

2. PERFORMANCE

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2.1 H/W Features01

Item	Feature	Comment
Standard Battery	Li-ion, 850 mAh Size: 54 × 34 × 50mm Weight: 20g	
AVG TCVR Current	GSM , EGSM: 260mA, DCS: 210mA (Tx Max Level)	
Stand by Current	< 4 mA	
Talk time	Up to 3hours 30minutes (GSM TX Level 7)	
Stand by time	Up to 250hours (Paging Period: 9, RSSI: -85 dBm)	
Charging time	3hours	
RX Sensitivity	GSM, EGSM: -105dBm, DCS: -105dBm	
TX output power	GSM, EGSM: 32 dBm (Level 5) DCS: 29dBm (Level 0)	
SIM card type	3V Small	
Display	128 × 64 pixel LCD	
Status Indicator	HW icons Key Pad 0 ~ 9, #, *, Up/Down Navigation Key Confirm Key, Clear Key Send Key, END/PWR Key	
ANT	Internal	
EAR Phone Jack	Yes	
PC Synchronization	No0	
Speech coding	EFR/FR/HR	
Data and Fax	Yes	
Vibrator	Yes	
Receiver	Yes	
Roud Speaker	Yes	
Voice Recoding	Yes	
C-Mike	Yes	
Travel Adapter	Yes	
Options	Hands-free kit, CLA, Data Kit	

2.2 Technical Specification

Item	Description	Specification					
1	Frequency Band	GSM • TX: $890 + n \times 0.2$ MHz • RX: $935 + n \times 0.2$ MHz ($n = 1 \sim 124$) EGSM • TX: $890 + (n - 1024) \times 0.2$ MHz • RX: $935 + (n - 1024) \times 0.2$ MHz ($n = 975 \sim 1024$) DCS • TX: $1710 + (n - 512) \times 0.2$ MHz • Rx: $1805 + (n - 512) \times 0.2$ MHz ($n = 512 \sim 885$)					
2	Phase Error	RMS < 5 degrees Peak < 20 degrees					
3	Frequency Error	< 0.1 ppm					
4	Power Level	GSM, EGSM					
		Level	Power	Toler.	Level	Power	Toler.
		5	33 dBm	± 2 dB	13	17 dBm	± 3 dB
		6	31 dBm	± 3 dB	14	15 dBm	± 3 dB
		7	29 dBm	± 3 dB	15	13 dBm	± 3 dB
		8	27 dBm	± 3 dB	16	11 dBm	± 5 dB
		9	25 dBm	± 3 dB	17	9 dBm	± 5 dB
		10	23 dBm	± 3 dB	18	7 dBm	± 5 dB
		11	21 dBm	± 3 dB	19	5 dBm	± 5 dB
		12	19 dBm	± 3 dB			
		DCS					
		Level	Power	Toler.	Level	Power	Toler.
		0	30 dBm	± 2 dB	8	14 dBm	± 3 dB
		1	28 dBm	± 3 dB	9	12 dBm	± 4 dB
		2	26 dBm	± 3 dB	10	10 dBm	± 4 dB
		3	24 dBm	± 3 dB	11	8 dBm	± 4 dB
		4	22 dBm	± 3 dB	12	6 dBm	± 4 dB
		5	20 dBm	± 3 dB	13	4 dBm	± 4 dB
		6	18 dBm	± 3 dB	14	2 dBm	± 5 dB
		7	16 dBm	± 3 dB	15	0 dBm	± 5 dB

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Item	Description	Specification	
5	Output RF Spectrum (due to modulation)	GSM, EGSM	
		Offset from Carrier (kHz).	Max. dBc
		100	+0.5
		200	-30
		250	-33
		400	-60
		600 ~ < 1,200	-60
		1,200 ~ < 1,800	-60
		1,800 ~ < 3,000	-63
		3,000 ~ < 6,000	-65
		6,000	-71
		DCS	
		Offset from Carrier (kHz).	Max. dBc
		100	+0.5
		200	-30
		250	-33
		400	-60
		600 ~ < 1,200	-60
		1,200 ~ < 1,800	-60
		1,800 ~ < 3,000	-65
		3,000 ~ < 6,000	-65
		6,000	-73
6	Output RF Spectrum (due to switching transient)	GSM, EGSM	
		Offset from Carrier (kHz)	Max. (dBm)
		400	-19
		600	-21
		1,200	-21
		1,800	-24
		GSM	
		Offset from Carrier (kHz)	Max. (dBm)
		400	-22
		600	-24
		1,200	-24
		1,800	-27
7	Spurious Emissions	Conduction, Emission Status	

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Item	Description	Specification		
8	Bit Error Ratio	GSM, EGSM BER (Class II) < 2.439% @-102 dBm DCS BER (Class II) < 2.439% @-100 dBm		
9	RX Level Report Accuracy	± 3 dB		
10	SLR	8 ± 3 dB		
11	Sending Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	0	-12
		1,000	0	-6
		2,000	4	-6
		3,000	4	-6
		3,400	4	-9
		4,000	0	-
12	RLR	2 ± 3 dB		
13	Receiving Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	2	-7
		500	*	-5
		1,000	0	-5
		3,000	2	-5
		3,400	2	-10
		4,000	2	
		* Mean that Adopt a straight line in between 300 Hz and 1,000 Hz to be Max. level in the range.		
14	STMR	13 ± 5 dB		
15	Stability Margin	> 6 dB		
16	Distortion	dB to ARL (dB)		Level Ratio (dB)
		-35		17.5
		-30		22.5
		-20		30.7
		-10		33.3
		0		33.7
		7		31.7
		10		25.5
17	Side Tone Distortion	Three stage distortion < 10%		
18	System frequency (13 MHz) tolerance	≤ 2.5 ppm		

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Item	Description	Specification	
19	32.768KHz tolerance	≤ 30 ppm	
20	Power Consumption	Full power < 243 mA (GSM, EGSM) ; < 209 mA (DCS) Standby - Normal < 4 mA (Max. power)	
21	Talk Time	GSM/ Level 7 (Battery Capacity 850mA): Up to 180 Min GSM/ Level 12 (Battery Capacity 850mA): Up to 300 Min	
22	Standby Time	Under conditions, Up to 250hours: 1. Brand new and full 850mAh battery 2. Full charge, no receive/send and keep GSM in idle mode. 3. Broadcast set off. 4. Signal strength display set at 3 level above. 5. Backlight of phone set off.	
23	Ringer Volume	At least 80 dB under below conditions: 1. Ringer set as ringer. 2. Test distance set as 50 cm	
24	Charge Voltage	Fast Charge : < 500 mA Slow Charge: < 60 mA	
25	Antenna Display	Antenna Bar Number	Power
		5	-85 dBm ~
		4	-90 dBm ~ -86 dBm
		3	-95 dBm ~ -91 dBm
		2	-100 dBm ~ -96 dBm
		1	-105 dBm ~ -101 dBm
		0	~ -105 dBm
26	Battery Indicator	Battery Bar Number	Voltage
		0	~ 3.62 V
		1	3.62 ~ 3.73 V
		2	3.73 ~ 3.82 V
		3	3.82 V ~
27	Low Voltage Warning	3.5 $\pm$ 0.03 V (Call)	
		3.62 $\pm$ 0.03 V (Standby)	
28	Forced shut down Voltage	3.35 $\pm$ 0.03 V	
29	Battery Type	1 Li-ion Battery Standard Voltage = 3.7 V Battery full charge voltage = 4.2 V Capacity: 850mAh	
30	Travel Charger	Switching-mode charger Input: 100 ~ 240 V, 50/60 Hz Output: 5.2 V, 600 mA	