5、Electrical Characteristics

5.1 Limits voltage range

Parameters	Min	Rating	Max	Units
V3.3_IN	-0.3	3.3	3.5	V
V3.3_IN_REV	-0.3	3.3	3.5	V
VSIM	-0.3	1.8/3.0	1.8/3.0+0.3	V

Table 5-1

5.2 Operating voltage range

3.3~3.5V

5.3 Current.

Current:

Standby：＜3mA

5.4 RF indicator

5.4.1 GSM/GPRS/EDGEF indicator

◆ Frequency

E-GSM900 TX: 880-915MHz RX: 925-960MHz

DCS1800 TX: 1710-1785MHz RX: 1805-1880MHz

◆ Transmitter Indicator

A) Transmitting Carrier Peak Power

POWER CONTROL LEVEL	E-GSM900(dBm)			DCS1800 (dBm)		
	tandard value（dBm）	Calibration range	Limits	tandard value（dBm）	Calibration range	Limits
0				30	±0.2	±0.3
1				28	±0.2	±2
2				26	±0.2	±2
3				24	±0.2	±2
4				22	±0.2	±2
5	33	±0.2	±0.3	20	±0.2	±2
6	31	±0.2	±2	18	±0.2	±2
7	29	±0.2	±2	16	±0.2	±2
8	27	±0.2	±2	14	±0.2	±2

9	25	±0.2	±2	12	±0.2	±2
10	23	±0.2	±2	10	±0.2	±2
11	21	±0.2	±2	8	±0.3	±2
12	19	±0.2	±2	7	±0.4	±2
13	17	±0.2	±2	6	±0.5	±2
14	15	±0.2	±2	5	±0.5	±2
15	13	±0.2	±2	3	±0.8	±2
16	11	±0.2	±2			
17	9	±0.2	±2			
18	7	±0.4	±2			
19	5	±0.5	±2			

Table 6-1

B) Launch of The Carrier Frequency

Emergency provisions of conventional GSM power / time maskrequirements of Figure 5-1 frame, the provisions on access to emergency power / time mask requirements box shown in Figure 5-2.

