBm)												
	Type of Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK												
	Transmission Technology	FHSS / DTS												
	Antenna	Integrated Antenna ---- See attached file "antenna.pdf" Inverted-F Type Antenna / Gain= 0.0dBi												
ANT+	Technical Specification	ANT+												
	Frequency Band	TX 2402MHz to 2480MHz, RX 2402MHz to 2480MHz												
	Tx Power	Nominal 0dBm (Max +4dBm / min -6dBm)												
	Type of Modulation	GFSK												
	Transmission Technology	DHSS												
	Antenna	Integrated Antenna ---- See attached file "antenna.pdf" Inverted-F Type Antenna / Gain= 0.0dBi												
W-LAN	Technical Specification	IEEE802.11a/b/g/n/ac												
	Frequency Band	2.4GHz Band (802.11 b/g/n) TX/RX 2412 - 2472MHz (Bandwidth: 20MHz only) NOTE: Frequency range from 2462 to 2472MHz does not operate in USA. Active scanning on 2412-2462 MHz, Passive Scanning on 2467-2472 MHz 5GHz Band (802.11 a/ n/ ac) W52(U-NII low) : TX/RX 5180 - 5240MHz (BW:20MHz) TX/RX 5190 - 5230MHz (BW:40MHz) TX/RX 5210 MHz (BW:80MHz) W53(U-NII Mid) : TX/RX 5260 - 5320MHz (BW:20MHz) TX/RX 5270 - 5310MHz (BW:40MHz) TX/RX 5290 MHz (BW:80MHz) W56(U-NII Worldwide): TX/RX 5500 - 5700MHz (BW:20MHz) TX/RX 5510 - 5670MHz (BW:40MHz) TX/RX 5530 - 5610MHz (BW:80MHz) NOTE: U-NII upper band (5725 to 5825MHz) is not supported.		<table border="1"> <tr> <td rowspan="4">IEEE802.11n stream</td> <td>Band</td> <td>2.4GHz</td> <td>5GHz</td> </tr> <tr> <td rowspan="2">TX</td> <td>1</td> <td>1</td> </tr> <tr> <td>RX</td> <td>1</td> <td>1</td> </tr> </table>	IEEE802.11n stream	Band	2.4GHz	5GHz	TX	1	1	RX	1	1
	IEEE802.11n stream	Band	2.4GHz	5GHz										
		TX	1	1										
			RX	1		1								
		Tx Power (average)	2.4GHz Band 802.11b 14.0dBm max 802.11g 14.0dBm max 802.11n 14.0dBm max 5GHz Band (BW:20MHz) 802.11n 12.5dBm max 802.11a 12.5dBm max 802.11ac 12.5dBm max 5GHz Band (BW:40MHz) 802.11n 12.5dBm max 802.11ac 12.5dBm max 5GHz Band (BW:80MHz) 802.11ac 12.5dBm max											
	Type of Modulation	BPSK, QPSK, 16QAM, 64QAM, 256QAM												
	Transmission Technology	DSSS/CCK, OFDM												
	Antenna	Integrated Antenna (Common to Bluetooth Antenna)												
	Personal Wireless Routers	2.4GHz Band : Yes, 5GHz Band : No(Slave mode only)												
Part 15E statement of conformity	a. The client software and associated drivers will not initiate any transmission on DFS frequencies without initiation by a master. b. This device has passive scan only. c. The software and/or hardware cannot be modified by an end user or an installer. d. This device complies with the requirements for software configuration control as discussed in KDB # 594280. (This device has the client mode only, and does not operate as the ad-hoc mode and/or WiFi Direct at the 5GHz band.)													

RF ID (NFC)	Technical Specification	NFCIP-1(ISO/IEC18092)
	Frequency Band	13.56 -13.56MHz
	Type of Modulation	ASK (NFC; Type-A: 100%, Type-B and Type-F(FeliCa): 10%)
	Antenna	Integrated Loop Antenna
	Note	NFC does not start to transmitter mode operate while a cable is connected to the external connectors (Headset/Micro USB).

## Class B Personal computer PERIPHERAL DEVICE

Items		
CPU	Clock Frequency	(source) 19.2MHz, (RTC)32.768KHz (internal) Max 2,265.6MHz (118 times pre-scale in CPU chipset from 19.2MHz)
	Clock Frequency	USB driver function is included in CPU.
USB	USB Data Cable / Connector	Shielded / Shielded

## Feature

Cell Phone Feature	SIM		Plug-in 1.8V/3V SIM card slot	
	Display			
		Main	5.4inch, 16,777,216 color IGZO, 1920x1080(FHD) with Backlight	
		Sub	—	
	Camera			
		Main	CMOS 13M pixel	
		Sub	CMOS 2.1M pixel	
	Battery/ Talk time			
		Capacity/voltage	3300mAh / DC3.8V (12.6W)	
		Battery type	Rechargeable Lithium Ion battery	
		standby time	900h(WCDMA) / 750h(GSM) / 770h(LTE)	
		talk time	1380min(WCDMA) / 1070min(GSM) / 920min(LTE)	
	Dimensions			
		Target size	74.4(W) x 9.3(D) x 139.4(H)mm	
		Target weight	122g	
Key Layout			Touch screen (Application Icon) , 2 side key (Power and Up/Down)	
VoIP			Yes: WLAN and Cellular (Data transmit mode)	
Proximity sensor			Proximity sensor (IC3300) is functioning to sense the cheek contact in order to disable the touch screen operation during the voice call. So it is not used to control the output power level.	
GPS			GPS device is supported and the map application can be used by the feature of A-GPS.	

## Battery

Battery	Manufacturing Description	UBATIA242AFN1
	Manufacturer	Sharp
	Type	Lithium Ion battery, DC3.8V 3,300mAh

## Interface

External I/F	Headset connector	For Stereo Headset (3.5mm dia.)
	MCPC connector	For USB Cable or PC Link cable or AC Charger
	SIM card terminal	1 slot
	SD Card connector	For micro SD card (1 slot)
	Integrated charger circuit	—
	HDMI connector	—

## Accessory

Accessory	AC Adapter	Optional Accessories Type 03: Input AC 100 to 240V Output DC 5.0V/1.0A Type 04: Input AC 100 to 240V Output DC 5.0V/1.8A
	Micro-USB Cable for PC (micro-USB<->USB)	Optional Accessories
	Stereo Headset (Earphone)	Optional Accessories ; The stereo headset with microphone

## Note with SAR information

Please note that the user manual requires use of accessories providing a minimum of 1.5 cm separation from the body to be in line with the accessory the carrier intends to market with this device. As SAR tests were performed at a more conservative separation distance of 1.0cm to cover both body-worn accessory and Hot-Spot usage the requirement in the manual is covered by the SAR evaluation.