



Approved by:

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# SPECIFICATION

PRODUCT: SAW FILTER

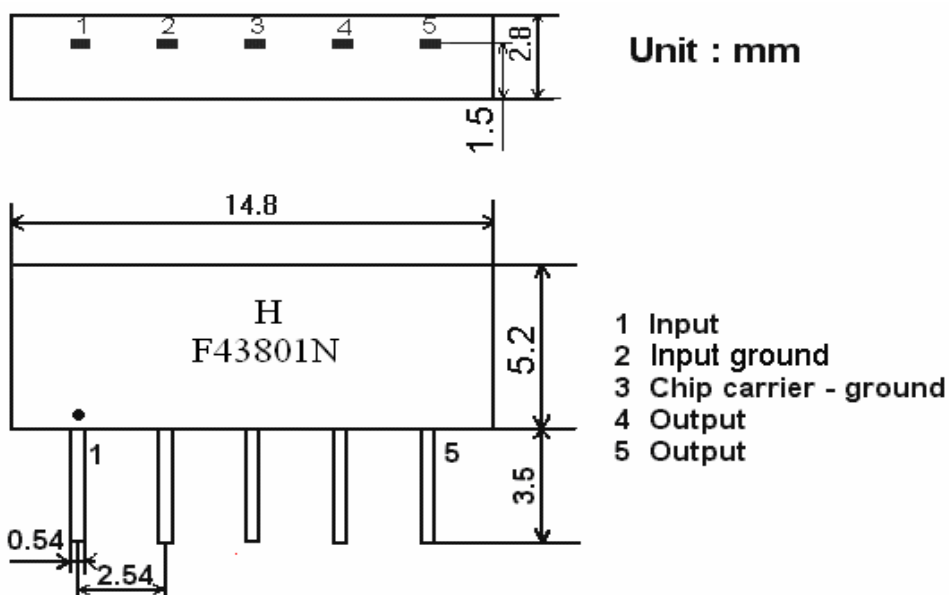
MODEL: HF43801N (K3957D) SIP5D

**HOPE MICROELECTRONICS CO.,LIMITED**

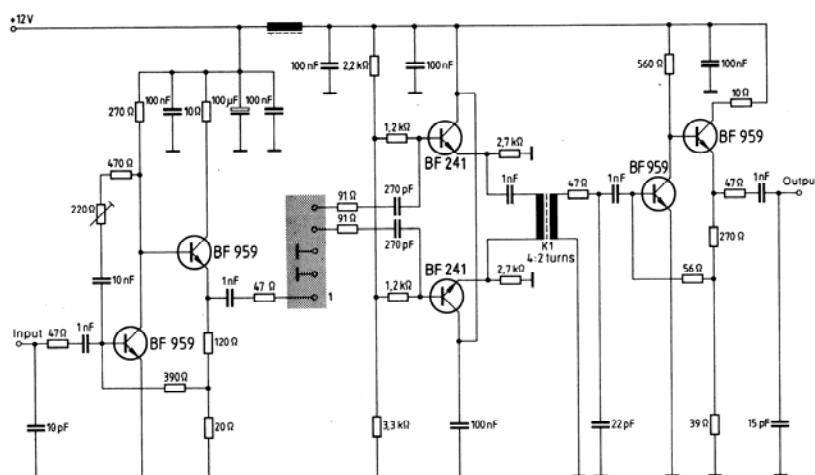
## 1. Construction

### 1.1 Dimension and materials

Type : F43801N



### 1.2. Circuit construction, measurement circuit



Test circuit for SIP-5 filter

Input impedance of the symmetrical post-amplifier: 2 kΩ in parallel with 3 pF

## 2.Characteristics

### Standard atmospheric conditions

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

- Ambient temperature : 15°C to 35°C
- 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.  $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$

### **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.  $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$

### **Reference temperature** $+25^{\circ}\text{C}$

## **2.1 Maximum Rating**

<b>DC voltage</b>	<b>VDC</b>	<b>12</b>	<b>V</b>	<b>Between any terminals</b>
<b>AC voltage</b>	<b>Vpp</b>	<b>10</b>	<b>V</b>	<b>Between any terminals</b>

## **2.2 Electrical Characteristics**

Source impedance  $Z_s=50\ \Omega$

Load impedance  $Z_L=2k\ \Omega // 3pF$   $T_A=25^{\circ}\text{C}$

Item	Freq	min	typ	max	
<b>Insertion attenuation</b>	36.50MHz	12.5	14.5	16.5	dB
Relative attenuation Reference level (at 36.50MHz)	33.57MHz	0.0	1.0	2.0	dB
	31.50MHz	42.0	52.0	-	dB
	32.50MHz	30.0	50.0	-	dB
	30.00MHz	42.0	51.0	-	dB
	31.00MHz	42.0	51.0	-	dB
	39.50MHz	42.0	51.0	-	dB
	40.00MHz	42.0	55.0	-	dB
	40.00MHz	42.0	53.0	-	dB
<b>Sidelobe</b>	25.00~30.00MHz	37.0	45.0	-	dB
	39.50~45.00MHz	35.0	41.0	-	dB
<b>Temperature coefficient of frequency</b>		-72			Ppm/k

## **2.3 Environmental Performance Characteristics**

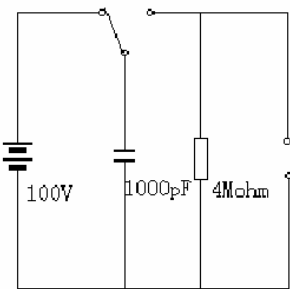
Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test $70^{\circ}\text{C}$ 1000H	< 1.0
Low temperature test $-40^{\circ}\text{C}$ 1000H	< 1.0
Humidity test $40^{\circ}\text{C}$ 90-95% 1000H	< 1.0
Thermal shock	< 1.0

-20°C==25°C==80°C 20 cycle 30M 10M 30M	
Solder temperature test Sold temp.260°C for 10 sec.	< 1.0
Soldering Immerse the pins melt solder at 260°C+5/-0°C for 5 sec.	More then 95% of total area of the pins should be covered with solder

## 2.4 Mechanical Test

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

## 2.5 Voltage Discharge Test

Item Test condition	Allowable change of absolute Level at center frequency(dB)
Surge test Between any two electrode  	<1.0

### 3.6 Frequency response:

►1:Transmission Log Mag 10.0 dB/

