

SCP-400S/H US Adjustment Description for Mass production.

Model Code NO.	1-163-265-00
Model NO.	SCP-400S/H US

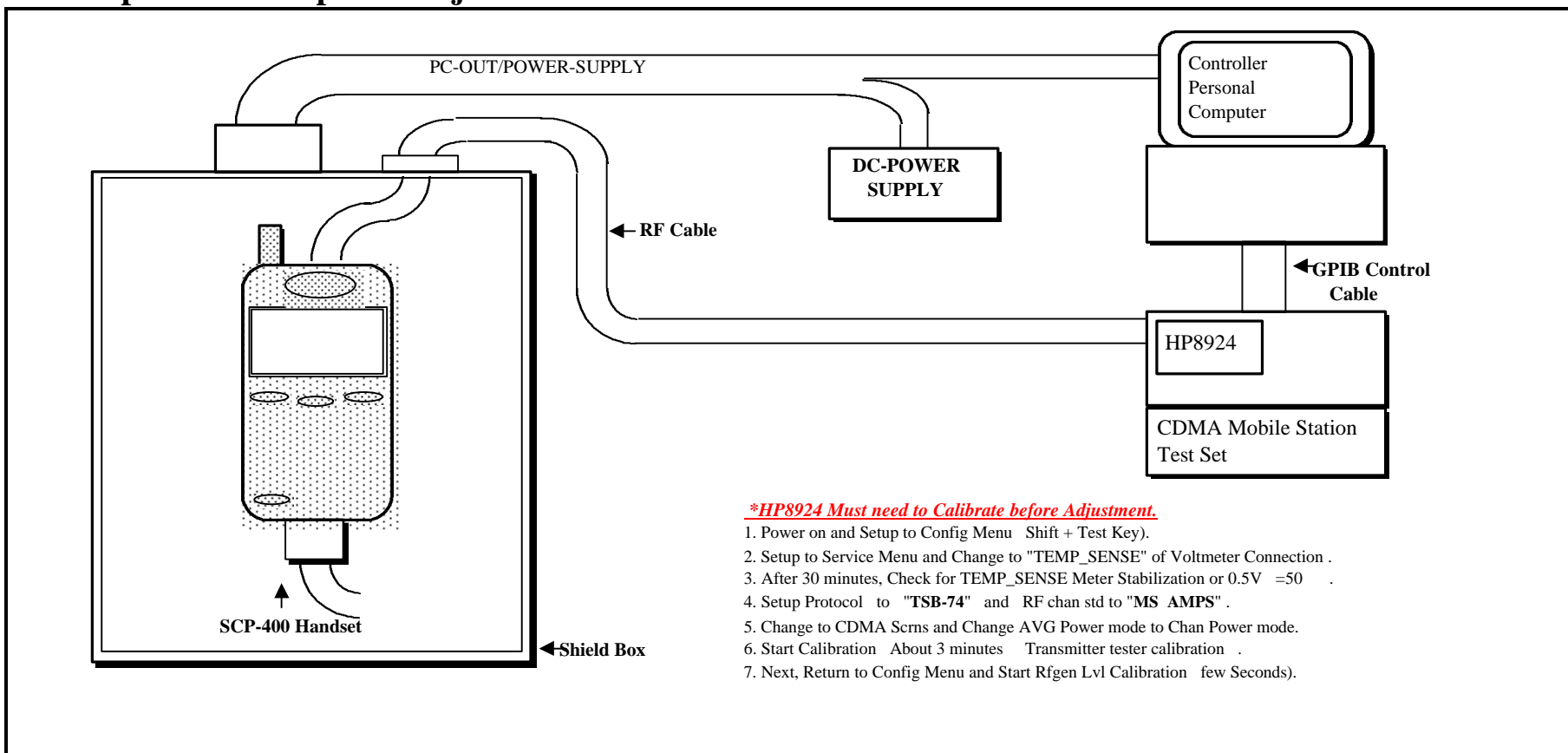
Eng.Section	Personal Telecommunication Division Technical Engineering Department RF Section
NAME	A.Shimahara

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1	Set-Up for Tune-Up and Adjustment of Transmitter
2	Alignment Procedure
3	Adjustment Value

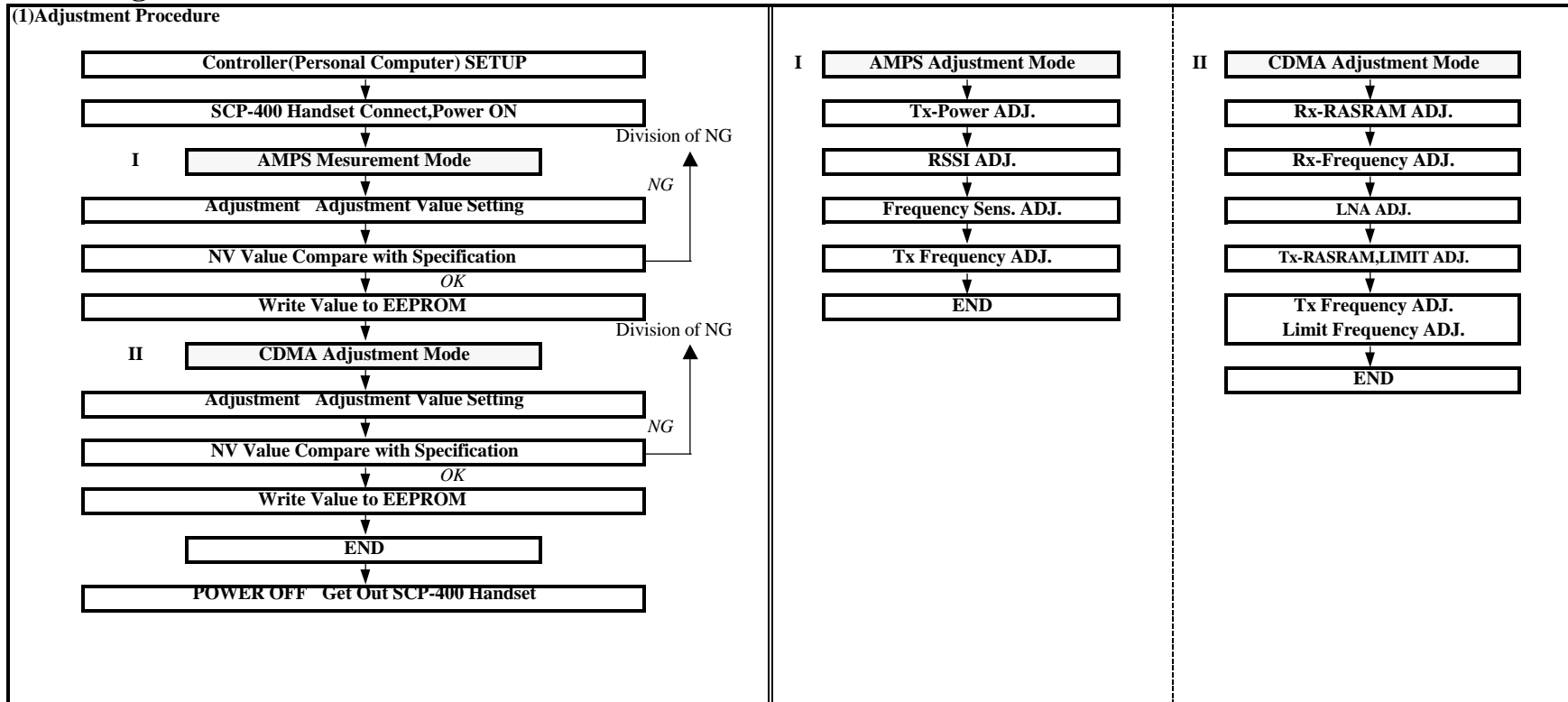
Minor Change Version

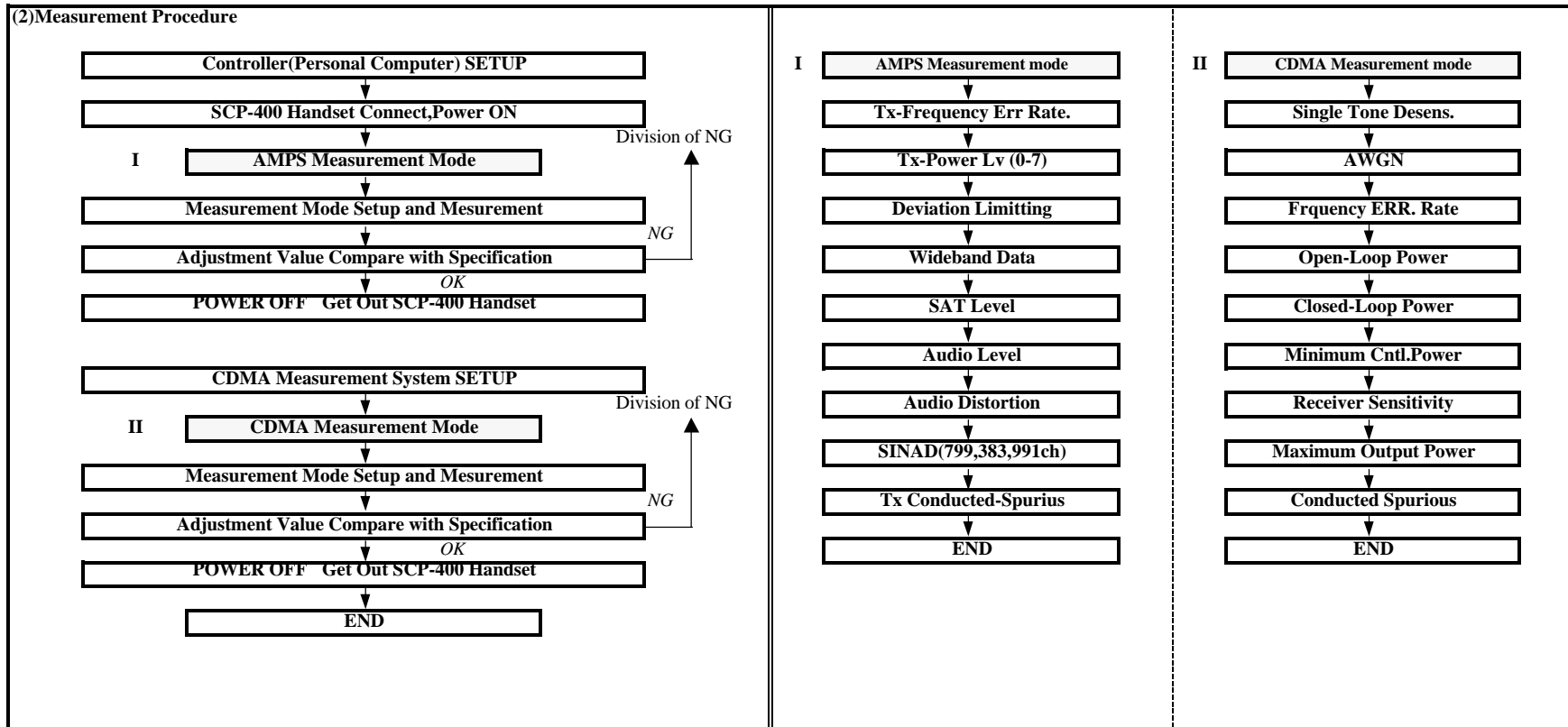
NO.		

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



2 Alignment Procedure





3.Adjustment Value

I.AMPS Adjustment

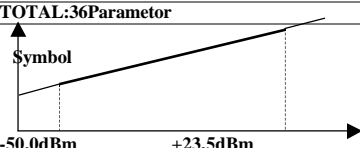
ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-Power Adjustment	PL=0,1,2	<u>Normal Test Mode</u>	<u>AMPS Mode</u>	+26.5dBm	
	PL=3	Tx AGC SET : 3-2-3-2	Txpower :dBm Mode	+24.0dBm	
	PL=4			+20.0dBm	
	PL=5			+16.0dBm	
	PL=6			+12.0dBm	
	PL=7			+ 8.0dBm	
	Tx-Power Frequency Adjustment	Bk 0=1017ch	<u>FCC Test Mode</u>	PL=0	+26.5dBm
Bk 1=46ch				+26.5dBm	
Bk 2=98ch				+26.5dBm	
Bk 3=150ch				+26.5dBm	
Bk 4=202ch				+26.5dBm	
Bk 5=254ch				+26.5dBm	
Bk 6=306ch				+26.5dBm	
Bk 7=358ch				+26.5dBm	
Bk 8=410ch				+26.5dBm	
Bk 9=462ch				+26.5dBm	
Bk10=514ch				+26.5dBm	
Bk11=566ch				+26.5dBm	
Bk12=618ch				+26.5dBm	
Bk13=670ch				+26.5dBm	
Bk14=722ch				+26.5dBm	
Bk15=774ch			+26.5dBm		
Frequency Sensibility Adjustment		<u>FCC Test Mode : AMPS</u> Tx : ST,CH : 358	<u>AF ANL Mode</u> Detector : Pk±Max DE-EMPH:750us Fil1:>20hz,Fil2:<99khz pass	8KHz dev.	dev. 8KHz±0.1KHz ▼ NV_FM_FREQ_SENSE_GAIN_I
RSSI Adjustment	-85dBm In -113dBm In	<u>FCC TEST Mode</u> RSSI=Filter*100+AgcRSSI*47	-85dBm RF ; -113dBm RF	-85dBm : BAR4 BAR1	<u>NV_FM_RSSI_I</u>

*Handset SETUP & HP8923 SETUP is Auto Set by Controller(Personal Computer).

2.CDMA RX Adjustment

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Rx-RASRAM Adjustment	Table 1	<u>Normal Mode</u>	CDMA Ch=358 :SG LV=-106.0dBm	-106.0dBm	
	Table 2	OFF Line Mode	SG LV=-100.6dBm	-100.6dBm	
	Table 3		SG LV=-95.3dBm	-95.3dBm	
	Table 4		SG LV=-90.0dBm	-90.0dBm	
	Table 5		SG LV=-84.7dBm	-84.7dBm	
	Table 6		SG LV=-79.4dBm	-79.4dBm	
	Table 7		SG LV=-74.1dBm	-74.1dBm	
	Table 8		SG LV=-68.8dBm	-68.8dBm	
	Table 9		SG LV=-63.5dBm	-63.5dBm	
	Table 10		SG LV=-58.1dBm	-58.1dBm	
	Table 11		SG LV=-52.8dBm	-52.8dBm	
	Table 12		SG LV=-47.5dBm	-47.5dBm	
	Table 13		SG LV=-42.2dBm	-42.2dBm	
	Table 14		SG LV=-36.9dBm	-36.9dBm	
	Table 15		SG LV=-31.6dBm	-31.6dBm	
	Table 16		SG LV=-26.3dBm	-26.3dBm	
	Table 17		SG LV=-21.0dBm	-21.0dBm	
RX AGC Frequency Adjustment	Bk 0=1017ch	<u>Normal Mode</u>	<u>RF INPUT(SG) LV=-63.5dBm</u>	AGC DIFF.	
	Bk 1=46ch	Reference ch :358ch	Change to Channel 16 Time.	AGC DIFF.	
	Bk 2=98ch	Deference of Center ch AGCsym.		AGC DIFF.	
	Bk 3=150ch	Change to Channel 16 Time.		AGC DIFF.	
	Bk 4=202ch	OFF Line Mode		AGC DIFF.	
	Bk 5=254ch			AGC DIFF.	
	Bk 6=306ch			AGC DIFF.	
	Bk 7=358ch			Center CH	
	Bk 8=410ch			AGC DIFF.	
	Bk 9=462ch			AGC DIFF.	
	Bk10=514ch			AGC DIFF.	
	Bk11=566ch			AGC DIFF.	
	Bk12=618ch			AGC DIFF.	
	Bk13=670ch			AGC DIFF.	
	Bk14=722ch			AGC DIFF.	
Bk15=774ch			AGC DIFF.		