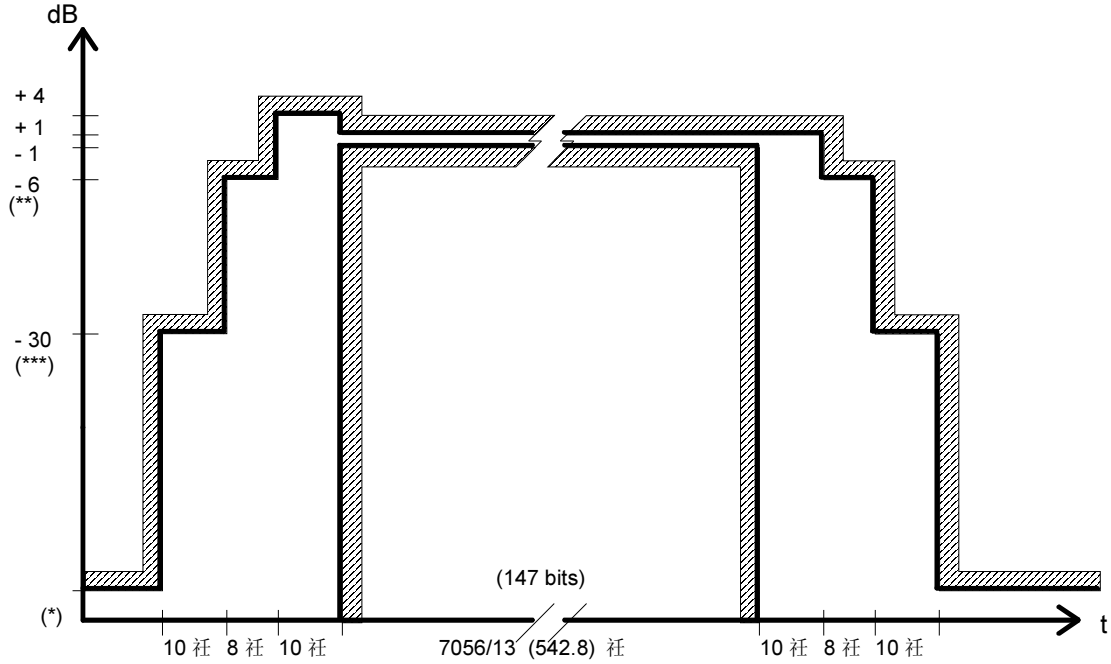

Figure 5-1

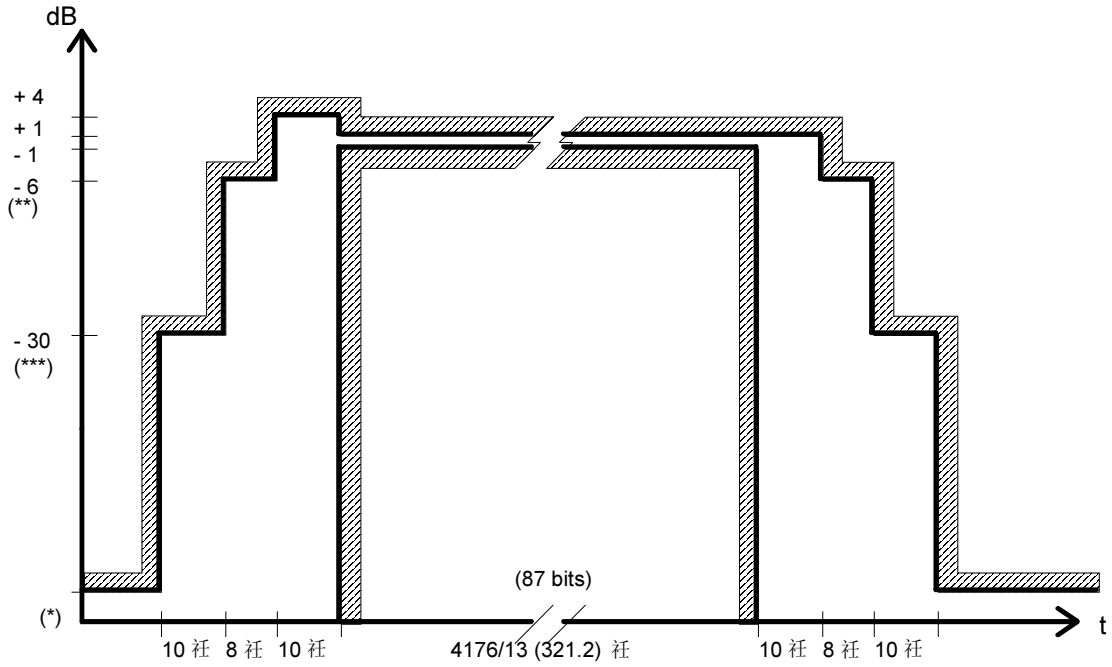

Figure 5-2

C) Modulation Spectrum

Power level （dBm）	Offset at the specified maximum relative level （dB）							
	100KHz	200KHz	250KHz	400KHz	600～<1200 KHz	1200～<1800 KHz	1800～<6000 KHz	6000 KHz
	Measurement bandwidth 30KHz						Measurement bandwidth100KHz	
>43	+0.5	-30	-33	-60	-70	-73	-75	-80
41	+0.5	-30	-33	-60	-68	-71	-73	-80
39	+0.5	-30	-33	-60	-66	-69	-71	-80
37	+0.5	-30	-33	-60	-64	-67	-69	-80
35	+0.5	-30	-33	-60	-62	-65	-67	-80
<33	+0.5	-30	-33	-60	-60	-63	-65	-80

Express 6-2

D) Switch Spectrum

Power control level	wer level （dBm）	Different from the carrier frequency offset at the maximum power （dBm）			
		400KHz	600KHz	1200KHz	1800KHz
0	43	-9	-21	-21	-24
1	41	-11	-21	-21	-24

2	39	-13	-21	-21	-24
3	37	-15	-21	-21	-24
4	35	-17	-21	-21	-24
5	33	-19	-21	-21	-24
6	31	-21	-23	-23	-26
7	29	-23	-25	-25	-28
8	27	-23	-26	-27	-30
9	25	-23	-26	-29	-32
10	23	-23	-26	-31	-34
≥11	21	-23	-26	-32	-36

Express 6-3

E) Fquency Tolerance

Fquency Tolerance < 0.1ppm。

F) Phase Tolerance

RMS for each burst is less than 5 °. The maximum peak of each burst phase error should not exceed 20 °.

G) Conducted Spurious Emissions

Measurement Bandwidth

Frequency Band	Frequency Deviation		Measurement Bandwidth	Video Bandwidth
100kHz~50MHz	—		10kHz	30kHz
50~500MHz	—		100kHz	300kHz
500MHz ~ 12.75GHz, Does not contain the following and the corresponding transmit and receive frequency bands P-GSM890 ~ 915 and 935 ~ 960MHz, DCS1710 ~ 1785 and 1805 ~ 1880MHz	From the phase Should be the Launch Band	0~10MHz	100 kHz	300 kHz
		≥10MHz	300 kHz	1MHz
		≥20MHz	1MHz	3MHz
		≥30MHz	3MHz	3MHz
P-GSM：890~915MHz E-GSM：880~915MHz	From the	1.8~6.0MHz	30kHz	100 kHz

DCS：1710~1785MHz	carrier frequency	>6.0MHz	100kHz	300kHz

Express 6-3

Technical Requirements

Frequency Range	Spurious Power Levels （dBm）	
	E-GSM 850/900MHz	DCS 1800/PCS1900MHz
0.1 – 1000MHz	-36	-36
1000 – 12750MHz	-30	-30

Express 6-3

◆ Receiver Index

Static Reference Sensitivity Is As Follows:

E-GSM900 < -106dBm (BER <2.4%)

DCS1800 < -106dBm (BER <2.4%)

5.4.2 WCDMA RF Index

◆ Operating Frequency Range

Band I：2110~2170MHz

Band II：1930~1990MHz

Band V：869~894 MHz

◆ Transmitter Indicators Index

A) Output Power

Max output power: 27dBm +1dB /-3dB

Min output power:≤-49dBm

B）Adjacent Channel Leakage Power Ratio

C) EVM Tolerance

D) Stray Radiation

◆ Receiver Index

A) Reference sensitivity

B) Maximum input level

C) ACS adjacent channel selectivity

D) Blocking characteristics...

E) Spurious response