

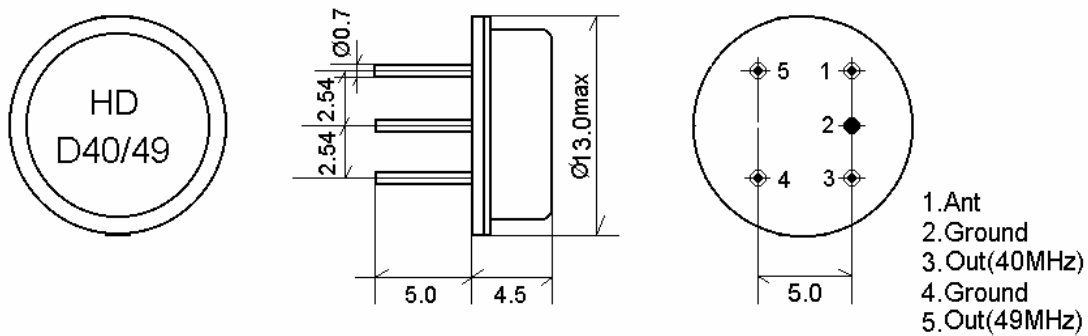
## 1. SCOPE

This specification shall cover the characteristics of SAW Duplexer used for the cordless phone.

## 2. Construction

### 2.1 Dimension and materials

Type: D40/49



## 3. Characteristics

### Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests is as follows;

- Ambient temperature : 15 to 35
- Relative humidity : 25% to 85%
- Air pressure : 86kPa to 106kPa

### Operating temperature range

Operating temperature range is the range of ambient temperatures in which the filter can be

operated continuously. -10 ~ +50

### Storage temperature range

Storage temperature range is the range of ambient temperatures at which the filter can be stored

without damage.

Conditions are as specified elsewhere in these specifications. -40 ~ +70

Reference temperature +25

### 3.1 Maximum Rating

DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	15	dBm	

### 3.2 Electrical Characteristics

#### Characteristics of channel 40:

Source impedance  $Z_s=50$

Load impedance  $Z_L=50$   $T_A=25$

Item	Freq	min	typ	max	
Nominal frequency	$f_N$	-	40.68	-	MHz
Insertion attenuation 40.50~40.86MHz			3.5	4.5	dB
attenuation	20.00~37.50MHz	30.0	35.0		dB
	49.70~50.02MHz	40.0	47.0		dB
	50.02~80.00MHz	30.0	35.0		dB
Temperature coefficient			-72		ppm/k

#### Characteristics of channel 49:

Source impedance  $Z_s=50$

Load impedance  $Z_L=50$   $T_A=25$

Item	Freq	min	typ	max	
Nominal frequency	$f_N$	-	49.86	-	MHz
Insertion attenuation 49.70~50.02MHz			3.5	4.5	dB
attenuation	20.00~40.50MHz	30.0	35.0		dB
	40.50~40.86MHz	40.0	47.0		dB
	53.50~80.00MHz	30.0	35.0		dB
Temperature coefficient			-72		ppm/k

#### Isolation between 40 and 49:

Source impedance  $Z_s=50$

Load impedance  $Z_L=50$   $T_A=25$

Item	Freq	min	typ	max	
attenuation	40.50~40.86MHz	40.0	48.0		dB
	49.70~50.02MHz	38.0	44.0		dB

### 3.3 Environmental Performance Characteristics

Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70 16H ,	< 1.0
Low temperature test -25 2H	< 1.0

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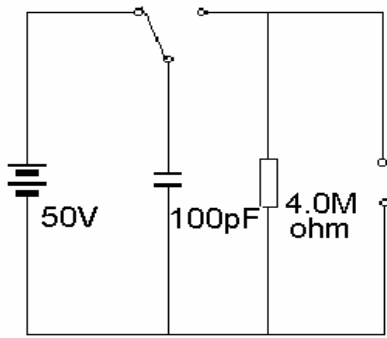
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Humidity test 40 90-95% 100H	< 1.0
Thermal cycle -25 ==70 3cycle 30min. 5min. 30min.	< 1.0
Solder temperature test Sold temp.260 for 10 sec.	< 1.0
Soldering Immerse the pins melt solder At 260 +5/-0 for 5 sec.	More then 95% of total area of the pins should be covered with solder

