

Approved by:	
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# **SPECIFICATION**

PRODUCT: SAW FILTER

MODEL: HB4301D (X6864D) SIP5D

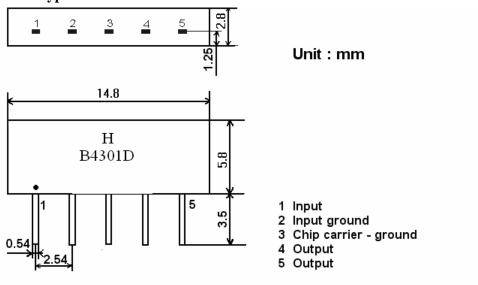
# HOPE MICROELECTRONICS CO.,LIMITED

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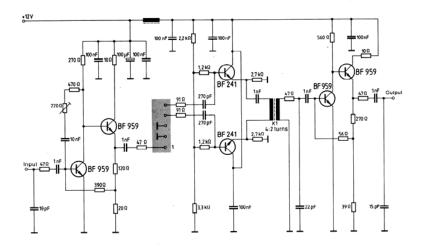
# 1.Construction

#### 1.1 Dimension and materials





# 1.2. Circuit construction, measurement circuit



Test circuit for SIP-5 filter Input impedance of the symmetrical post-amplifier: 2 k $\Omega$  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  $: 15^{\circ}\mathbb{C}$  to  $35^{\circ}\mathbb{C}$  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℃

#### 2.1 Maximum Rating

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

#### 2.2 Electrical Characteristics

Source impedance  $Zs=50 \Omega$ 

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

Load Imped	$L_{L}$		K 35 // 3pr			1 A-23 C
Iten	1	Freq	min	typ	max	
Center fre	quency	Fo	-	43.75	-	MHz
Insertion att		43.81MHz	13.2	15.2	17.2	dB
Pass bandwidth		$\mathrm{B}_{\mathrm{3dB}}$	-	6.2	-	MHz
rass va	illawiatii	$\mathrm{B}_{\mathrm{30dB}}$	-	7.6	-	MHz
Relative attenuation		40.71MHz	-	3.0	-	dB
		46.91MHz	-	2.2	-	dB
	35.06~	39.06MHz	36.0	45.0		dB
Sidelobe	39.06~39.76MHz		34.0	42.0		dB
Sidelobe	47.86~4		34.0	42.0		dB
	49.66~55.06MHz		36.0	46.0		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	< 1.0
70°C 1000H	< 1.0
Low temperature test	< 1.0
-40°C 1000H	< 1.0
Humidity test	. 1.0
40°C 90-95% 1000H	< 1.0
Thermal shock	
$-20^{\circ}\text{C} == 25^{\circ}\text{C} == 80^{\circ}\text{C}$ 20 cycle	< 1.0
30M 10M 30M	

Solder temperature test	.10
Sold temp.260°C for 10 sec.	< 1.0
Soldering	More then 95% of total
Immerse the pins melt solder	area of the pins should
at $260^{\circ}\text{C} + 5/-0^{\circ}\text{C}$ for 5 sec.	be covered with solder

# **2.4 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

# 2.5 Voltage Discharge Test

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

#### 2.6 Frequency response:

