



Approved by:

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# SPECIFICATION

PRODUCT: SAW FILTER

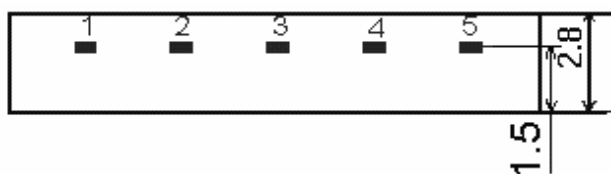
MODEL: HF65801N (F811CPL) SIP5D

**HOPE MICROELECTRONICS CO., LIMITED**

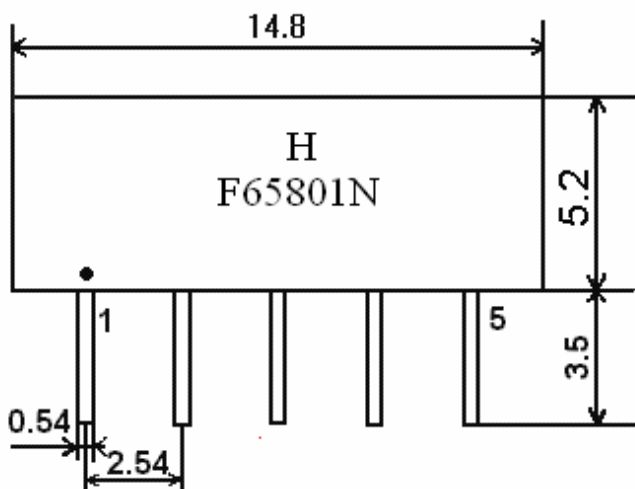
# 1. Construction

## 1.1 Dimension and materials

Type : F65801N

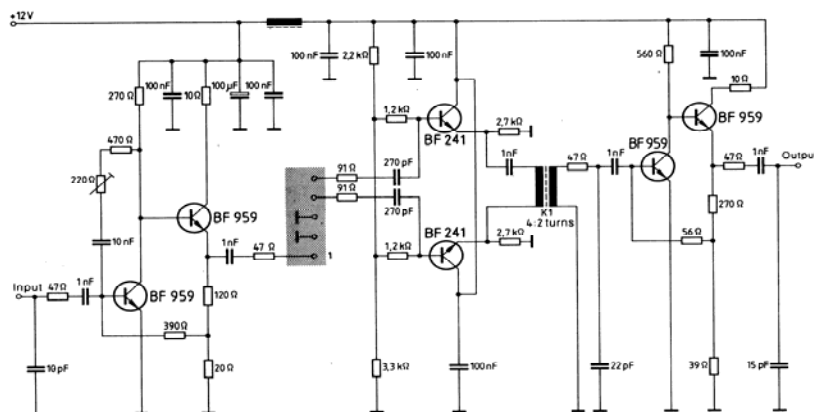


Unit : mm



- 1 Input
- 2 Chip carrier - ground
- 3 Output (Sound)
- 4 Output (Video)
- 5 Output (Video)

## 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 rang 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:

### Characteristics of channel 1 (PIF)

Source impedance  $Z_S=50\ \Omega$

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

| Item                                     | Freq           | min  | typ  | max   |    |
|--|----------------|------|------|-------|----|
| Insertion attenuation<br>Reference level | 57.08MHz       | 14.6 | 16.6 | 18.6  | dB |
| Relative attenuation                     | 58.83MHz       | 6.7  | 5.2  | 3.7   | dB |
|  | 55.25MHz       | -    | -0.9 | 2.0   | dB |
|  | 54.33MHz       | 18.0 | 31.0 | -     | dB |
|  | 52.83MHz       | 40.0 | 54.0 | -     | dB |
|  | 60.33MHz       | 40.0 | 45.0 | -     | dB |
| Sidelobe                                 | 45.08~52.83MHz | 30.0 | 41.0 | -     | dB |
|  | 60.33~65.08MHz | 30.0 | 38.0 | -     | dB |
| Temperature coefficient                  |                | -72  |      | ppm/k |    |

### Characteristics of channel 2 (SIF)

Source impedance  $Z_S=50\ \Omega$

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

| Item                                     | Freq           | min  | typ  | max   |    |
|--|----------------|------|------|-------|----|
| Insertion attenuation<br>Reference level | 54.33MHz       | 14.0 | 16.0 | 18.0  | dB |
| Relative attenuation                     | 52.83MHz       | 23.0 | 30.0 | -     | dB |
|  | 55.25MHz       | 12.0 | 18.0 | -     | dB |
|  | 58.75MHz       | 30.0 | 39.0 | -     | dB |
|  | 60.33MHz       | 30.0 | 37.0 | -     | dB |
| Sidelobe                                 | 45.08~52.83MHz | 25.0 | 29.0 | -     | dB |
|  | 60.33~65.08MHz | 27.0 | 32.0 | -     | dB |
| Temperature coefficient                  |                | -72  |      | ppm/k |    |

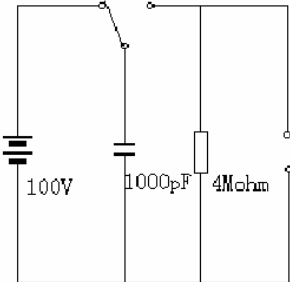
### 2.3 Environmental Performance Characteristics

| Item Test condition   | Allowable change of absolute Level at center frequency(dB)            |
|---|---|
| High temperature test<br>70°C 1000H                                     | < 1.0   |
| Low temperature test<br>-40°C 1000H                                     | < 1.0   |
| Humidity test<br>40°C 90-95% 1000H                                      | < 1.0   |
| Thermal shock<br>-20°C==25°C==80°C 20 cycle<br>30M 10M 30M              | < 1.0   |
| Solder temperature test<br>Sold temp.260°C for 10 sec.                  | < 1.0   |
| Soldering<br>Immerse the pins melt solder<br>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<br>600-3300rpm amplitude 1.5mm<br>3 directions 2 H each | <1.0   |
| Drop test<br>On maple plate from 1 m high 3 times                      | <1.0   |
| Lead pull test<br>Pull with 1 kg force for 30 seconds                  | <1.0   |
| Lead bend test<br>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<br>Between any two electrode<br><br> | <1.0   |