

## 1.SCOPE

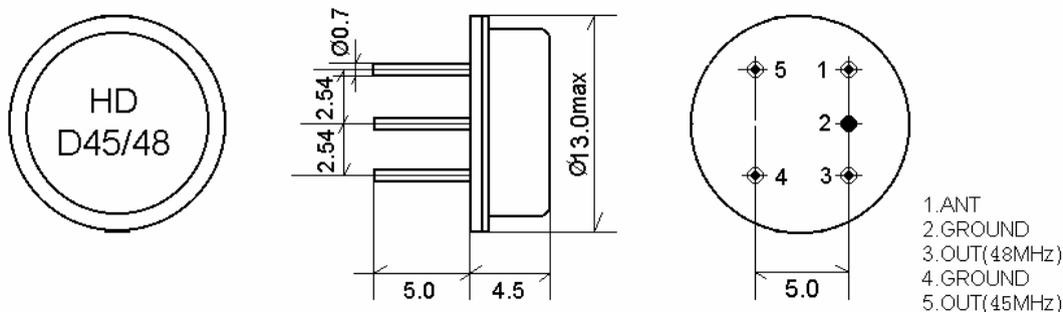
This specification shall cover the characteristics of SAW Duplexer used for the cordless phone.

## 2.Construction

### 2.1 Dimension and materials

Manufacturer's name :SHOULDER ELECTRONICS Co. LTD(CHINA)

Type : D45/48



## 3.Characteristics

### Standard atmospheric conditions

Unless otherwise specified , the standard rang 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 rang

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

operated continuously. -10 ~ +50

### 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 ~ +70

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**Reference temperature** +25

**3.1 Maximum Rating**

<b>DC voltage</b>	<b>V<sub>DC</sub></b>	<b>0</b>	<b>V</b>	
<b>Source power</b>	<b>P<sub>s</sub></b>	<b>15</b>	<b>dBm</b>	

**3.2 Electrical Characteristics**

**Characteristics of channel 45:**

Source impedance  $Z_S=50$

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

Item	Freq	min	typ	max	
Nominal frequency	$f_N$	-	45.24	-	MHz
Insertion attenuation 45.00~45.48MHz			4.5	6.0	dB
attenuation	20.00~41.50MHz	30.0	35.0		dB
	48.00~48.48MHz	40.0	47.0		dB
	48.48~80.00MHz	30.0	35.0		dB
Temperature coefficient			-72		ppm/k

**Characteristics of channel 48:**

Source impedance  $Z_S=50$

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

Item	Freq	min	typ	max	
Nominal frequency	$f_N$	-	48.24	-	MHz
Insertion attenuation 48.00~48.48MHz			4.5	6.0	dB
attenuation	20.00~45.00MHz	30.0	35.0		dB
	45.00~45.48MHz	40.0	47.0		dB
	51.50~80.00MHz	30.0	35.0		dB
Temperature coefficient			-72		ppm/k

**Isolation between 45 and 48:**

Source impedance  $Z_S=50$

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

Item	Freq	min	typ	max	
attenuation	45.00~45.48MHz	40.0	48.0		dB
	48.00~48.48MHz	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

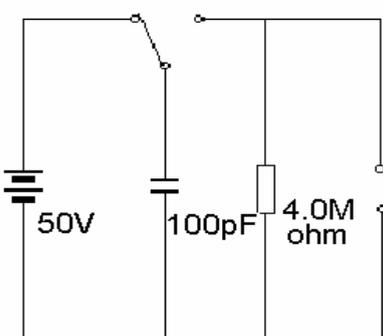
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Low temperature test -25 2H	< 1.0
Humidity test 40 90-95% 100H	< 1.0
Thermal cycle -25 ==70 3cycle 30min. 5min. 30min.	< 1.0
Solder temperature test Sold temp.260 for 10 sec.	< 1.0
Soldering Immerse the pins melt solder At 260 +5/-0 for 5 sec.	More 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