3.CDMA TX & TX-LIMIT Adjustment

ITEM	Sub-ITEM	Handset Setup(Internal Setup)	HP8924 Setup	Adj. Value	Accuracy of NV-Value
Tx-RASRAM Adjustment →		<u>Normal Test Mode</u>	CDMA Ch=358ch	+23.5dBm	
			SG level is cording to the transmission power level of MS	-50.0dBm	
&					
Tx-Limit Adjustment →		TOTAL:36Paramotor Symbol 			
	Table 1		CDMA Ch=358ch	+11.75dBm	
	Table 2			+13.1dBm	
	Table 3			+14.4dBm	
	Table 4			+15.7dBm	
	Table 5			+17.1dBm	
	Table 6			+18.4dBm	
	Table 7			+19.7dBm	
	Table 8			+21.1dBm	
	Table 9			+22.4dBm	
	Table 10			+23.7dBm	
	Table 11			+25.1dBm	
	Table 12			+26.4dBm	
	Table 13			+27.7dBm	
	Table 14			+29.0dBm	
	Table 15			+30.4dBm	
	Table 16			+31.7dBm	
	OFFSET	Offset : 18.4dB(Table 6)			+19.7dBm
SPN	Spn : 26.4dBm(Table 12)			+29.0dBm	

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.
	Bk 1=46ch	Reference ch :358ch	Change to Channel 16 Time.	Tx-Pow diff.
	Bk 2=98ch	Difference of Center ch AGCsym.		Tx-Pow diff.
	Bk 3=150ch	Change to Channel 16 Time.		Tx-Pow diff.
	Bk 4=202ch			Tx-Pow diff.
	Bk 5=254ch			Tx-Pow diff.
	Bk 6=306ch			Tx-Pow diff.
	Bk 7=358ch			Tx-Pow diff.
&	Bk 8=410ch			Tx-Pow diff.
	Bk 9=462ch			Tx-Pow diff.
	Bk10=514ch			Tx-Pow diff.
	Bk11=566ch			Tx-Pow diff.
	Bk12=618ch			Tx-Pow diff.
	Bk13=670ch			Tx-Pow diff.
	Bk14=722ch			Tx-Pow diff.
	Bk15=774ch			REF. CH
TX Limit Frequency Adjustment	Bk 0=1017ch	Nomal Test Mode	RF INPUT(SG) LV=-92.0dBm	*
	Bk 1=46ch	Reference ch :358ch	Change to Channel 16 Time.	*
	Bk 2=98ch	Difference of Center ch AGCsym.		*
	Bk 3=150ch	Change to Channel 16 Time.		*
	Bk 4=202ch			*
	Bk 5=254ch			*
	Bk 6=306ch			*
	Bk 7=358ch	12Symb=1.0dB		*
	Bk 8=410ch			*
	Bk 9=462ch			*
	Bk10=514ch			*
	Bk11=566ch			*
	Bk12=618ch			*
	Bk13=670ch			*
	Bk14=722ch			*
	Bk15=774ch			REF. CH

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

4.Measurement Specification of Adjustment

1.AMPS Mesurement Specification

Measurement Item	Standard Item	IS98A Standard Spec	Measurement Spec	Measurement Condition	Measurement Channel	Others
Tx-Frequency Err	IS-98-A:3.1.2	< ±2.5ppm	< ±2.0ppm	Measurement Equipment Accuray < 0.1ppm	799ch	
Tx-Power Level(0,1,2)	IS-98-A:3.2.1	24dBm - 30dBm	25.5dBm - 27.5dBm	Measurement Equipment	799(H),383(M),991(L)	
Tx-Power Level(3)	IS-98-A:3.2.1	20dBm - 26dBm	22dBm - 26dBm	Accuray < 0.2dB	799ch	
Tx-Power Level(4)	IS-98-A:3.2.1	16dBm - 22dBm	18dBm - 22dBm		799ch	
Tx-Power Level(5)	IS-98-A:3.2.1	12dBm - 18dBm	14dBm - 18dBm		799ch	
Tx-Power Level(6)	IS-98-A:3.2.1	8dBm - 14dBm	10dBm - 14dBm		799ch	
Tx-Power Level(7)	IS-98-A:3.2.1	4dBm - 10dBm	6dBm - 10dBm		799ch	
Deviation Limitting	IS-98-A:3.3.2.3	< ±12Khz dev. >±10Khz dev.	< ±12Khz dev. >±10Khz dev.	Comp=ON,SAT=OFF HF Mode,Mic=6V IN	799ch	
Wideband Data	IS-98-A:3.3.3	±8Khz dev. ± 10% (±7.2 - 8.8Khz dev.)	±8Khz dev. ± 10% (±7.2 - 8.8Khz dev.)	Wideband Mode		
SAT Level	IS-98-A:3.3.4	±2Khz±0.2Khz dev.	±2Khz±0.2Khz dev.	SAT Mode		
Audio Level		-	52.0mV ± 3dB	Voice Mode	799ch	
Audio Distortion	IS-98-A:2.2.2.5	< 5%	<5%	Voice Mode	799ch	
SINAD	IS-98-A:2.3.1	> 12dB	> 12dB	RF IN = -116dBm	799(H),383(M),991(L)	
Tx-Conducted Spurious	IS-98-A:3.4.2	> 43+10*Log(W) W:Tx-Power	< -14dBm		799ch	

2. CDMA Measurement Specification

Measurement Item	Standard Item	IS98C Standard Spec	Measurement Spec	Measurement Condition	Measurement Channel	Others
<i>RTC Demod. of FW.ch</i> AWGN Test6(Eb/Nt=4.6) AWGN Test12(Eb/Nt=2.9)	98C:9.3.3	1%(0.010) 1%(0.010)	1%(0.010) 1%(0.010)	Rate1 1200(TEST6) Rate2 1800(TEST12)	383ch 383ch	
<i>Waveform Quality</i> RHO Frequency Err Rate Time Offset	98C:10.3.2	>0.944 ±300Hz ±1 S	>0.944 ±300Hz ±1 S	Rateset2 SVC opt9 14400bps Traffic Ec/Io -12.3dB	1013ch,383ch,777ch 1013ch,383ch,777ch 1013ch,383ch,777ch	
<i>TTC Range of Openloop</i> Openloop Power Test1 Openloop Power Test2 Openloop Power Test3	98C:10.4.1	dBm -48±9.5(CLASS III) -8±9.5(CLASS III) 20±9.5(CLASS III)	dBm -48±9.5(CLASS III) -8±9.5(CLASS III) 20±9.5(CLASS III)	Rateset2 SVC opt9 14400bps	1013ch,383ch,777ch 1013ch,383ch,777ch 1013ch,383ch,777ch	
<i>TTC Range of Closedloop</i> Closedloop Full Power Closedloop Max Power Closedloop Min Power	98C:10.4.4	RF Output = -15dBm >+24dB <-24dB	-16±3dBm >+24dB <-24dB	Rateset2 SVC opt9 14400bps	1013ch,383ch,777ch 1013ch,383ch,777ch 1013ch,383ch,777ch	
<i>TTC Min. Controlled Pow</i> Minimum Controlled Pow	98C:10.4.6	-50dBm/1.23MHz	-50dBm/1.23MHz	Rateset2 SVC opt9 14400bps	1013ch,383ch,777ch	
<i>RTC Receiver Sensitivity</i> Receiver Sensitivity FER	98C:9.4.1	0.5%(Confidence95%)	0.5%(Confidence95%)	Rate2 Full -104.0dBm	1013ch,383ch,777ch	
<i>Single Tone Desens.</i> Sensitivity FER	98C:9.4.2	1.0%(Confidence95%)	1.0%(Confidence95%)	Tone Offset ±900kHz	1013ch,383ch,777ch	
<i>TTC Max RF Output Pow</i> Max Power Output Max Power Spurious(Ch) Max Pow.Spurious Freqoff	98C:10.4.5	> 0.2W < -42dBc -	22.0dBm - 24.0dBm < -42dBc -		1013ch,383ch,777ch 1013ch,383ch,777ch 1013ch,383ch,777ch	