Reference No	Function	Part No
	MOBILE STATION MODEM	
IC211	MOBILE STATION MODEM	MSM3100A280FBGA-TR
	POWER & CHARGER CIRCUIT	
IC221	Power & Chrager	BH6030KN
IC222	ANOLOG SWITCH	TC7S66FU or SN74AHC1G66H
Q2203	SWITCHING	2SA1774
Q2204	SWITCHING	2SC4617
Q2202	SWITCHING	HAT1043M
	SPEAKER AMP	
IC231	SPEAKER AMP	LM4864IMM
Q2301	SWITCHING	DTC124XE
	EARPHONE JACK SWITCH	
IC212	Schmitt INVERTER	TC7S14FU or SN74AHC1G14H or NC7S14
	REAL TIME CLOCK	
IC281	REAL TIME CLOCK	RTC-8564NB
	MEMORY	
IC241	64M FALSH/8M SRAM	M6MG3D641S8TP
Q2401	SWITCHING	DTC114YE
	INTERFACE CIRCUIT	
Q2701	SWITCHING	DTC124XM
Q2702	SWITCHING	DTC124XM
Q2703	SWITCHING	DTC124XM
Q2704	SWITCHING	DTC124XM
Q2705	SWITCHING	DTC124XM
	LCD MODULE	
LCD01	MAIN LCD Driver	HD66750

DESCPRIPTIVE INFORMATION
Parts List

Reference No.	Function	Part No.
	PLL Synthesizer	
IC 141	PLL IC	LMX2339L
IC 142	Low Current Amplifier	uPG8128TB
X 1402	VCO	ENFVK192S15
XF 141	Divider	LDD15A030D0967
	Transmitter	
IC 131	Power Amplifier	PA3100
IC 133	Regulator(2.8V)	R1140Q281D
IC 135	AND GATE	TC7SH08FU
D 1301,1302	Diode	HSC88
XF 111	Duplexer	EFSD836MB2Z1
XF 131	Isolator	CE053R836DCB
XF 132	Couper	LDC10B200J0836
XF 133	RF SAW Filter	TSM836AW3B
	Receiver	
IC 121	LNA	GN01096B
IC 122	Mixer	GN02037B
XF 121	RF SAW Filter	SRF881NJC31
XF 122	IF SAW Filter	TMXM300
	IF AGC Circuit	
IC 132	TX AGC+Mixer IC	RFT3100
IC 123	RX AGC IC	IFR3000
D 1201,1202,1303,1304	Diode	HVC306A
	TCXO Circuit	
X 1401	TCXO	KT18-ECV30A-19.680M
Q 1401	Transistor	2SC4649

