

NOV. 16, 2000

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Checked by: SungIl Park



Issued by: Kim, MyeongKee



SPECIFICATION

MODEL: 5457TS

SURFACE ACOUSTIC WAVE FILTER

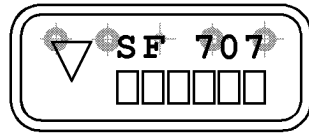
PRELIMINARY

To: 삼성전자 영상디지털사업부

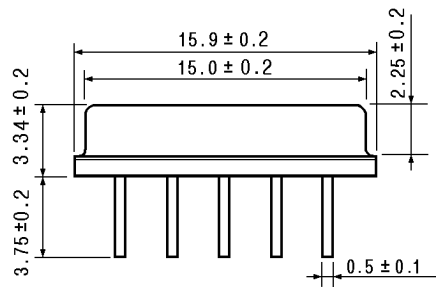
SAMSUNG ELECTRO-MECHANICS CO., LTD.
314. MAETAN3-DONG, PALDAL-KU,
SUWON-SI, KYUNGKI-DO, KOREA, 442-743

1. OUTLINE DRAWING AND DIMENSION

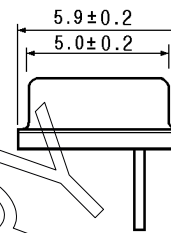
[Unit : mm]



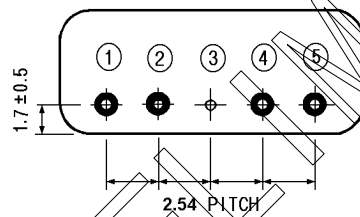
[TOP VIEW]



[SIDE VIEW]



[RIGHT SIDE VIEW]



[BOTTOM VIEW]

PIN NO.	FUNCTION
①	INPUT
②	GROUND
③	GROUND
④	OUTPUT
⑤	OUTPUT

2. MARKING

SF 903
 ▽ 5457TS

Color : Black/Red Ink or LASER Marking

Model No. : 5457TS (S-type Package)

Lot No. : 903

Pin No. 1: ▽

3. PERFORMANCE**3-1. APPLICATION**

IF Filter for NTSC-M/N Intercarrier

3-2. MAXIMUM RATING

(Ta = 25℃)

CHARACTERISTICS		RATING	UNITS
Input signal voltage		5	V _{p-p}
DC voltage	between inputs	3	V
	between outputs		
	between others	15	
AC voltage ; 50~60 Hz		10	V _{p-p}
Operating temperature range		-25 ~ +65	℃
Storage temperature range		-25 ~ +85	℃

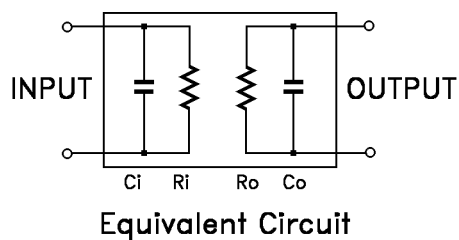
3-3. ELECTRICAL CHARACTERISTICS

3-3-1. TABLE

Ta=25℃(45℃)

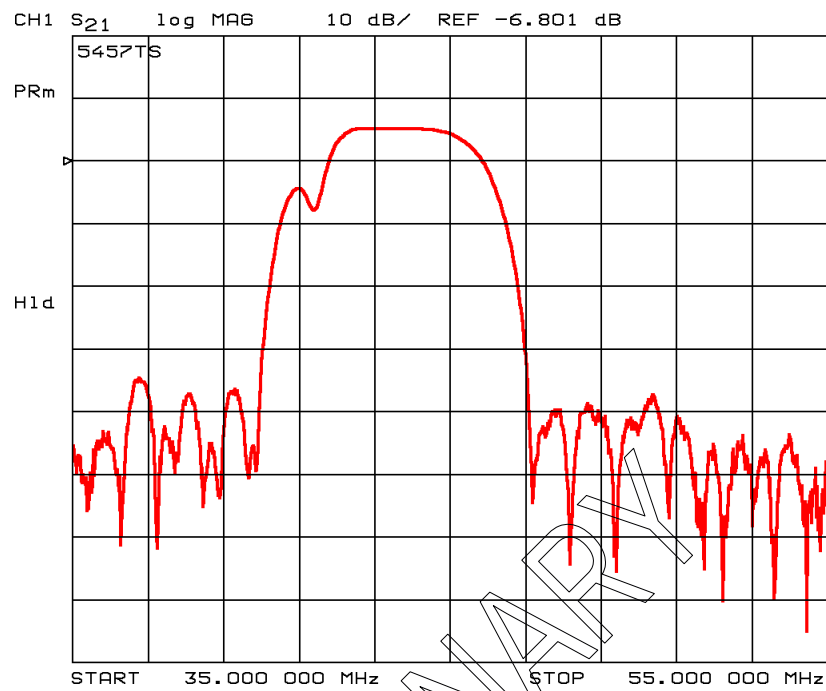
CHARACTERISTICS		Freq. (MHz)	Specification				Test Fixture
			Min.	Typ.	Max.	Units	
Insertion Loss (α)		44.06(44.00)	0.8	1.8	2.8	dB	No. 1
Relative Attenuation (Ref.: α)	adj.picture	39.81(39.75)	43	55	-	dB	
	sound	41.31(41.25)	11.0	12.5	14.0		
	color	42.23(42.17)	-0.5	0.5	1.5		
	picture	45.81(45.75)	4.0	5.0	6.0		
	adj.sound	47.31(47.25)	43	45	-		
	lower sidelobe	35.06 ~ 39.81 (35.00~39.75)	37	40	-		
	upper sidelobe	47.31 ~ 55.06 (47.25~55.00)	37	42	-		
Temperature Coefficient of Frequency Response				-72		ppm/°C	
Impedance	R _i /C _i					k Ω /pF	
	R _o /C _o					k Ω /pF	

Impedance equivalent circuit is shown below.

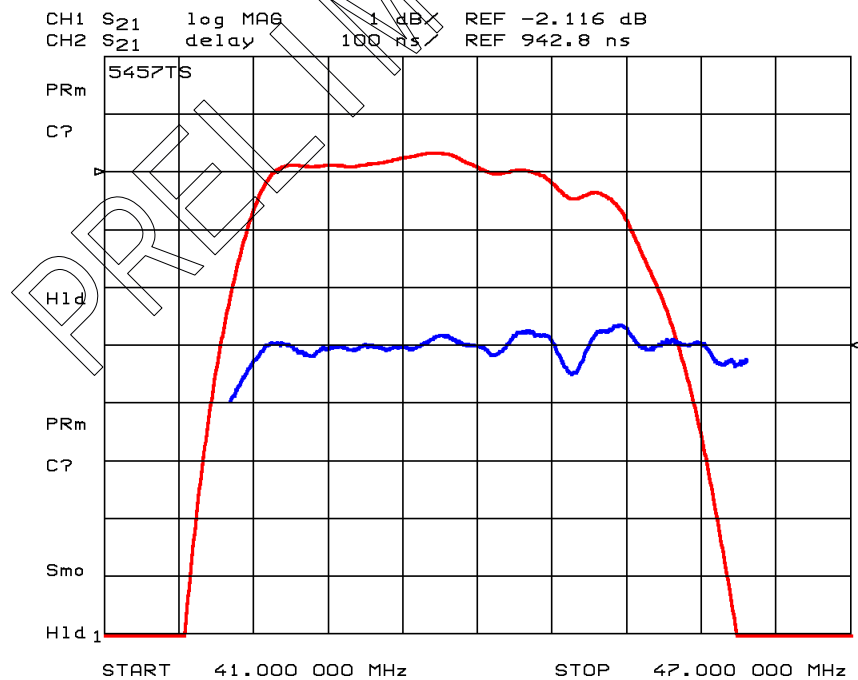


3-3-2. GRAPH

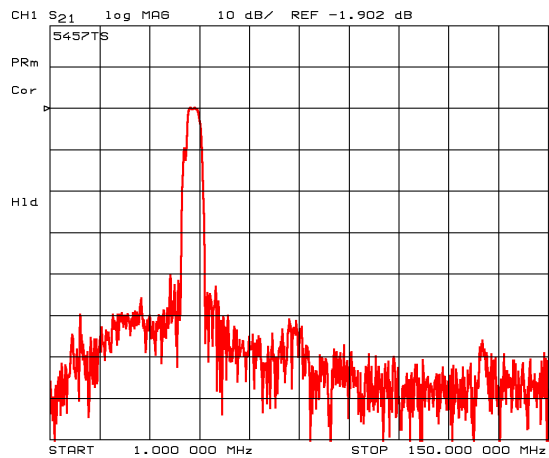
Frequency Response by Test Fixture No. 1



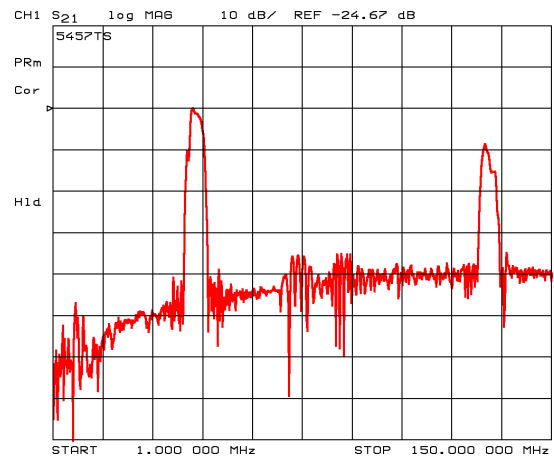
Frequency Response by Test Fixture No. 1



Test Fixture No. 1

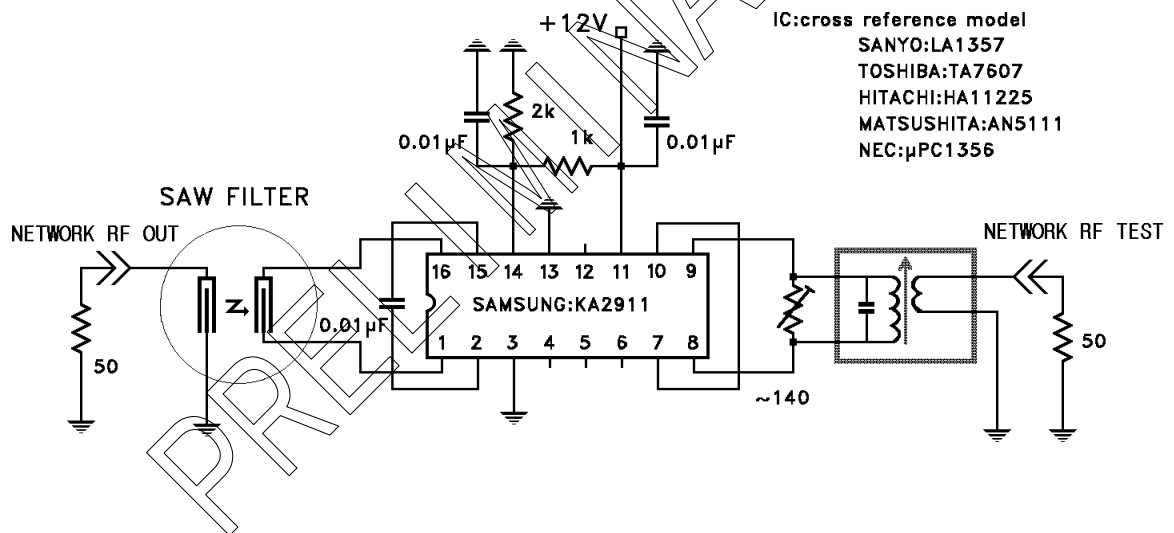


Test Fixture No. 2

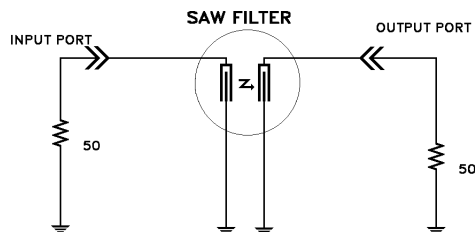


3-3-3. TEST FIXTURE

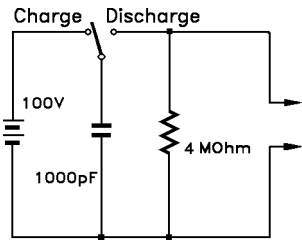
No. 1



No. 2



4. RELIABILITY

ITEM	TEST CONDITION	LIMIT
4-1. LIFE TEST		
High Temperature Operation	Ta=+70±2℃, 500h, DC 3V, Output ports load.	insertion loss : initial ±1.5dB amplitude response : pass bandwidth α -1dB,-3dB,-30dB initial ±0.5MHz (with test fixture on No. 1)
High Temperature Exposure	Tstg=+85±2℃, 500h	
Low Temperature Exposure	Ta=-40±2℃, 500h	
Moisture Resistance	Ta=+40±2℃, RH 90~95%, 500h	
Salt Spray	After soldering, 5% salt solution, 24h	
4-2. HEAT CYCLE, SOLDERING TEST		
Temperature Cycle	(-20℃,30min→25℃,5min→80℃,30min→25℃,5min) 5 cycle.	Same as 4-1.
Solderability	Immerse the pins in melt solder at 230±5℃ for 2+1-0 sec.	More than 90% of total area of the pins should be covered with solder
Heat Resistivity for Melt Solder	Immerse the pins in melt solder at 260±5℃ for 10+2-0 sec.	Same as 4-1.
4-3. MECHANICAL TEST		
Vibration	Amplitude=2mm, 20↔60Hz, sweep time 1 minute, 3 direction each 8h.	Same as 4-1.
Drop	On concrete plate from 1m high, 3 times.	
Lead Bend	90° bending with 450g weight, 2 times.	Should not be broken.
Lead Pull	After bending lead parallel to header base, pull with 1kg force for 1 minute.	Should not be lost or broken.
4-4. SURGE TEST		
Surge Test	10 times between any leads 	Same as 4-1.

5. REVISION

Date	Page	Revision	Reason

PRELIMINARY