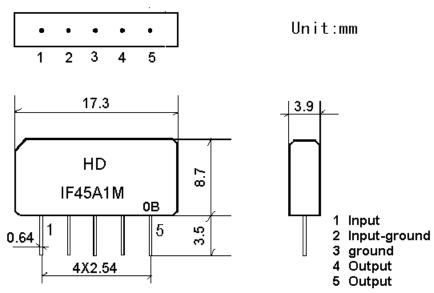
1.SCOPE

The SAW filter series have broad line up products meeting all broadcast standard including NTSC,PAL and SECAM systems. These filters are composed of two interdigital transducers on a single-crystal. piezoelectrical chip. They are used in electronic equipments such as TV and so on.

2.Construction

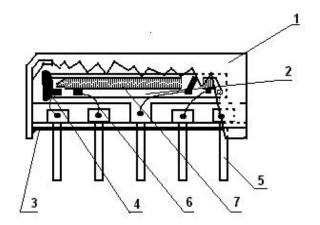
2.1 Dimension and materials

Type: IF45A1M



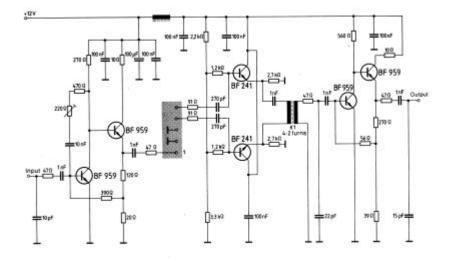
0: year(0,1,2,3,4,5,6,7,8,9)

B:product in this quarter(A:1~3,B:4~6,C:7~9,D:10~12)



Components	Materials	
1.Outer casing	PPS	
2.Substrate	Lithium niobate	
3.Base	Epoxy resin	
4.Absorber	Epoxy resin	
5.Lead	Cu alloy+Au plate	
6.Bonding wire	AlSi alloy	
7.Electrode	Al	

2.2. Circuit construction, measurement circuit



Test circuit for SIP-5 filter Input impedance of the symmetrical post-amplifier: 2 k Ω in parallel with 3 pF

3. Characteristics

Standard atmospheric conditions

Unless otherwise specified, the standard rang of atmospheric conditions for making measurements and tests is as follows;

Ambient temperature : 15 to 35
Relative humidity : 25% to 85%
Air pressure : 86kPa to 106kPa

Operating temperature rang

Operating temperature rang is the rang of ambient temperatures in which the filter can be

operated continuously. -10 ~ +60

Storage temperature rang

Storage temperature rang is the rang of ambient temperatures at which the filter can be stored

without damage.

Conditions are as specified elsewhere in these specifications. $-40 \sim +70$

Reference temperature +25

3.1 Maximum Rating

DC voltage	VDC	12	V	Between any terminals
AC voltage	Vpp	10	V	Between any terminals

3.2 Electrical Characteristics

		Freq	Min	typ	max	
Insertion at Reference		44.06MHz	10.7	12.7	14.7	dB
		45.81MHz	4.5	6.0	7.5	dB
		42.23MHz	-0.5	1.0	2.5	dB
	Relative attenuation		-	3.0	-	dB
Relative att			1	7.4	ı	dB
		41.31MHz	17.1	19.1	21.1	dB
			42.0	50		dB
		47.31MHz	40.0	48		dB
Sidelobe	35.06~39.81MHz 35.0	dB				
Sidelobe	47.31~	55.06MHz	35.0			dB
Temp	Temperature coefficient		-72			ppm/k

3.3 Environmental Performance Characteristics

Item Test condition	Allowable change of absolute	
	Level at center frequency(dB)	
High temperature test	< 1.0	
70 1000H	< 1.0	
Low temperature test	< 1.0	
-40 1000H	< 1.0	
Humidity test	< 1.0	
40 90-95% 1000H	< 1.0	
Thermal shock		
-20 ==25 ==80 20 cycle	< 1.0	
30M 10M 30M		
Solder temperature test	< 1.0	
Sold temp.260 for 10 sec.	< 1.0	
Soldering	More then 95% of total	
Immerse the pins melt solder	area of the pins should	
at 260 +5/-0 for 5 sec.	be covered with solder	

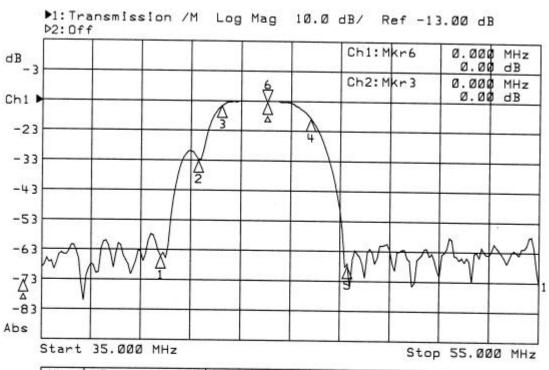
3.4 Mechanical Test

Item	Allowable change of absolute
Test condition	Level at center frequency(dB)
Vibration test	
600-3300rpm amplitude 1.5mm	<1.0
3 directions 2 H each	
Drop test	<1.0
On maple plate from 1 m high 3 times	<1.0
Lead pull test	<1.0
Pull with 1 kg force for 30 seconds	<1.0
Lead bend test	-1.0
90° bending with 500g weigh 2 times	<1.0

3.5 Voltage Discharge Test

Item	Allowable change of absolute
Test condition	Level at center frequency(dB)
Surge test	
Between any two electrode	
100V 1000pF 4Mohm	<1.0

3.6 Frequency response



Mkr	ΔFreq (MHz)	Ch 1 (dB)	Freq (MHz)	Ch 2 (dB)
1	-4.250	-51.97		OII & CODY
2	-2.750	-19.69		
3	-1.830	-1.46	l .	
4	1.750	-5.80	t .	
5	3.250	-54.68		
6	0.000	0.00		1
7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.00	. 39	
8				1

