



Approved by:

Checked by:

Issued by:

SPECIFICATION

PRODUCT: SAW FILTER

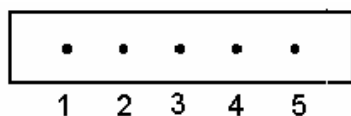
MODEL: HF23802M (K2979M) SIP5K

HOPE MICROELECTRONICS CO.,LIMITED

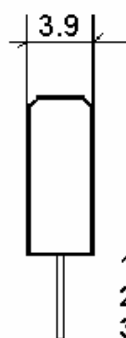
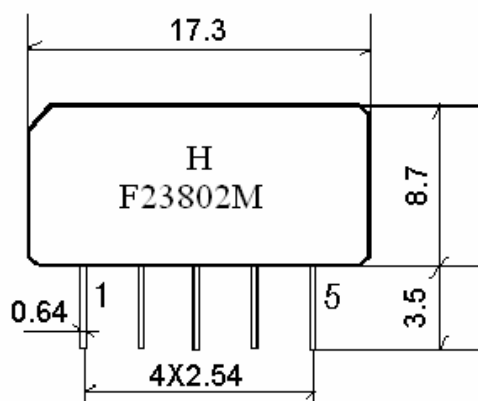
1. Construction

1.1 Dimension and materials

Type : F23802M

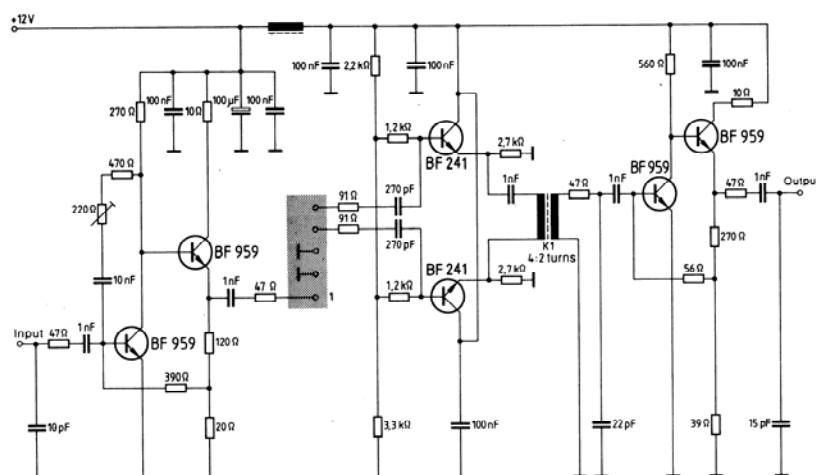


Unit : mm



- 1 Input
- 2 Input-ground
- 3 ground
- 4 Output
- 5 Output

1.2. 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

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

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

2.2 Electrical Characteristics

Source impedance $Z_s=50\ \Omega$

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

Items		Freq	Min	typ	max	
Insertion attenuation Reference level		36.50MHz	15.5	17.5	19.5	dB
Relative attenuation		38.00MHz	4.5	6.0	7.5	dB
		33.57MHz	14.0	16.0	18.0	dB
		32.50MHz	14.0	16.0	18.0	dB
		31.50MHz	14.0	16.0	18.0	dB
		30.00MHz	42.0	62.0		dB
		39.50MHz	40.0	50.0		dB
Sidelobe	25.00~30.00MHz	37.0	48.0			dB
	39.50~45.00MHz	35.0	40.0			dB
Temperature coefficient			-72			Ppm/k

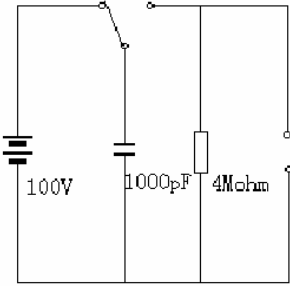
2.3 Environmental Performance Characteristics

Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70°C 1000H	< 1.0
Low temperature test -40°C 1000H	< 1.0
Humidity test 40°C 90-95% 1000H	< 1.0
Thermal shock -20°C==25°C==80°C 20 cycle 30M 10M 30M	< 1.0
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

2.6 Frequency response:

