

规格书编号

**SPEC NO :**

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_

PRODUCT 产品: \_\_\_\_\_ SAW FILTER \_\_\_\_\_

MODEL NO 型号: \_\_\_\_\_ HDF405C-S3 \_\_\_\_\_

MARKING 印字: \_\_\_\_\_ HDF485 \_\_\_\_\_

PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_

APPROVED 批准: \_\_\_\_\_ D A T E 日期: \_\_\_\_\_ 2006-5-11 \_\_\_\_\_

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

无锡市好达电子有限公司  
Shoulder Electronics Limited



# 1. SCOPE

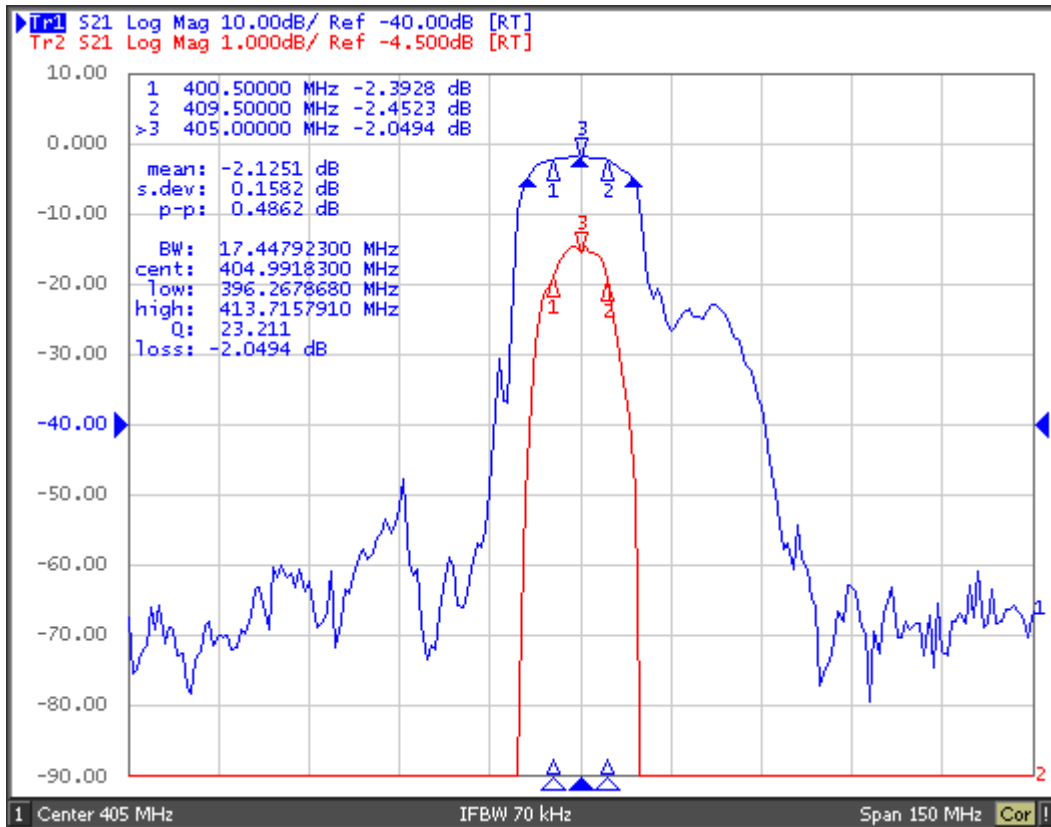
This specification shall cover the characteristics of SAW filter With F405C used for the page system.

# 2. ELECTRICAL SPECIFICATION

Operation Temperature Range	-20°C to +50°C
Storage Temperature Range	-40°C to +85°C
DC. Permissive Voltage	0 V DC. max.
Maximum Input Power	5dBm

## Electronic Characteristics

### 2-1. Typical frequency response



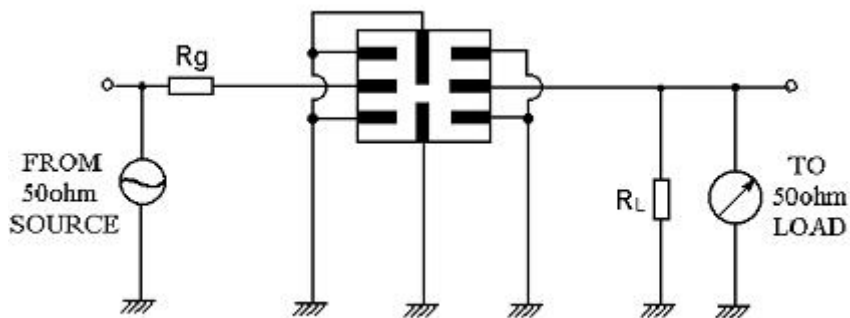
## 2-2.Electrical characteristics

**FOR HANDSET**

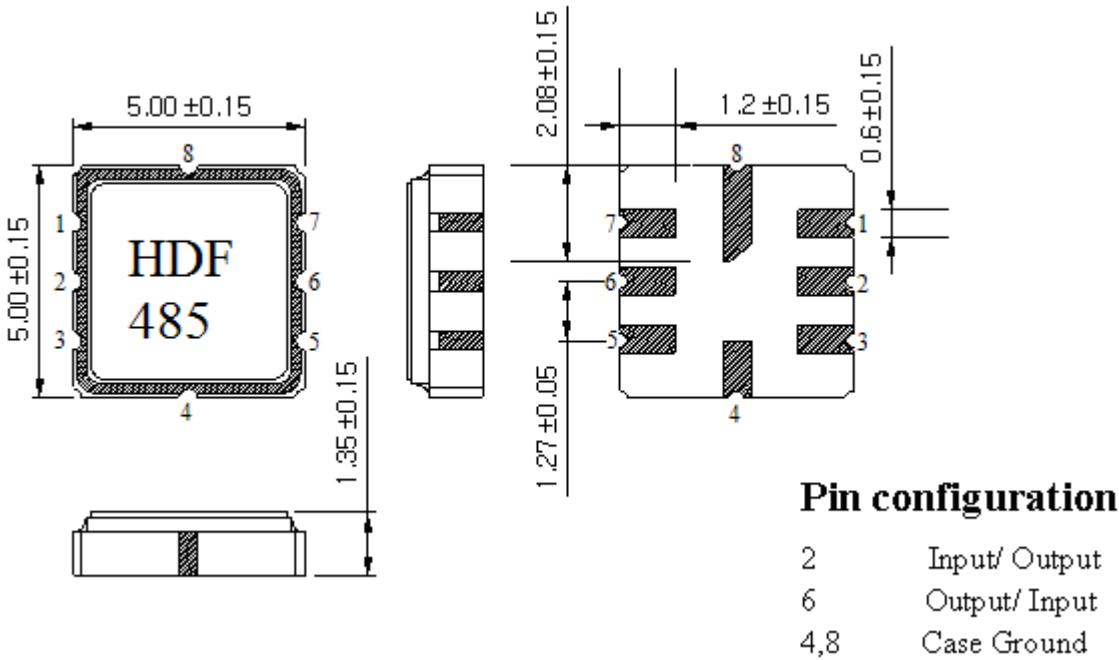
Item	Sign	condition	Specification			Unit
			Min.	Typ.	Max.	
Pass band frequency rang			400.25		409.75	MHz
Maximum Insertion Loss	ILmax.	400.25~409.75		2.5	4.5	dB
Amplitude Ripple	Arip			1.2	2.0	dB
Relative attenuation (Ref:405MHz)		110	40	61		dBc
		510~520	35	55		
		900	25	61		
Input/Output VSWR		400.25~409.75		1.6	2.0	

**FOR BASE STATION**

Item	Sign	condition	Specification			Unit
			Min.	Typ.	Max.	
Pass band frequency rang			400.5		409.5	MHz
Maximum Insertion Loss	ILmax.	400.5~409.5		2.5	4.5	dB
Amplitude Ripple	Arip			2.0		dB
Relative attenuation (Ref:405MHz)		110	40	61		dBc
		510~520	35	55		
		900	30	61		
Input/Output VSWR		400.25~409.75		2.3		

**3.TEST CIRCUIT**


**4. DIMENSION**



**Marking: HDF485**

HD: Brand  
 F : Filter  
 485 : No.

**5. ENVIRONMENTAL CHARACTERISTICS**

**5-1 Temperature cycling**

Subject the device to a low temperature of  $-40^{\circ}\text{C}$  for 30 minutes. Following by a high temperature of  $+25^{\circ}\text{C}$  for 5 Minutes and a higher temperature of  $+85^{\circ}\text{C}$  for 30 Minutes. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in 2-2.

**5-2 Resistance to solder heat**

Submerge the device terminals into the solder bath at  $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for  $10 \pm 1$  sec. Then release the device into the room conditions for 4 hours. It shall meet the specifications in 2-2.

**5-3 Solderability**

Submerge the device terminals into the solder bath at  $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 2-2.

**5-4 Mechanical shock**

Drop the device randomly onto the concrete floor from the height of 1 m 3 times. the filter shall fulfill the specifications in 2-2.

### 5-5 Vibration

Subject the device to the vibration for 2 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 hz. The filter shall fulfill the specifications in 2-2.

## 6. REMARK

### 6.1 Static voltage

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

### 6.2 Ultrasonic cleaning

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

### 6.3 Soldering

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

## 7. Packing

### 7.1 Dimensions

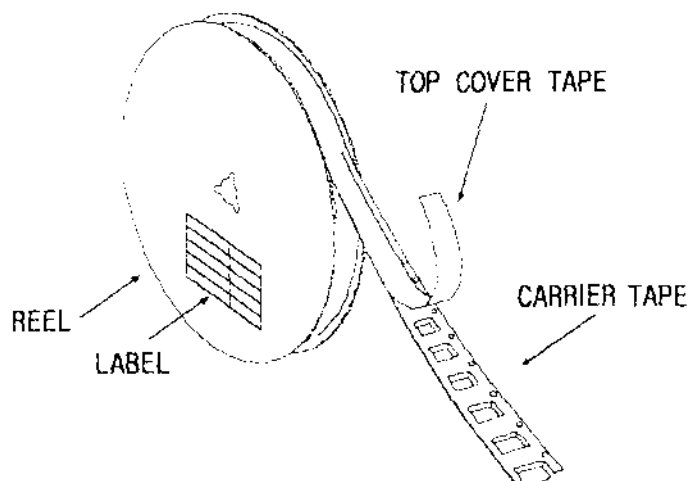
- (1) Carrier Tape: Figure 1
- (2) Reel: Figure 2
- (3) The product shall be packed properly not to be damaged during transportation and storage.

### 7.2 Reeling Quantity

1000 pcs/reel 7''  
3000 pcs/reel 13''

### 7.3 Taping Structure

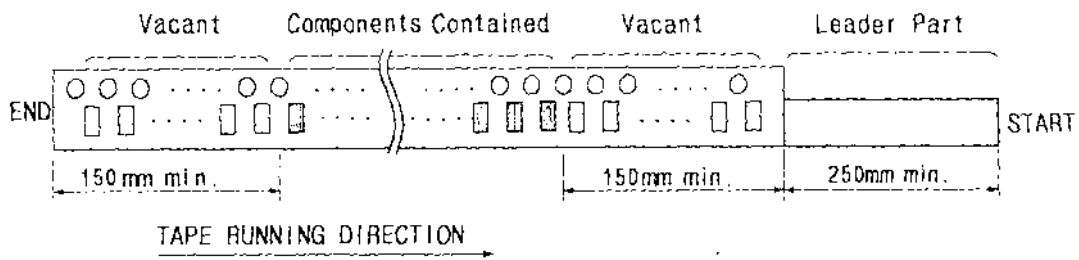
- (1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
User Product Name	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