### 3.4 Mechanical Test

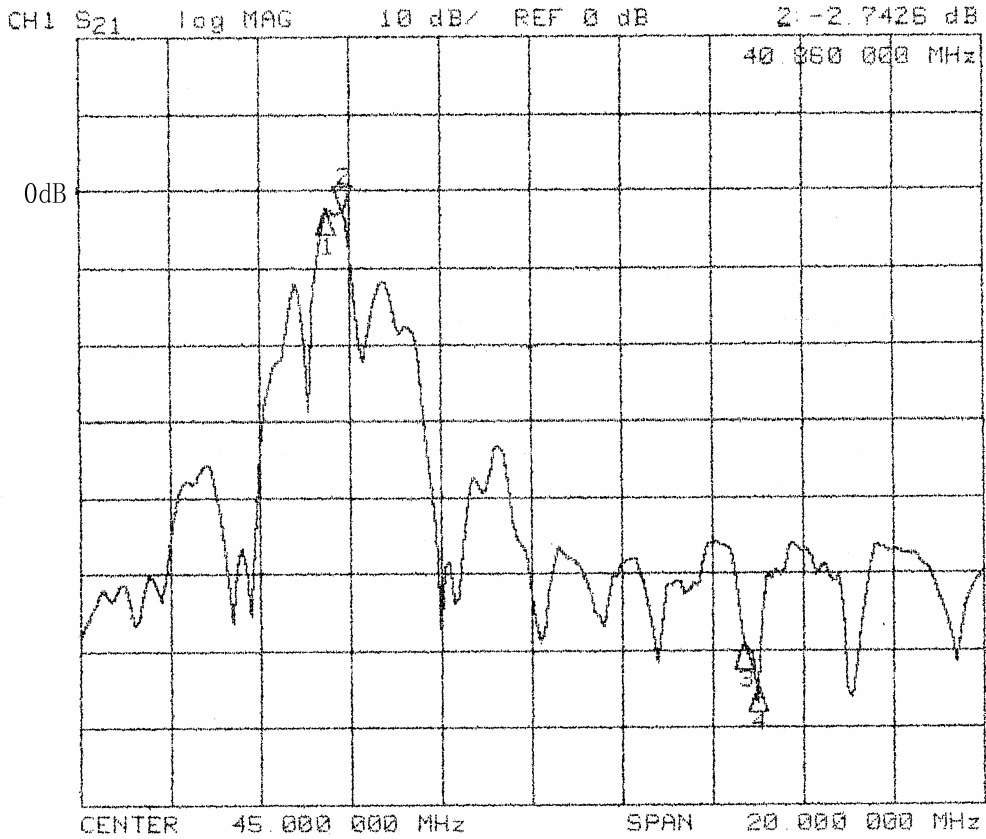
Item Test condition	Allowable change of absolute Level at center frequency(dB)
Vibration test Frequency 10~55Hz amplitude 1.5mm 3 directions 2 H each	<1.0
Drop test On maple plate frome 1 m high 3 times	<1.0
Lead pull test Pull with 1 kg force for 30 seconds	<1.0
Lead bend test 90° bending with 500g weigh 2 times	<1.0

### 3.5 Voltage Discharge Test

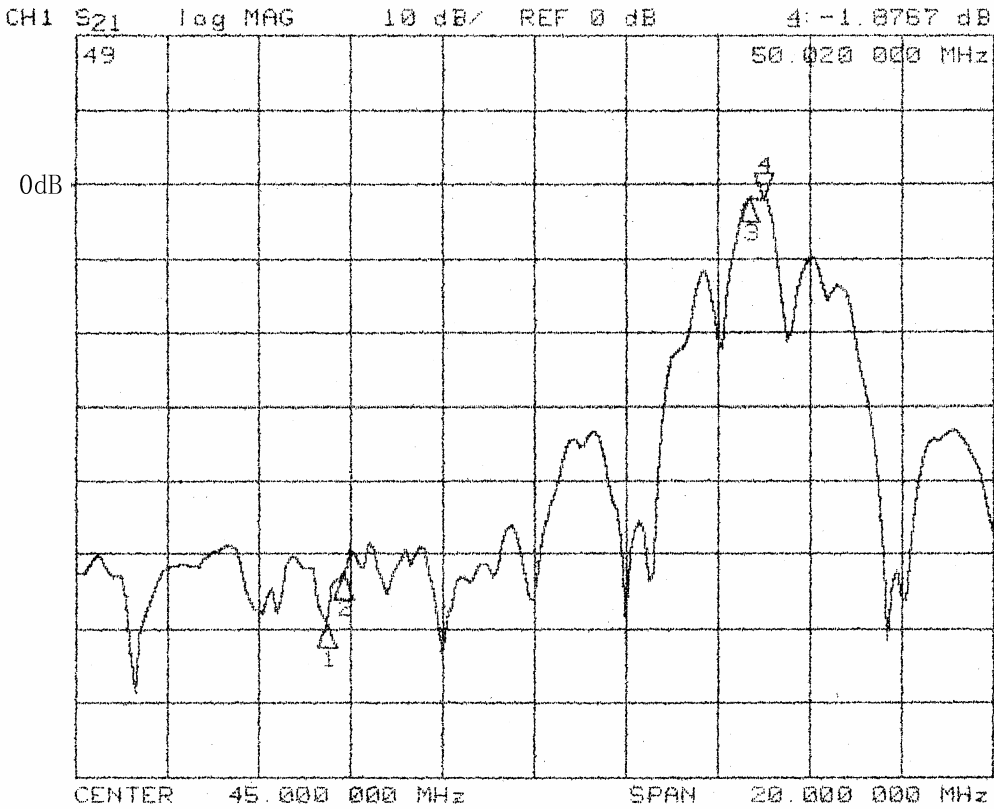
Item Test condition	Allowable change of absolute Level at center frequency(dB)
Surge test Between any two electrode  	<1.0

### 3.6 Frequency response

#### Transfer function channel 40:



#### Transfer function channel 49:



Isolation between 40 and 49:

