

Production Specification

DIVISION : TWR R&D
MODEL NAME : SP-230/250/UHF
DESCRIPTION : U/V PLL SYNTHESIZER

MODEL CODE : 7763 / 7765
STANDARD SPEC : TIA/EIA 603

Revision History :

REV NO.	ECO NO	DATE	WRITTEN	REVIEWED	APPROVED
0	N/A	2003.08.03	Y.K.KIM		

COMMENTS

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ATTACHED TEST DATA

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WRITTEN BY :	REVIEWED :	APPROVED :	PAGE :

MSA-402-04-01B

ELECTRICAL PERFORMANCE TEST(RX)

MODEL : SP230/250
STANDARD SPEC : TIA/EIA603

DESTINATION :WORLD-WIDE

PAGE 2 OF 6
TEST DATE : 2003 . 8 . 3 .

NO	TEST ITEM		SPECIFICATION		UNIT	FREQ		
			Normal	Limit		CH	CH	CH
1	SENSE	12 DB SINAD	120	-118(V) -117(U)	DBM			
2	SQUELCH	SQ.OPEN	12	6 14 (SINAD)	dB			
		PWR SAVING		MAX16 (SINAD)	dB			
		SQ (HYS)		0 - 6	DB SINAD			
3	MOD. ACCEPTANCE B.W	N - BAND		3.5 KHz MIN	KHz			
		S - BAND		7.0 KHz MIN				
4	STAND-BY CURRENT	STAND-BY	75	80	mA			
		PWR SAVING (100/400)	42	50				
5	AUDIO FREQUENCY RESPONSE	0.30KHz	+ 12.5 + 2.5		dB			
		0.6 KHz	+ 6.5 - 3.5					
		1 KHz	0					
		2 KHz	- 4.0 - 14.0					
		3 KHz	- 7.5 - 17.5					
		5 KHz	LESS THEN - 12.0					
		6 KHz	LESS THEN - 13.5					
6	HUM / NOISE	N BAND		34 40(CTITT)	dB			
		S BAND		40				
7	AUDIO DISTORTION		2	5	%			
8	AUDIO OUTPUT (AT 10% THD)	8 ohm LOAD	2.2	MIN 1.6 RMS	V			

ELECTRICAL PERFORMANCE TEST(RX)

MODEL : SP-230/250
STANDARD SPEC : EIA/TIA603

DESTINATION :WORLD-WIDE

PAGE 3 OF 6
TEST DATE: 2003. 8. 3.

NO	TEST ITEM			SPECIFICATION		UNIT	FREQ		
				Normal	Limit		CH	CH	CH
10	ADJACENT CHANNEL SELECTIVITY	N-BAND	+12.5K	65	50	dB			
			-12.5K						
		S-BAND	+25K	75	60				
			-25K						
11	SPURIOUS RESPONSE ATT.	fc - 0.91 (U) fc + 0.91 (V)		70	60	dB			
		fc - 22.55 (U) fc + 22.55 (V)			60				
12	IMAGE REJECTION	fc - 90.2 (U) fc + 90.2 (V)		68	60	dB			
13	INTER MODLATION DISTORTION (3 S.S.G)	+25/50K			60	dB			
		+50/100K							
		-25/50K							
		-50/100K							
14	CONDUCTED RX SPRIOUS				- 53	dBm			
TEST CONDITION ----- 1. STD. Supply Voltage : 7.5 Vdc At Batt Terminal 2. Normal Temperature : 25 ± 5 /EXTREME-30 - +60 3. STD. Audio Frequency : 1 KHz 4. STD. Deviation : N-BAND : ± 1.5 KHz S-BAND : ± 3.0 KHz 5. Main Signal Input Level : -47dBm						6. ANT. Impedance : 50 ohm 7. Carrier Frequency : 8. REF. Audio Output : 1V rms 9. Audio Output Load : 8 ohm 10.CH Spacing : N-BAND : ± 12.5 KHz S-BAND : ± 25 KHz			

ELECTRICAL PERFORMANCE TEST(TX)

MODEL : SP-230/250
STANDARD SPEC : TIA/EIA603

DESTINATION : WORLD-WIDE

PAGE 4 OF 6
TEST DATE: 2003 . 8 . 3 .

NO	TEST ITEM			SPECIFICATION		UNIT	FREQ		
				Normal	Limit		CH	CH	CH
1	POWER OUTPUT	HIGH	5.0	(A)4 - 6	Watt				
		LOW	1	0.8 - 1.5					
2	POWER OUTPUT	+ 10%		+ 2 dB					
		- 10%		- 3 dB					
		APC MAX.							
		APC MIN.							
3	FREQUENCY ERROR	ROOM TEMP	750 (U) 500 (V)		Hz				
		-10 %							
4	MAX. CURRENT (ANT/DUMI LOAD)	7.5V DC	2.2	2.5	A				
5	CONDUCTED SPURIOUS EMISSION	2'ND		60	dBC				
		3'ND							
		OTHER							
6	PEAK FM DEVIATION (DCS : N/A)	N-BAND	AUDIO at 1KHz (W/TONE)	2.5		KHz			
			TONE	0.25	0.5 (USA)				
		S-BAND	AUDIO at 1KHz (W/TONE)	5.0					
			TONE	0.5	1.0 (USA)				
7	AUDIO DISTORTION	N-BAND	1.5 KHz	2	5	%			
		S-BAND	3 KHz	2	5				
8	HUM / NOISE	N-BAND	1.5 KHz	40	34 40(CTITT)	dB			
		S-BAND	3 KHz	45	40				

ELECTRICAL PERFORMANCE TEST(TX)

MODEL : SP-230/250
STANDARD SPEC : TIA/EIA

DESTINATION : WORLD-WIDE

PAGE 5 OF 6
TEST DATE: 2003 . 8 . 3

NO	TEST ITEM		SPECIFICATION		UNIT	FREQ		
			Normal	Limit		CH	CH	CH
9	AUDIO RESPONSE	0.30 KHz	(A) - 9.5	- 17.9	dB			
		0.6 KHz	- 3.5	- 7.5				
		1 KHz	0					
		2 KHz	+ 3.0	+ 7.0				
		2.55 KHz(N)	+ 4.0	+ 10.5				
		3 KHz(S)	+ 4.0	+ 10.5				
		5 KHz						
10	MIC SENSITIVITY		20	(A) 10-35	mV			
11	ADJACENT CHANNEL POWER	N-BAND	65	60	dB			
		S-BAND	75	70				
12	LOW BATTERY VOLTAGE		5.6		Vdc			
TEST CONDITION ----- 1. STD. Supply Voltage : 7.5 Vdc 2. Normal Temperature :25 ± 10 /EXTREME-30 - +60 3. STD. Audio Frequency : 1 KHz 4. STD. Deviation : N-BAND : ± 1.5 KHz S-BAND : ± 3 KHz 5. Main Signal Input Level : -47dBm					6. ANT. Impedance : 50 ohm 7. Carrier Frequency : 8. REF. Audio Output : 1V rms 9. Audio Output Load : 8 ohm(Ext) 10. CH. Spacing : N-BAND : 12.5 KHz S-BAND : 25 KHz			

EXTREM CONDITIONS

MODEL : SP-230/250

STANDARD SPEC : TIA/EIA

DESTINATION : WORLD-WIDE

PAGE 6 OF 6

TEST DATE: 2003 . 8 . 3

ITEMS	Limit	Freq	-30	-20	-10	0	+10	+25 (REF)	+50	+60	Remark
SENTIVITY (12dB SINAD) (dBm)	-116	F1									
		F2									
		F3									
MAX AUDIO OUTOUT (Vrms)	1.5	F1									
		F2									
		F3									
AUDIO DISTORTION (%)	10	F1									
		F2									
		F3									
SQ(Audio on) (SINAD)	6 18 db	F1									
		F2									
		F3									
POWER (W)	+2.0 -3.0 DB	F1									
		F2									
		F3									
CURRENT (A)	Max 2.5	F1									
		F2									
		F3									
FREQ.ERROR (ppm)	+/-5	F1									
		F2									
		F3									
PEAK DEV. (KHz)	2.5/5K	F1									
		F2									
		F3									
SPURIOUS & HARMONICS (dBc)	-60dbc	F1									
		F2									
		F3									
REMARK	THE UNIT UNDER TEST WAS IN A TEMPERATURE CHAMBER POWER/CURRENT : 7.5V - +10% - -10% ORDER										

