



Approved by:

Checked by:

Issued by:

SPECIFICATION

PRODUCT: SAW FILTER

MODEL: HB3615N (X6867D) SIP5D

HOPE MICROELECTRONICS CO., LIMITED

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°C ~ +60°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°C ~ +70°C

Reference temperature +25°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 Ω

Load impedance Z_L=2k Ω //3pF T_A=25°C

Item	Freq	min	typ	max	
Center frequency	F _o	-	36.00	-	MHz
Insertion attenuation Reference level	36.00MHz	20.60	22.60	24.60	dB
Amplitude ripple: 32.35~39.65 MHz		-	1.0	1.5	dB
Pass bandwidth	B _{1.5dB}	-	7.8	-	MHz
	B _{3dB}	-	8.1	-	MHz
	B _{15dB}	-	9.0	-	MHz
	B _{30dB}	-	9.5	-	MHz
Relative attenuation	31.65MHz	7.0	8.7	-	dB
	40.35MHz	7.0	10.7	-	dB
	31.30MHz	20.0	25.0	-	dB
	40.70MHz	20.0	29.0	-	dB
Sidelobe	25.00~31.00MHz	31.0	36.0	-	dB
	41.00~45.00MHz	30.0	38.0	-	dB
Temperature coefficient		-72			ppm/k

2.3 Environmental Performance Characteristics

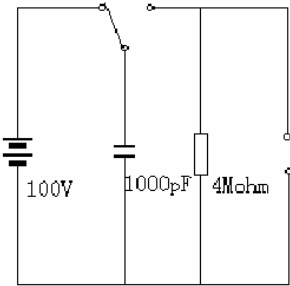
Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70°C 1000H	< 1.0
Low temperature test -40°C 1000H	< 1.0
Humidity test	< 1.0

40°C 90-95% 1000H	
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

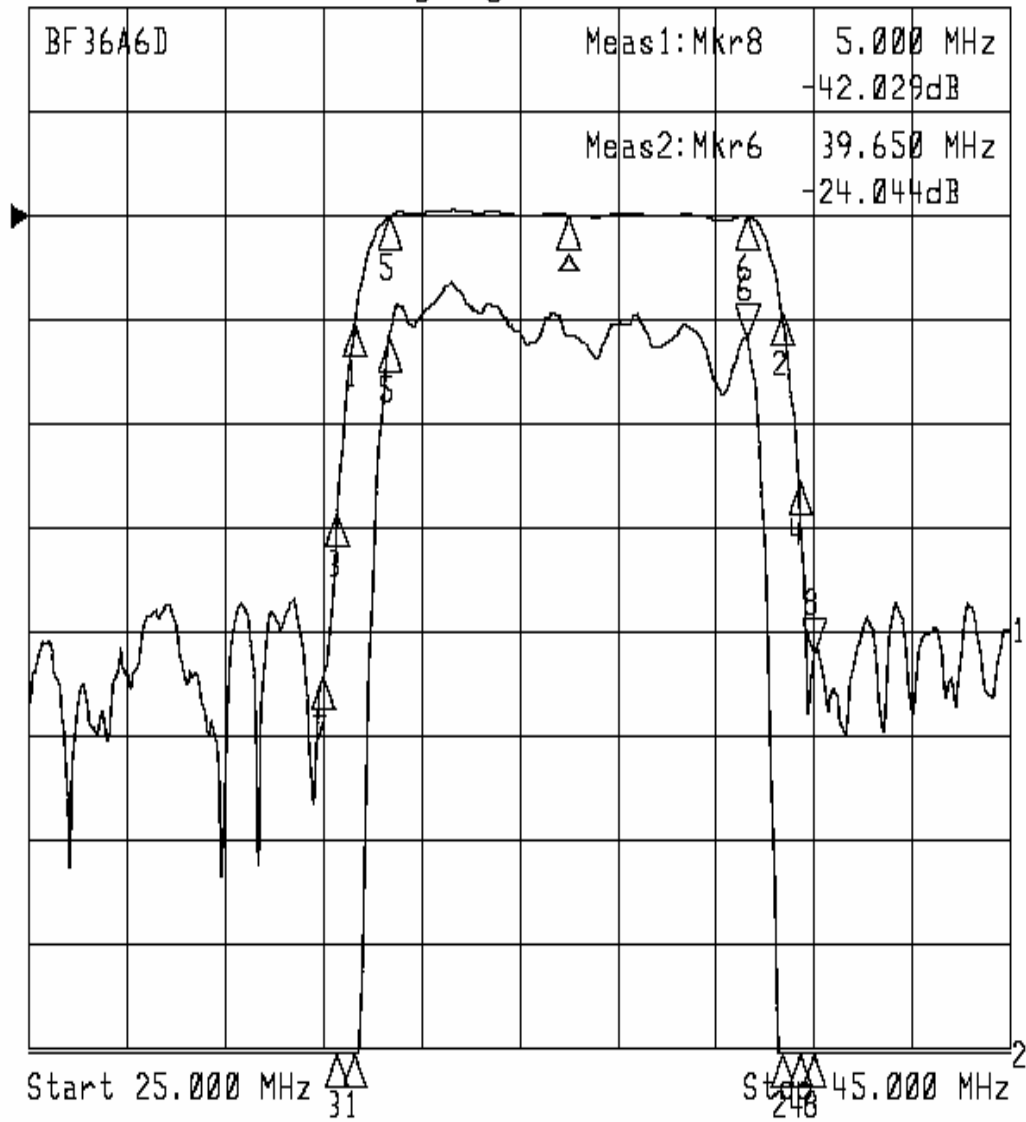
2.5 Voltage Discharge Test

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

2.6 Frequency response:

►1: Transmission /M Log Mag 10.0 dB/ Ref -24.07 dB

►2: Transmission /M Log Mag 1.0 dB/ Ref -22.86 dB



1: Mkr Δ (MHz)	dB	2: Mkr (MHz)	dB
1: -4.3500	-10.381	1: 31.6500	-34.436
2: 4.3500	-9.249	2: 40.3500	-33.290
3: -4.7000	-28.626	3: 31.3000	-52.680
4: 4.7000	-25.594	4: 40.7000	-49.639
5: -3.6500	0.036	5: 32.3500	-24.027
6: 3.6500	0.007	6: 39.6500	-24.044
7: -5.0000	-44.215		
8: 5.0000	-42.029	8: 41.0000	-66.058