CDMA-Mode RF Block/Parts List

MODEL NO. SCP-600 **FCC USE ONIY**

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
C1104	18P	C1326	390P	C1503	1U	C2398	33P		
C1114	2P	C1327	0.01U			C2399	33P		
C1200	3.5P	C1328	0.01U			C2660	22P		
C1201	18P	C1329	33P			C2674	22P		
C1203	1000P	C1331	33P			C2675	22P		
C1204	0.01U	C1332	7P			C2676	1U		
C1205	1000P	C1334	1000P			C2677	1U		
C1206	1P	C1335	390P			C2678	1U		
C1207	1000P	C1336	0.015U			C2679	1U		
C1208	100P	C1337	560P			C2681	1U		
C1209	100P	C1339	0.01U			C2682	1U		
C1211	22P	C1341	1000P			C2683	0.47U		
C1212	1.5P	C1342	0.01U			C2684	0.47U		
C1214	11P	C1343	1000P			C2685	0.22U		
C1216	1000P	C1344	100P			C2686	0.22U		
C1217	1000P	C1345	100P			C2687	0.22U		
C1219	6P	C1346	0.1U			C2688	0.22U		
C1221	2P	C1347	0.1U			C2689	0.22U		
C1222	6P	C1348	100P			C2691	0.22U		
C1223	6P	C1349	0.01U			C2692	0.47U		
C1224	0.01U	C1351	1U			C2693	0.47U		
C1225	4700P	C1352	100P			C2694	0.47U		
C1226	0.01U	C1353	100P			C2696	0.1U		
C1228	1000P	C1354	10U			C2697	0.1U		
C1229	0.01U	C1362	0.01U			C2698	0.1U		
C1230	0.1U	C1363	0.01U			C2699	0.1U		
C1231	0.1U	C1370	1U						
C1232	1000P	C1371	1U						
C1233	1000P	C1372	1U						
C1234	0.01U	C1373	1U						
C1235	33P	C1401	1000P						
C1236	4P	C1402	1000P						
C1237	33P	C1403	470P						
C1238	0.01U	C1404	0.047U						
C1239	0.01U	C1405	2700P						
C1241	0.01U	C1406	0.01U						
C1242	120P	C1407	10U						
C1251	0.01U	C1408	0.01U						
C1252	0.01U	C1409	0.01U						
C1260	4.7U	C1410	0.01U						
C1301	12P	C1411	1200P						
C1303	100P	C1412	0.033U						
C1305	1U	C1413	1000P						
C1306	0.1U	C1414	1000P						
C1308	100P	C1415	10U						
C1309	1000P	C1416	1000P						
C1311	4P	C1417	100P						
C1312	100P	C1418	100P						
C1313	1000P	C1419	100P						
C1314	0.01U	C1420	0.01U						
C1315	0.1U	C1421	1000P						
C1316	4700P	C1422	1000P						
C1317	0.01U	C1423	0.75P						
C1318	0.01U	C1424	1U						
C1321	22P	C1425	100P						
C1323	390P	C1426	0.01U						
C1324	390P	C1430	1000P						
C1325	390P	C1431	18P						

CDMA-Mode RF Block/Parts List

MODEL NO. SCP-600 **FCC USE ONIY**

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
L1101	27n	L2396	220n						
L1103	2.7n	L2397	220n						
L1104	10n	L2398	220n						
L1105	22n	L2399	220n						
L1201	18n								
L1202	39n								
L1203	15n								
L1204	18n								
L1205	47n								
L1206	22n								
L1207	22n								
L1208	220n								
L1209	82n								
L1210	15n								
L1211	180n								
L1213	220n								
L1214	82n								
L1302	10n								
L1305	10n								
L1306	27n								
L1307	27n								
L1308	33n								
L1401	12n								
L1402	15n								

CDMA-Mode RF Block/Parts List

MODEL NO. SCP-600 **FCC USE ONIY**

Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description	Ref NO.	Description
R1108	0	R2396	10						
R1113	0	R2397	10						
R1201	0	R2398	1k						
R1204	4.7k	R2683	100k						
R1205	68	R2684	150						
R1206	680	R2685	150						
R1207	1k	R2688	1k						
R1209	680	R2689	330						
R1211	620	R2692	150						
R1213	1k	R2693	68						
R1214	100	R2694	150						
R1219	4.7k	R2695	68						
R1221	10k	R2696	150						
R1222	10k	R2697	68						
R1301	56	R2698	150						
R1302	10k	R2699	330						
R1303	3.9k	RB121	1kX4						
R1304	1k	RB122	1kX4						
R1305	56k	TH161	68k						
R1308	0								
R1310	0								
R1311	0								
R1312	1k								
R1313	1k								
R1314	10k								
R1315	10k								
R1316	10k								
R1317	8.2k								
R1318	12k								
R1319	0								
R1320	0								
R1321	10k								
R1322	8.2k								
R1323	47								
R1335	51k								
R1336	100k								
R1401	10k								
R1402	5.6k								
R1403	10k								
R1404	10k								
R1405	18								
R1406	100								
R1407	100								
R1408	100								
R1409	33								
R1411	68								
R1412	120k								
R1413	100k								
R1414	0								
R1415	15k								
R1416	47k								
R1417	680								
R1501	0								
R1510	0								
R1601	18k								
R1602	68k								

SCP-600/H.HK Adjustment Discription for Mass production.

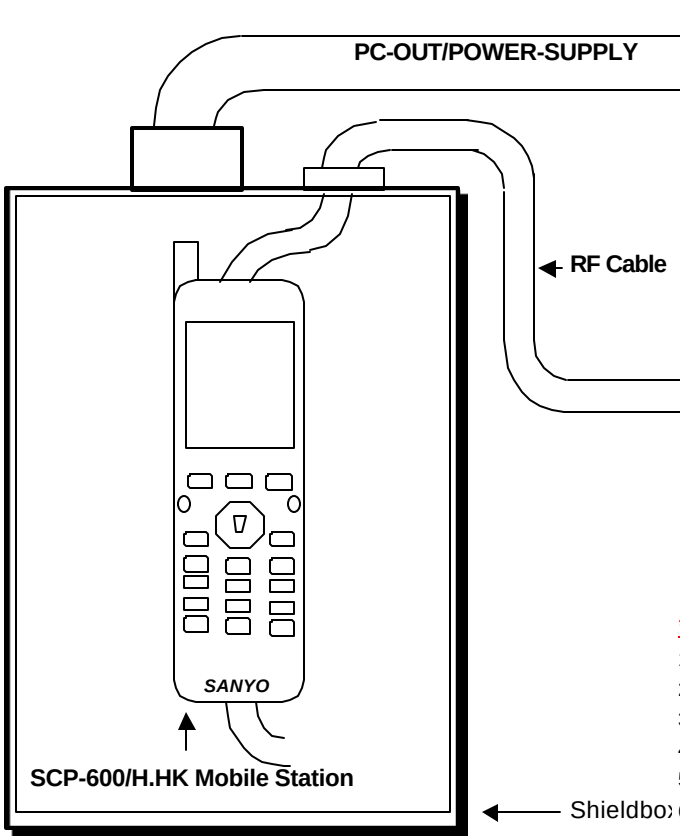
Model Code NO.	1-163-298-00
Model NO.	SCP-600/H.HK

Engineering Section	SANYO Telecommunications Corp. Over Sea Products Department Design Engineering Section 1
	SANYO Telecommunications Corp. Technical Engineering Department RF Section.
Name	M.Ichi

Minor Change Version

NO.	Draw/Change History	Draw/Change Contents

1.-1 Set-Up for Tune-Up and Adjustment of Transmitter



HP8924 Must be Calibrated before Adjustment.

1. Power on and setup to Config Menu (Shift + Test Key)
2. Setuop to Service Menu and Change to "TEMP_SENSE" of Voltmetor Connection.
3. 30 minutes after,Check of TEMP_SENSE Metor is stabilization or 0.5V(=50degree C)
4. Setup to Protocol is **TSB-74** and RF CH std is "**MS AMPS**"
5. Change to CDMA Screens and Change AVG Power mode to change to Chan Power mode
6. Starting Calibration (About 3 Minutes:Transmitter tester calibration)

2. Alignment Procedure

(1) Adjustment Procedure

<Adjustment Mass Production Line>

Mobile Station Connect

↓

Adjustment Start(Push Start switch)

↓

Judgement "Pass or Fail"

NG → (Retry) → **Adjustment Start(Push Start switch)**

↓

END

↓

Get Out SCP-600/H.HK Mobile Station

<Adjustment Process>

Controller (Personal Computer) SETUP

↓

SCP-600/H.HK Mobile Station Connect,Power ON

↓

CDMA Adjustment Mode

↓

Adjustment/Adjustment Value Setting

↓

NV Value Compare with Specification

NG → **CDMA Adjustment Mode**

OK

↓

Write Value to EEPROM

↓

END

↓

Power-off/Get Out SCP-600/H.HK Mobile Station

<Adjustment Item>

CDMA Adjustment Mode

↓

Rx-RASRAM ADJ.

↓

LNA ADJ.

↓

Rx-Frequency ADJ.

↓

RX TEMP ADJ.
TX-LIMIT TEMP ADJ.

↓

Tx-RASRAM,LIMIT ADJ.

↓

Tx Frequency ADJ.

↓

Limit Frequency ADJ.

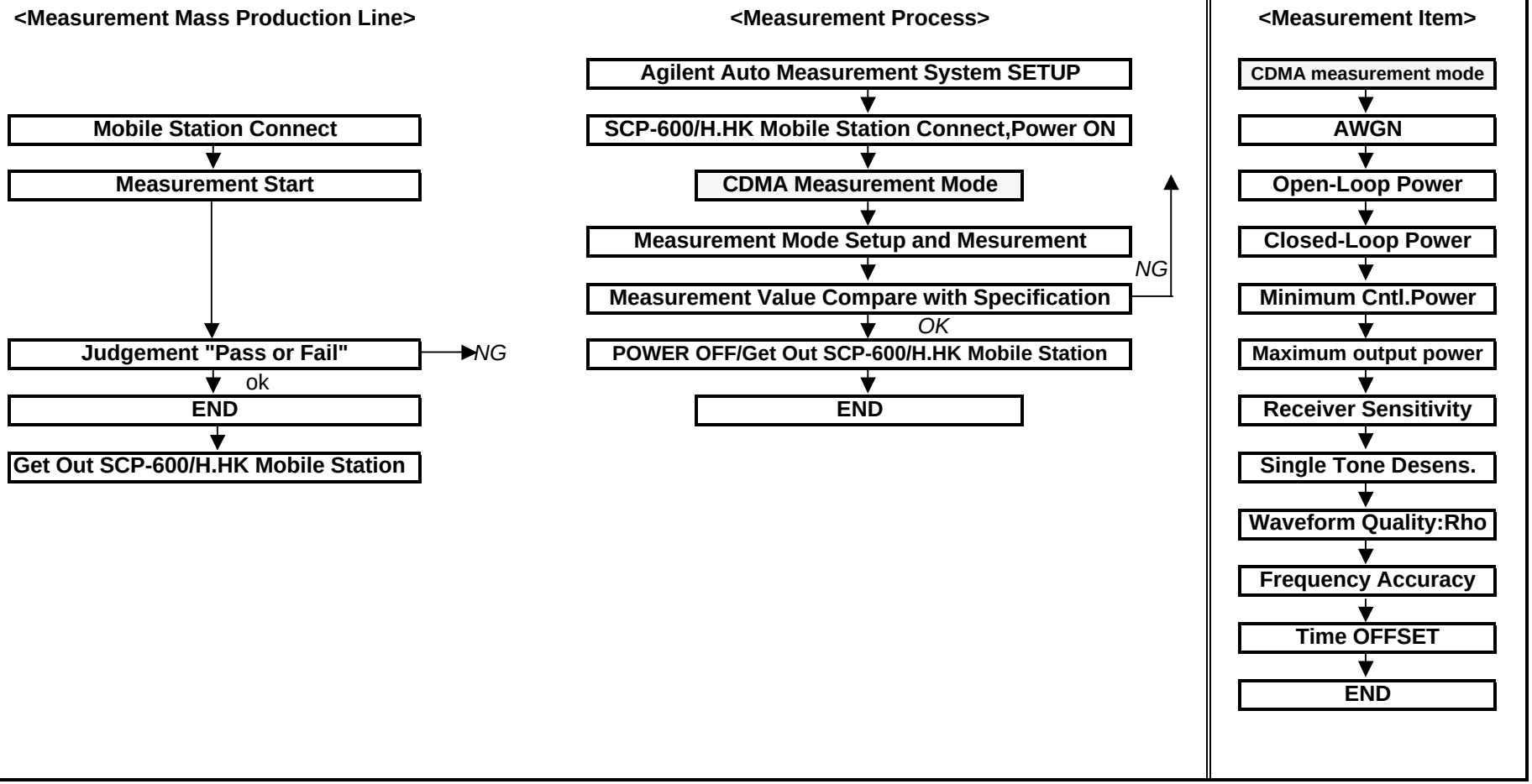
↓

TX TEMP Correction

↓

END

(2)Measurement Procedure



3.Adjustment Value

1.CDMA RX Adjustment

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Rx-RASRAM Adjustment	Table 1	Normal Mode	cdma Ch=358: SG LV=-106.0dBm	-106.0dBm	RX_LIN_OFF : >5
	Table2	OFF Line Mode	SG LV=-100.6dBm	-100.6dBm	RX_LIN_SLP : 0-1F
	Table3		SG LV=-95.3dBm	-95.3dBm	RX_LIN_SLP : 0-1F
	Table4		SG LV=-90.0dBm	-90.0dBm	RX_LIN_SLP : 2-1F
	Table5		SG LV=-84.7dBm	-84.7dBm	RX_LIN_SLP : 2-1F
	Table6		SG LV=-79.4dBm	-79.4dBm	RX_LIN_SLP : 2-1F
	Table7		SG LV=-74.1dBm	-74.1dBm	RX_LIN_SLP : 2-1F
	Table8		SG LV=-68.8dBm	-68.8dBm	RX_LIN_SLP : 2-1F
	Table9		SG LV=-63.5dBm	-63.5dBm	RX_LIN_SLP : 2-1F
	Table10		SG LV=-58.1dBm	-58.1dBm	RX_LIN_SLP : 2-1F
	Table11		SG LV=-52.8dBm	-52.8dBm	RX_LIN_SLP : 2-1F
	Table12		SG LV=-47.5dBm	-47.5dBm	RX_LIN_SLP : 2-1F
	Table13		SG LV=-42.2dBm	-42.2dBm	RX_LIN_SLP : 2-1F
	Table14		SG LV=-36.9dBm	-36.9dBm	RX_LIN_SLP : 2-1F
	Table15		SG LV=-31.6dBm	-31.6dBm	RX_LIN_SLP : 2-1F
	Table16		SG LV=-26.3dBm	-26.3dBm	RX_LIN_SLP : 0-1F
	Table17		SG LV=-21.0dBm	-21.0dBm	RX_LIN_SLP : 0-1F
RX AGC Frequency Adjustment	Bk 0=1017c	Normal Mode	RF INPUT (SG) LV=-63.5dBm	AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 1=46ch	Reference ch : 358ch	Change the Channels 16 Times.	AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 2=98ch	Deference of Center ch AGCsym.		AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 3=150ch	Change the Channels 16 Times.		AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 4=202ch	OFF Line Mode		AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 5=254ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 6=306ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 7=358ch			Center CH	RXCOMP_VS_FREQ : 0
	Bk 8=410ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk 9=462ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk10=514ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk11=566ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk12=618ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk13=670ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk14=722ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14
	Bk15=774ch			AGC DIFF.	RXCOMP_VS_FREQ : E7-14

Continued

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
LNA Adjustment	1.LNAOffset	LNA Gain Active Point Setting	Reference ch: 358ch		LNA_GAIN_OFF : 90,98,A0
		Measurement Agcvalue : Cntl=A	at LNA_GAIN=0xC0 AGC_Value.		
		Measurement Agcvalue : Cntl=B	AGC_Value < 5 = 0xA0		
		Compare Gain,A0 with B0	5< agc <17 = 0x98		
		LNAOffset = 90 or 98 or A0	agc < 17 = 0x90		
	2. NASlope	LNA Gain Slope Setting			
		Measurement Agcvalue : Cntl=C0			
		Measurement Agcvalue : Cntl=D0			
		Measurement Agcvalue : Cntl=E0			
		Measurement Agcvalue : Cntl=F0			
		Measurement Agcvalue : Cntl=FF			
	3. LNAMIN	LNA vs Rfin Active Point			LNA_GAIN_MIN : =9d
					ADJUSTMENT
	4. LNAMAX	LNA Active SPAN			
		Compare Gain,Cntl = FF			
		Gain>=C8 -> 0x39			Lna_Gain_Pwr_Max : 39,3C,40
		Gain>=C4 -> 0x3C			
		Gain<C4 -> 0x40			

3.CDMA TX & TX-LIMIT Adjustment

ITEM	Sub-ITEM	Handset Setup (Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-RASRAM ⟶		Nomal Test Mode	CDMA Ch=358ch	+24.6dBm	
Adjustment		1.Agc<255->+6.0dBm 30stp	SG LEVEL according to the transmission	-50.0dBm	
		Measurement Tx-Power.	LEVEL of MS		
		+6.0 over, agc set 15stp to 24.6dBm			
		2.Agc>255 -40dBm 30stp			
		Measurement Tx-Power.			
		under -40,agc set 15stp			
&		TOTAL: 36 Parametor			
		HIGH POWER MODE			
		LOW POWER MODE			
		2TIMES ADJUSTMENT			
Tx-Limit ->	Table1		CDMA Ch=358ch	+11.75dBm	
Adjustment	Table2	According to the above approximate		+13.1dBm	
	Table3	curve,each AGC register value		+14.4dBm	
	Table4	corresponded to Tx-limit levels are		+15.7dBm	
	Table5	registered.		+17.1dBm	
	Table6			+18.4dBm	
	Table7	HIGH POWER MODE		+19.7dBm	
	Table8	LOW POWER MODE		+21.1dBm	
	Table9	2TIMES ADJUSTMENT		+22.4dBm	
	Table10			+23.7dBm	
	Table11			+24.6dBm	
	Table12				
	Table13				
	Table14				
	Table15				
	Table16				
	OFFSET	Offset : 18.4dB(Table 6)		+19.7dBm	
	SPN	Spn : 24.6dBm(Table 12)			

4.Tx AGC Frequency Adjustment and Tx Limit Frequency Adjustment.

TX AGC Frequency Adjustment	Bk 0=1017ch	Nomal Test Mode	RF INPUT(SG) LV=-92.0dBm	Tx-Pow diff.	TX_Comp vs FREQ:-64 to +63
	Bk 1=46ch	Reference ch: 358ch	Change he Channels 16 Times.	Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 2=98ch	Difference of Center ch AGCsym.		Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 3=150ch	Change the Channels 16 Times.		Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 4=202ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 5=254ch	HIGH POWER MODE		Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 6=306ch	LOW POWER MODE		Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 7=358ch	2TIMES ADJUSTMENT		REF. CH	TX_Comp vs_FREQ : 0
&	Bk 8=410ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk 9=462ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk10=514ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk11=566ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk12=618ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk13=670ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk14=722ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
	Bk15=774ch			Tx-Pow diff.	TX_Comp vs FREQ : -64 to +63
TX Limit Frequency Adjustment	Bk 0=1017c	Nomal Test Mode	RF INPUT(SG) LV=-92.0dBm		
	Bk 1=46ch	Reference ch: 358ch	Change the Channels 16 Times.		
	Bk 2=98ch	Difference of Center ch AGCsym.			
	Bk 3=150ch	Change the Channel 16 Times.			
	Bk 4=202ch				
	Bk 5=254ch	HIGH POWER MODE			
	Bk 6=306ch	LOW POWER MODE			
	Bk 7=358ch	2TIMES ADJUSTMENT		REF. CH	TX_Lim_vs_Freq : 0
	Bk 8=410ch				
	Bk 9=462ch				
	Bk10=514ch				
	Bk11=566ch				
	Bk12=618ch				
	Bk13=670ch				
	Bk14=722ch				
	Bk15=774ch				

***TX-Power Diffrencial + ADC Diffrencial ×Limit Table Value**

Measurement Item	Standard Item	IS98A Standard Spec	Measurement Spec	Measurement Condition	Measurement Channe	Others
RTC Demod. of FW.ch	IS98A:9.3.3					
AWGN Test6(Eb/Nt=4.6)		1%(0.010)	1%(0.010)	Rate1 1200(TEST6)	383ch	
AWGN Test10(Eb/Nt=4.0)		1%(0.010)	1%(0.010)	Rate2 7200(TEST10)	383ch	
Waveform Quality	IS98A:10.3.2	>0.944	>0.944	Rateset2 SVC opt9	1013ch,383ch,777ch	
RHO/Frequency Err/Time Offset		±300Hz	±300Hz	14400bps		
		±1uS	±1uS	Traffic Ec/Io -12.3dB		
TTC Range of Openloop	IS98A:10.4.1	dBm	dBm	Rateset2 SVC opt9		
Test1 (-25dBm)		-48±9.5(CLASS3)	-48±9.5(CLASS3)	14400bps	383ch	
Test1A (-40dBm)		-33±8.0(CLASS3)	-33±8.0(CLASS3)		1013ch,777ch	
Test2 (-65dBm)		-8±9.5(CLASS3)	-8±9.5(CLASS3)			
Test2A (-80dBm)		7±8.0(CLASS3)	7±8.0(CLASS3)			
Test3 (-104dBm)		18-30(CLASS3)	18-30(CLASS3)			
Test2-Test1A		24±6	24±6			
Test2A-Test2		15±4	15±4			
TTC Range of Closedloop	IS98A:10.4.4			Rateset2 SVC opt9		
Closedloop Full Power		RF Output = -15dBm	-16±3dBm	14400bps	383ch	
Closedloop Max Power		>+24dB	>+24dB		1013ch,777ch	
Closedloop Min Power		<-24dB	<-24dB			
TTC Min.Controlled Power	IS98A:10.4.6			Rateset2 SVC opt9	1013ch,383ch	
		-50dBm/1.23Mhz	-50dBm/1.23MHz	14400bps	777ch	
RTC Receiver Sensitivity	IS98A:9.4.1	0.5%(Confidence95%)	0.5%(Confidence95%)	Rate1 Full -104.5dBm	1013ch,777ch	
					383ch	
Single Tone Desens.	IS98A:9.4.2	1.0%(Confidence95%)	1.0%(Confidence95%)	Tone Offset	1013ch,383ch,777ch	
				±900KHz		
TTC Max RF Output Pow	IS98A:10.4.5	>0.2W	24.1 +0.5/-1.0 dBm			
Max Power Output/Spurious			24.1 +0.5/-1.0 dBm		1013ch,383ch,777ch	
(a)Spur Inband Power/Freq			24.1 +0.5/-1.0 dBm		1013ch,383ch,777ch	
delta f>885KHz <-42dBc/30KHz		(a) <-42dBc/30KHz	(a) <-42dBc/30KHz		1013ch,383ch,777ch	
delta f>1.98MHz <-54dBc/30KHz					1013ch,383ch,777ch	
TTC Conducted Spurious	IS98A:10.5.1	Mesurement Level/Freq		SVC Opt9(14400)	1013ch, 777ch	
(a)Spur Inband Power/Freq		(a) <-42dBc/30KHz	(a) <-42dBc/30KHz	-13dBm/1.23MHz	383ch	
delta f>885KHz <-42dBc/30KHz						
delta f>1.98MHz <-54dBc/30KHz		(b)<-60dBm/30kHz	(b)<-60dBm/30kHz			
(b)Spur Inband Power/Freq <-60dBm/30KHz		(c)<-54dBm/1.23MHz	(c)<-54dBm/1.23MHz			
(c)Spur Inband Power/Freq <-54dBm/1.23MHz						