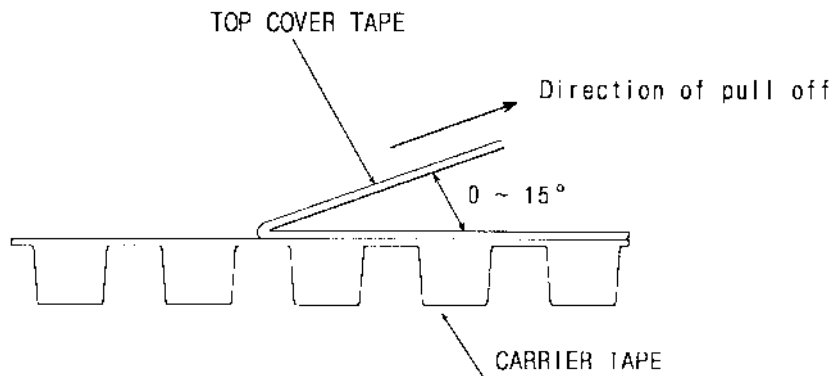


## 8. TAPE SPECIFICATIONS

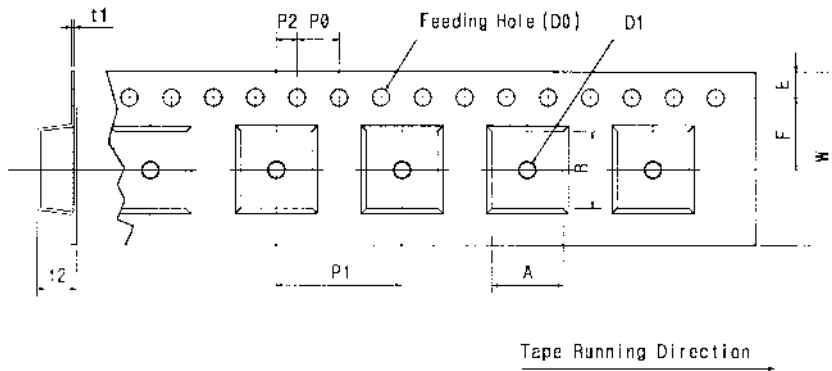
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

8.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions

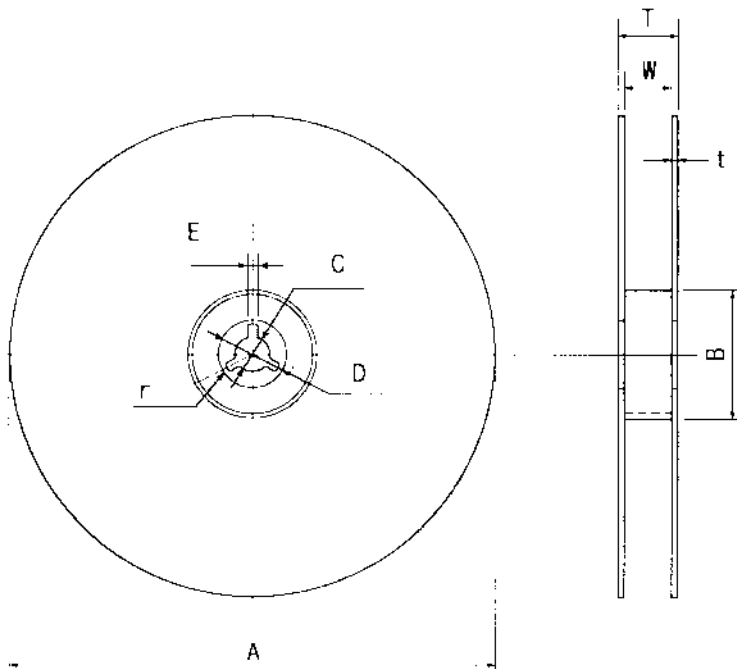


[Unit:mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.0	5.5	1.75	4.0	8.0	2.0	Ø1.5	Ø1.0	0.3	2.10	6.40	5.20
±0.3	±0.05	±0.1	±0.1	±0.1	±0.05	±0.1	±0.25	±0.05	±0.1	±0.1	±0.1

[Figure 2]

[Unit:mm]



A	B	C	D	E	W	t	r
Ø330	Ø100	Ø13	Ø21	2	13	3	1.0
±1.0	±0.5	±0.5	±0.8	±0.5	±0.3	max.	max.