



Approved by:
Checked by:
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# SPECIFICATION

PRODUCT: SAW FILTER

MODEL: HF4507M (M1962M) SIP5K

**HOPE MICROELECTRONICS CO., LIMITED**



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

	Freq	Min	typ	max	
<b>Insertion attenuation</b>	44.00MHz	9.4	11.4	13.4	dB
Reference level					
Relative attenuation	45.75MHz	3.6	5.1	6.6	dB
	42.17MHz	3.7	5.2	6.7	dB
	41.25MHz	17.7	19.7	21.7	dB
	39.75MHz	42.0	60.0		dB
	47.25MHz	41.0	57.0		dB
<b>Sidelobe</b>	35.00~39.75MHz	35.0	45.0		dB
	47.25~55.00MHz	35.0	42.0		dB
Temperature coefficient		-72			ppm/k

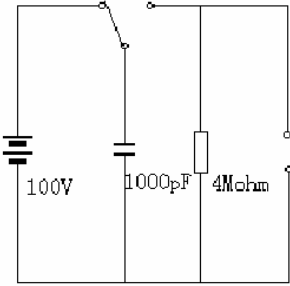
### 2.3 Environmental Performance Characteristics

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

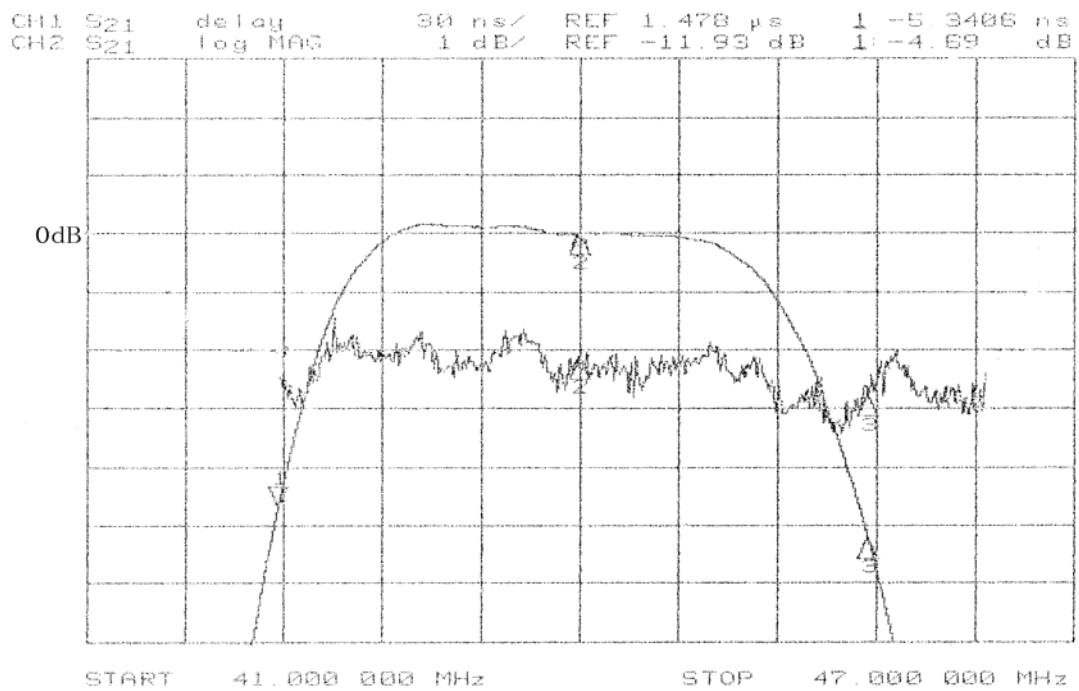
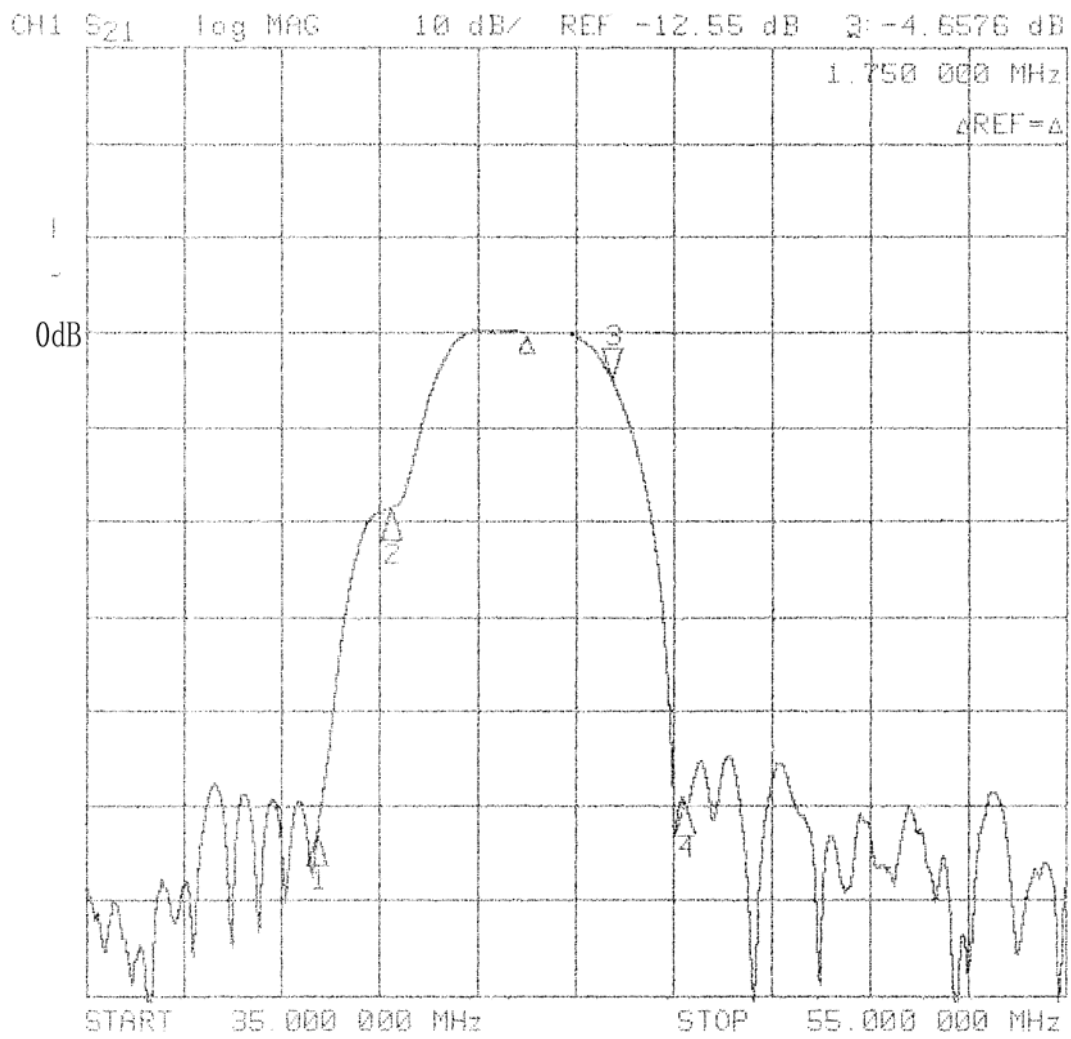
### 2.4 Mechanical Test

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:



**Time domain response:**