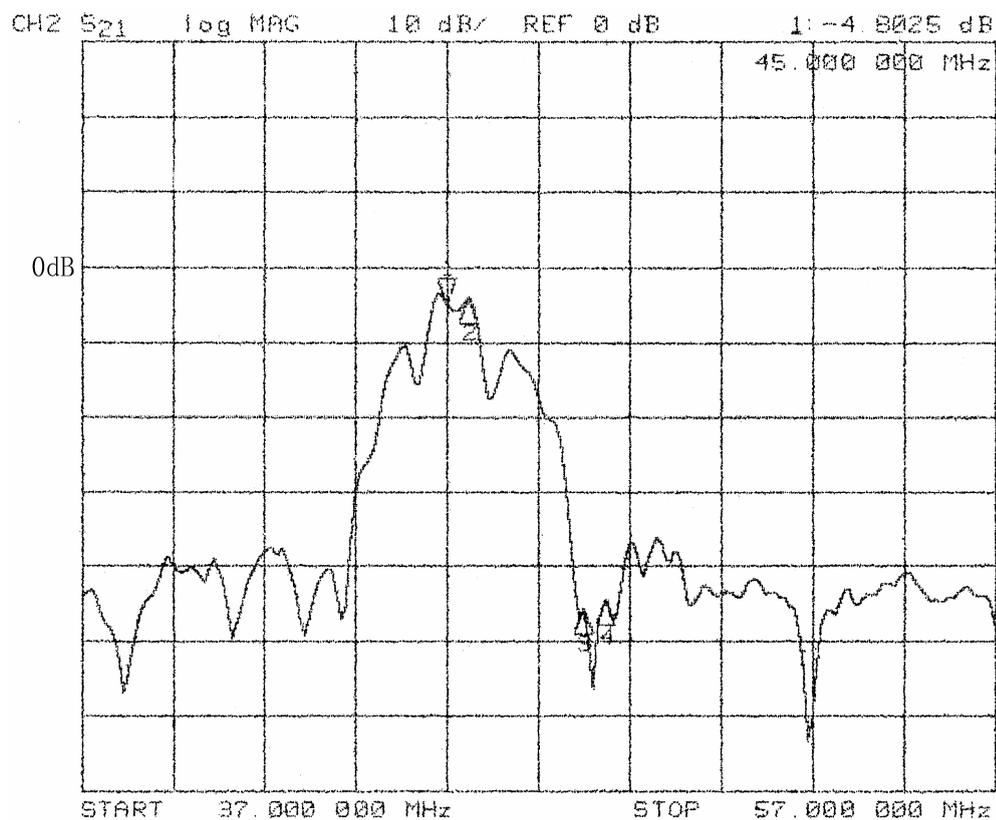
**3.5 Voltage Discharge Test**

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

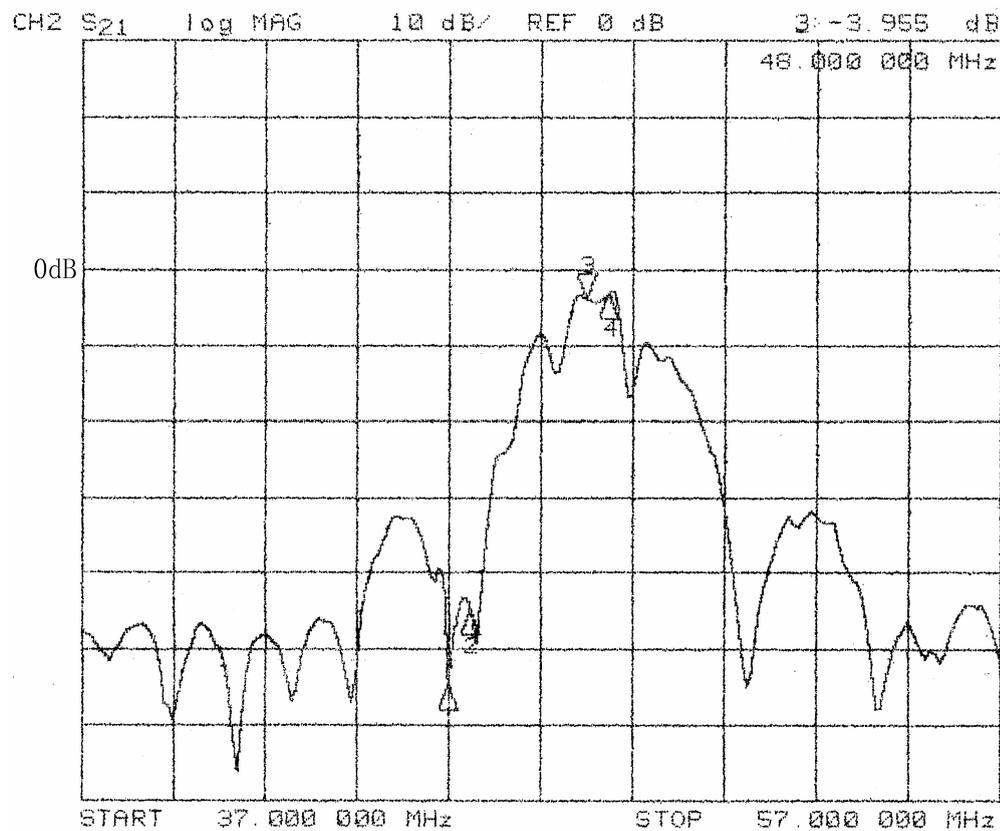
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**Transfer function channel 45:**



**Transfer function channel 48:**



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**Isolation between 45 and 48:**

