

# SPECIFICATION FOR APPROVAL

MESSRS :

MODEL :

No.	Customer P/N	Kwang Sung P/N	Descriptions	K.P. Code
1	T.B.A.	KST-F102VA	TUNER PACK KSE TYPE: F102V	PKSTF102VA000000

Approved by (with Company chop)	
Approved Date	



**KWANG SUNG**

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KS07QR0003-A

MESSRS :	FM TUNER PACK	DATE : 2003. 01. 15
MODEL : KST-F102VA	<b>SPECIFICATION</b>	KP CODE: PKSTF102-VA00000-1

This is special specification which differs from our standard specification for customer.

#### 1. ELECTRICAL CHARACTERISTICS

I T E M	DESCRIPTION

#### 2.THE OTHERS

I T E M	DESCRIPTION

						DRAWN	DESIGN	CHECK	APPR.
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page 4	F102VA-4	page 5	-----	page 6	-----				

## 1. APPLICATION

This specification cover the tuner to be used for FM broadcast reception,  
which FM Front End with Detector.

## 2. APPENDED DOCUMENTS

2-1. Dimensions and terminal connection.

Refer to the attached drawing No. ( TOS - 032 )

2-2. Schematic diagram.

As show in the attached drawing No. ( KSD - F028 )

## 3. RECEIVING METHOD

FM section is designed super heterodyne receiving circuit with RF.

Amp ( As shown in the attached drawings )

## 4. ELECTRICAL SPECIFICATION & CHARACTERISTICS

4-1. Electrical specification

4-1-1	RECEIVING SYSTEM	UPPER SIDE BAND SUPERHETERODYNE SYSTEM
4-1-2	RECEIVING FREQUENCY	87.5 MHz - 108.0 MHz
4-1-3	OPERATING SUPPLY VOLTAGE	+B VOLTAGE : 8.2 V
		TUNING VOLTAGE : 1.2 V - 9.0 V
		AGC VOLTAGE : 5.0 V
4-1-4	INPUT IMPEDANCE	75 ohm UNBALANCED
4-1-5	IF OUTPUT IMPEDANCE	300 ohm UNBALANCED
4-1-6	GAIN CONTROL	REVERSE AGC (5V → 0V)
4-1-7	IF	10.7 MHz
4-1-8	CURRENT DRAIN	25 ± 10 mA

## 4-2. ELECTRICAL CHARACTERISTICS

NO	ITEM	CONDITION	SPECIFICATION			
			MIN	TYP	MAX	UNIT
1	SUPPLY VOLTAGE RANGE	GUARANTEED RANGE	7.5	8.2	10	V
2	POWER GAIN	GUARANTEED RANGE	30	38	45	dB
3	NOISE FIGURE	GUARANTEED RANGE	--	7	10	dB
4	GAIN DIFFERENCE	GUARANTEED RANGE	--	7	10	dB
5	IMAGE REJECTION	GUARANTEED RANGE	45	50	--	dB
6	IF REJECTION	GUARANTEED RANGE	60	70	--	dB
7	1/2 IF REJECTION	GUARANTEED RANGE	75	80	--	dB
8	2 X OSC REJECTION	GUARANTEED RANGE	65	70	--	dB
9	IF BAND WIDTH	at 98.1 MHz (-3dB)	300	500	700	kHz
10	OSC OUT VOLTAGE	at 98.1MHz 60dB 1k $\Omega$ LOAD	100	150	--	mVrms
11	SPURIOUS RADIATION	as PER FCC RULE CONTENT	0	--	--	dB
12	AGC REJECTION	5V TO 0V	12	--	--	dB
13	LOCAL OSC DRIFT BY STRONG INPUT SIGNAL	at SIGNAL IS CHANGE FROM 60dB TO 120dB	--	--	$\pm 20$	kHz
14	LOCAL OSC DRIFT BY TEMPERATURE AND CHANGE OF P.G.	WHEN CHANGE OF 25°C IS GIVEN	--	--	$\pm 500$	kHz
		AT LOCAL OF 30°C	--	--	$\pm 6$	dB
15	LOCAL OSC DRIFT BY HUMIDITY AND CHANGE OF P.G.	AFTER UNIT IS KEPT IN ATMOSPHERE OF 40 $\pm 2$ °C,RELATIVE HUMIDITY OF 90% FOR 5 HOURS, FURTHER TO BE LEFT AS IT IS FOR 40 MINUTES IN NORMAL CONDITIONS.	--	--	$\pm 500$	kHz
			--	--	$\pm 6$	dB
16	LOCAL OSC DRIFT BY SUPPLY VOLTAGE AND CHANGE OF P.G.	AT CHANGE OF 10% FROM STANDARD VOLTAGE.	--	--	$\pm 100$	kHz
			--	--	$\pm 5$	dB

## 5. SPECIAL ENVIRONMANT TEST

### 5-1. VIBRATION TEST

At condition. amplitude and oscillation shall be 2mm and 1,000 C.P.M. respectively. There shall be no looseness after each 2 hours of top-bottom back-forth and right-left vibrations.

After this test the gain variation shall be less than 3dB and frequency drift shall be less than 200 kHz.

### 5-2. DROP TEST

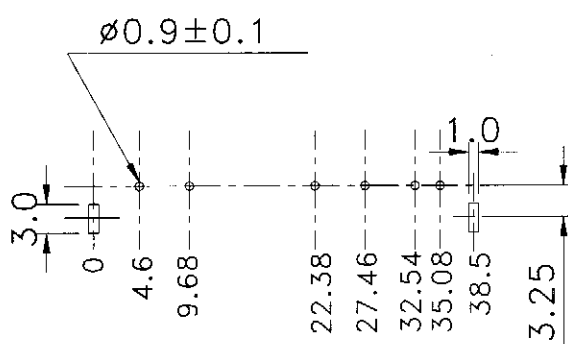
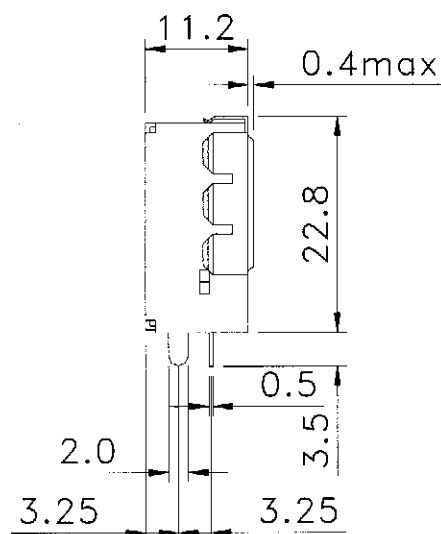
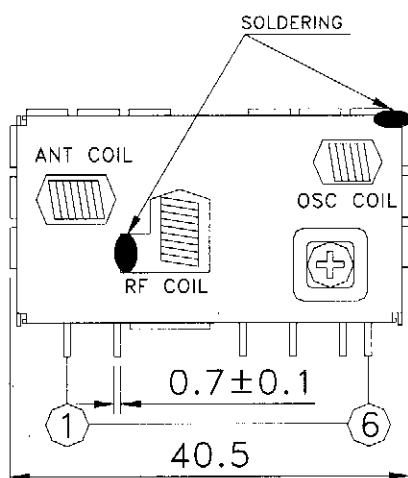
After the packed tuner at 50Cm height is dropped six times from each side, gain variation shall be less then 3dB and frequency drift shall be less than 200 kHz.

### 5-3. TEMPERATURE TEST

After the tuner shall be exposed for each 30 minutes in a test Chamber of temperature cycle at 20°C ,40°C ,60°C ,40°C ,20°C ,0°C , -20°C ,0°C ,20°C and then the tuner shall be operated satisfactorily electrical performance.

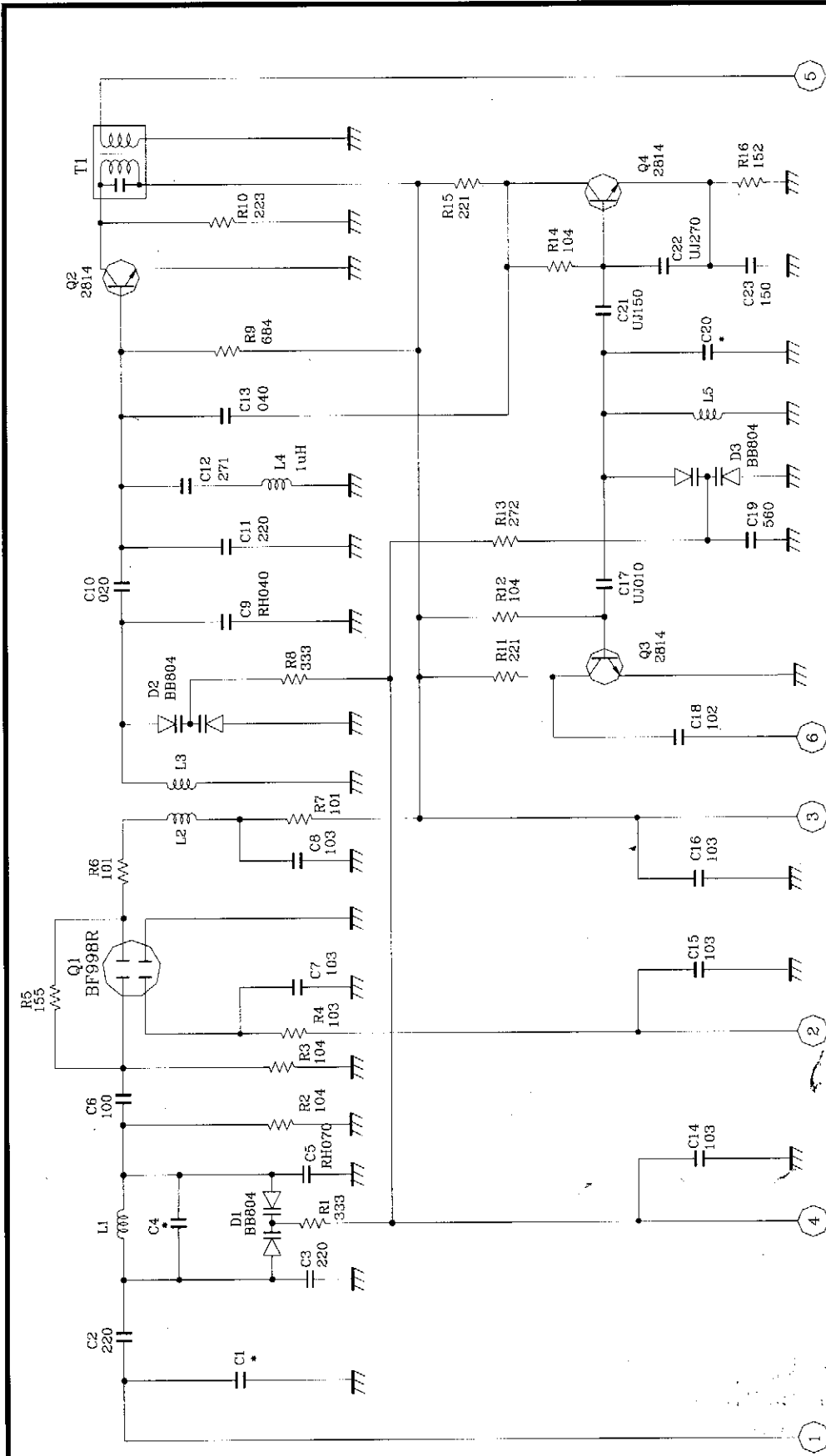
### 5-4. VT CALIBRATION ( AT STANDARD TEST CONDITION )

FREQUENCY (MHz)	TUNING VOLTAGE	ALLOWADLE VOLTAGE
87.5	1.50 (V)	1.2 min (V)
90.0	1.86	
92.0	2.20	
94.0	2.59	
96.0	3.03	
98.0	3.52	
100.0	4.08	
102.0	4.72	
104.0	5.43	
106.0	6.23	
108.0	7.14	9.0 max



NO	TERMINALS
1	ANT
2	AGC
3	B+
4	VT
5	IF OUT
6	OSC OUT

NO	PART'S NO	PART'S NAME	MATERIAL	SIZE	TREATMENT	REMARK
MODEL NO : KST-F102VA			UNIT: mm	SCALE: 1:1	DATE : 2003.03.06	
DRAWN	DESIGNED	CHECKED	APPROVED	DRAW NO	TOS 032	
					???	



EXTERNAL TERMINAL		REFERENCE		PART'S NAME		MATERIAL		SIZE		TREATMENT		REMARK	
1	ANT	6	OSC OUT	*D1,2,3: BB804*KV14407???		NO		MODEL NO : KST-F102VA		JMT: mm		DATE: 2002.03.14.	
2	AGC	7		??KV14407.??C20C2012 CDG		DRAWN		DESIGNED		CHECKED		APPROVED	
3	B+	8		1H 010C								DRAW NO	
4	VT	9										KSD-F028	
5	IF OUT	10										???	