HD SHOULDER 好达

规格书编号: HDBF16820A24SP02

SPEC NO : HDBF16820A24SP02

产品规格书
SPECIFICATION

CUSTOMER 客 户:	ZTE		
PRODUCT 产 品:	SAW FILTER		
MODEL NO 型 号:	HDBF16820A24 SMD-24		
PREPARED 编 制:	俞虹	CHECKED 审 核:	邓攀
APPROVED 批 准:	倪山林	D A T E 日 期:	2009-03-05

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子股份有限公司
Shoulder Electronics Limited

更改历史记录
History Record

更改日期 Date	规格书编号 Spec. No.	产品型号 Part No.	客户产品型号 Customer No.	更改内容描述 Modify Content	备注 Remark
2009-01-05	HDBF16820 A24SP01	HDBF16820 A24			Ver.01 (Original)
2009-03-05	HDBF16820 A24SP02	HDBF16820 A24		更新了性能指标及测试图	Ver.02

1. SCOPE

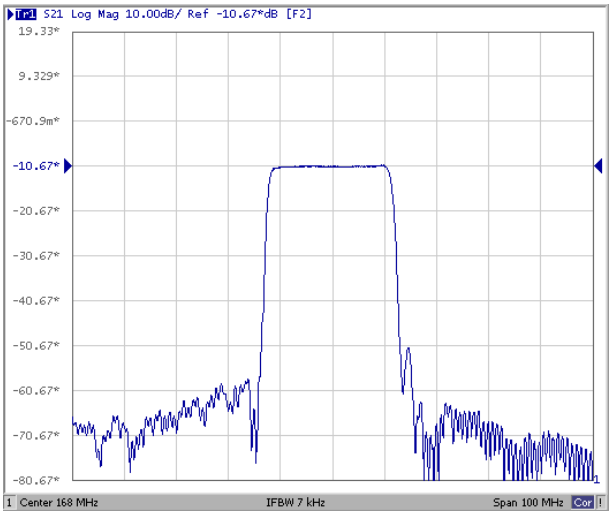
This specification shall cover the characteristics of SAW filter HDBF16820A24

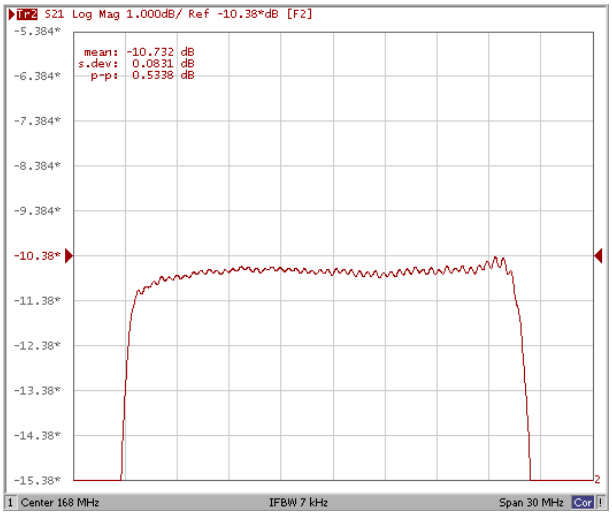
2. ELECTRICAL SPECIFICATION

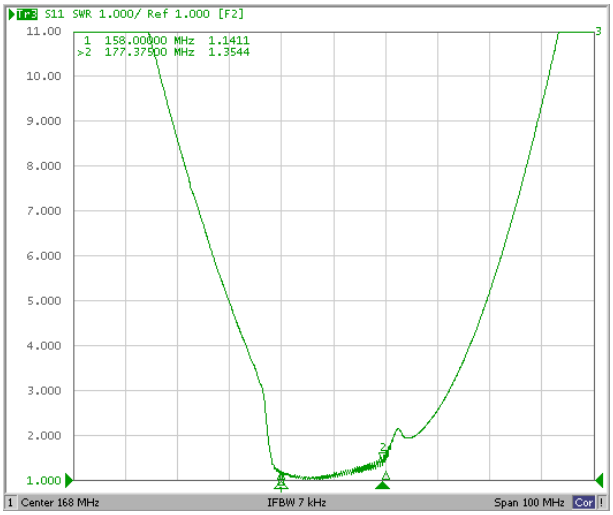
Max Incident Power in Passband	10 dBm
Max voltage between any 2 terminals	30 VDC
Storage Temperature Range	-50 to +125 ℃

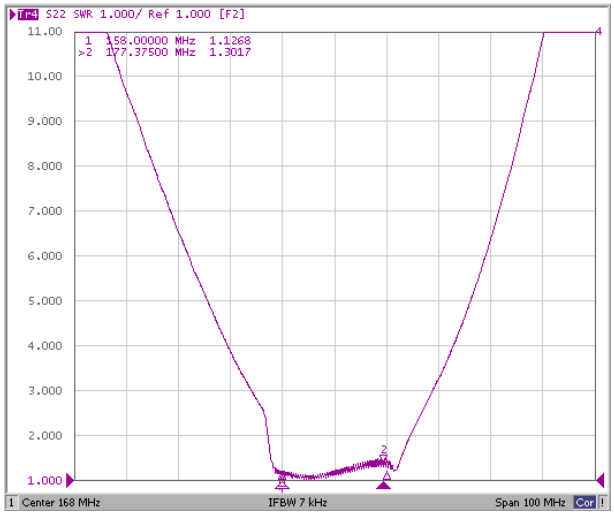
Electronic Characteristics

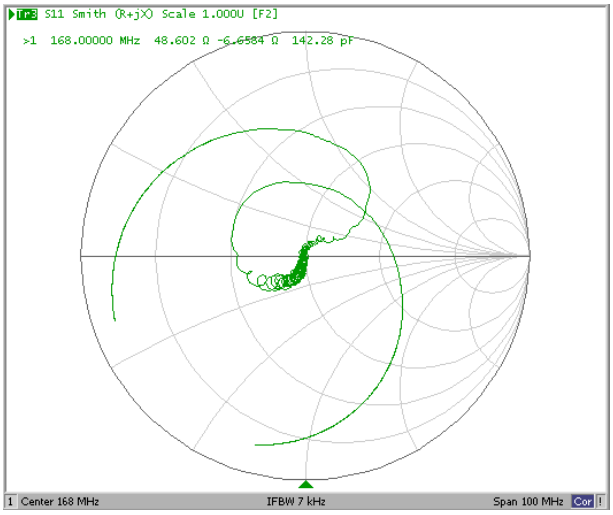
Parameter	Min	Typ	Max	Units
Center Frequency		168		MHz
Insertion Loss		11.0	12.0	dB
-1dB Bandwidth	20.0	22.4		MHz
-3dB Bandwidth		23.4		MHz
-35dB Bandwidth		26.2	28	MHz
Amplitude Ripple(158~178MHz)		0.5	0.8	dB
Group Delay Ripple(158~178MHz)		30	100	ns
Absolute Delay at 168MHz		1.13	1.5	us
Input VSWR(Matching Network)		1.3	1.7	
Output VSWR(Matching Network)		1.3	1.7	
Stopband Rejection 0~138MHz, 198MHz~1GHz	40	50		dB
Input/Output Impedance		50		ohm
Operating Temperature Range	-40		+85	℃
Material Temperature coefficient		-94		ppm/℃

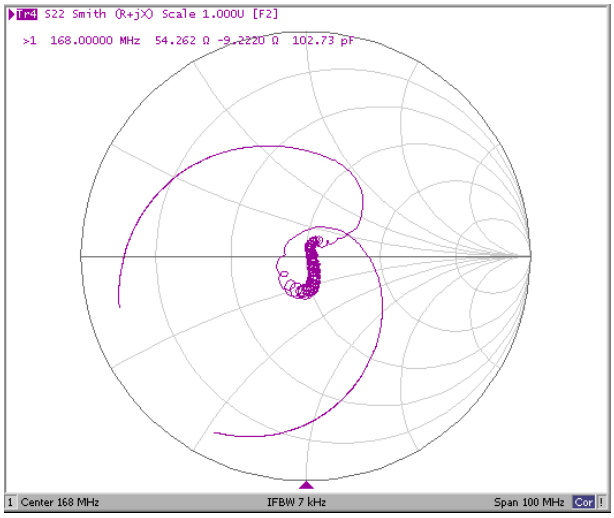

Tr1 S21 Log Mag 10.00dB/ Ref -10.67*dB [F2]
19.33*
9.329*
-670.9m*
-10.67*
-20.67*
-30.67*
-40.67*
-50.67*
-60.67*
-70.67*
-80.67*
1 Center 168 MHz
IFBW 7 kHz
Span 100 MHz
Cor


Tr2 S21 Log Mag 1.000dB/ Ref -10.38*dB [F2]
mean: -10.732 dB
s.dev: 0.0831 dB
p-p: 0.5338 dB
-5.384*
-6.384*
-7.384*
-8.384*
-9.384*
-10.38*
-11.38*
-12.38*
-13.38*
-14.38*
-15.38*
1 Center 168 MHz
IFBW 7 kHz
Span 30 MHz
Cor

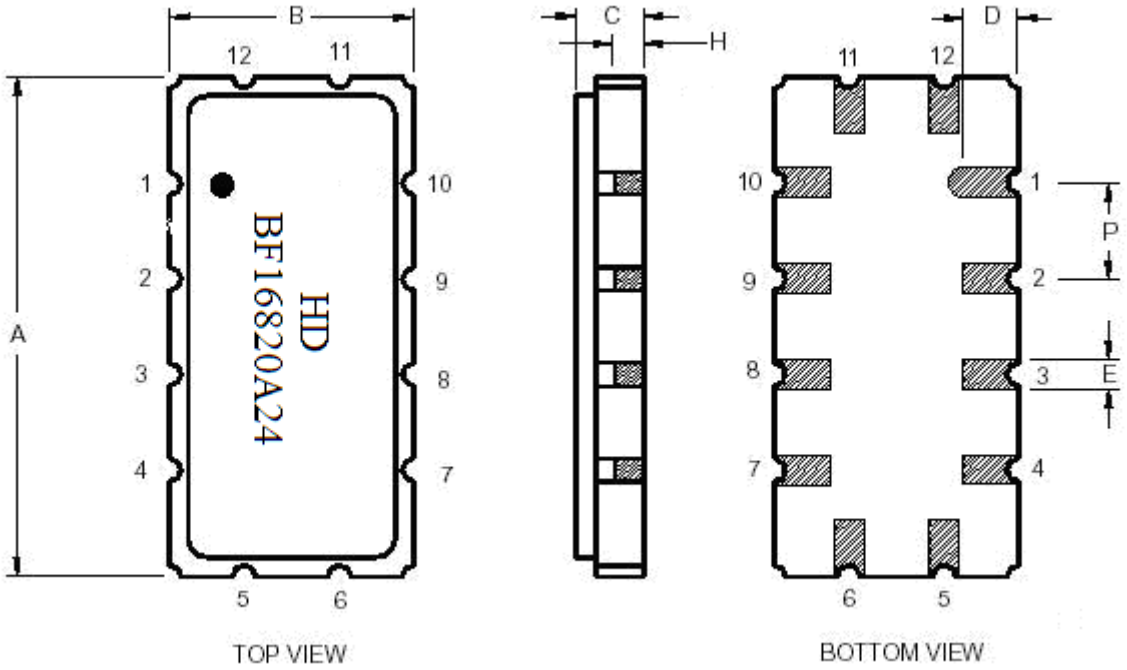

Tr3 S11 SWR 1.000/ Ref 1.000 [F2]
1 158.00000 MHz 1.1411
>2 177.37500 MHz 1.3544
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 168 MHz
IFBW 7 kHz
Span 100 MHz
Cor


Tr4 S22 SWR 1.000/ Ref 1.000 [F2]
1 158.00000 MHz 1.1268
>2 177.37500 MHz 1.3017
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Center 168 MHz
IFBW 7 kHz
Span 100 MHz
Cor


Tr3 S11 Smith (R+jX) Scale 1.000U [F2]
>1 168.00000 MHz 48.602 Ω -6.6584 Ω 142.28 pF
1 Center 168 MHz
IFBW 7 kHz
Span 100 MHz
Cor


Tr4 S22 Smith (R+jX) Scale 1.000U [F2]
>1 168.00000 MHz 54.262 Ω -9.2220 Ω 102.73 pF
1 Center 168 MHz
IFBW 7 kHz
Span 100 MHz
Cor

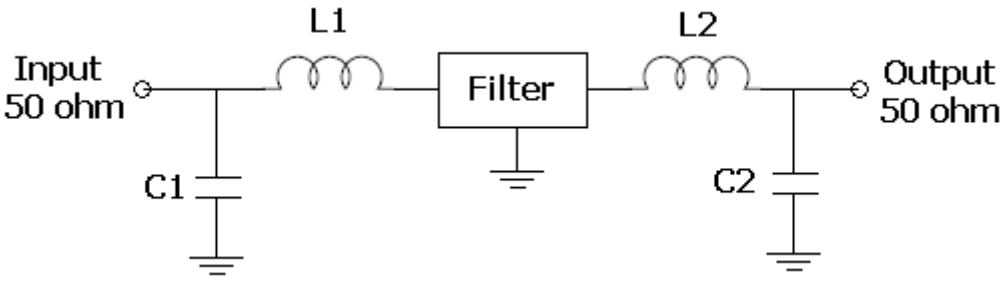
3. DIMENSION



Dimension	mm		
	min	typ	max
A	13.1	13.3	13.5
B	6.3	6.5	6.7
C	1.21	1.36	1.51
D		1.5	
E		0.8	
H	0.72	0.76	0.80
P		2.54	

Pin Configuration	
11	Input
5	Output
Other	Ground

4.TEST CIRCUIT



L1 = 56 nH, L2 = 56 nH
C1 =27 pF, C2 = 30 pF

* Component values may vary due to actual PCB layout and parasitics.

5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the device to +85℃ for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-2 Low temperature exposure

Subject the device to -20℃ for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-3 Temperature cycling

Subject the device to a low temperature of -40℃for 30 minutes. Following by a high temperature of +80℃ for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in table 1.

5-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 260℃ ±10℃ for 10±1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in table 1.

5-5 Solderability

Subject the device terminals into the solder bath at 245℃ ±5℃ for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in table 1.

5-6 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in table 1.

5-7 Vibration

Subject the device to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 Hz. The device shall fulfill the specifications in table 1.

5-8 Lead fatigue

5-8-1 Pulling test

Weight along with the direction of lead without an shock 1kg. The device shall satisfy all the initial Characteristics.

5-8-2 Bending test

Lead shall be subject to withstand against 90℃ bending with 450g weight in the direction of thickness. This operation shall be done toward both direction. The device shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

6. REMARK

7.1 Static voltage

Static voltage between signal load & ground may cause deterioration &destruction of the component. Please avoid static voltage.

7.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

7.3 Soldering

Only leads of component may be soldered. Please avoid soldering another part of component.