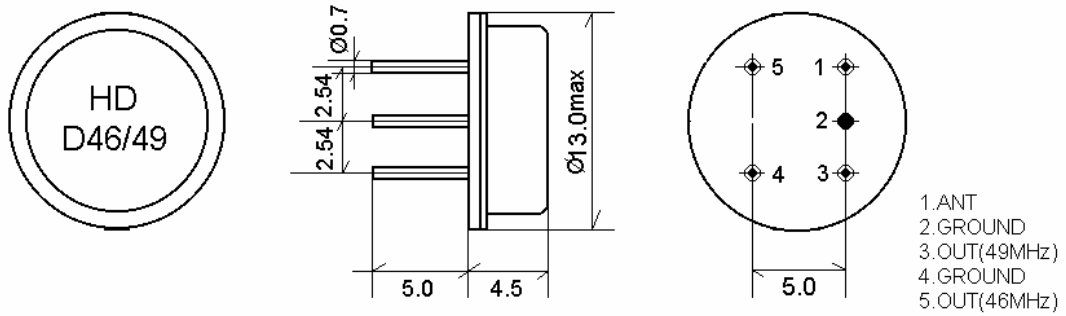
1.SCOPE

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

2.Construction

2.1 Dimension and materials

Type : D46/49



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℃

Reference temperature +25℃

3.1 Maximum Rating

DC voltage	**V_{DC}**	**0**	**V**	
Source power	**Ps**	**15**	**dBm**	

3.2 Electrical Characteristics

Characteristics of channel 46:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25℃

Item		Freq	min	typ	max	
Nominal frequency		f_N	-	46.79	-	MHz
Insertion attenuation 46.61~46.97MHz				3.0	4.5	dB
attenuation	20.00~43.50MHz		30.0	35.0		dB
	49.67~49.99MHz		40.0	47.0		dB
	49.99~80.00MHz		30.0	35.0		dB
Temperature coefficient			-72			ppm/k

Characteristics of channel 49:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25℃

Item		Freq	min	typ	max	
Nominal frequency		f_N	-	49.83	-	MHz
Insertion attenuation 49.67~49.99MHz				3.0	4.5	dB
attenuation	20.00~46.61MHz		30.0	35.0		dB
	46.61~46.97MHz		40.0	47.0		dB
	53.50~80.00MHz		30.0	35.0		dB
Temperature coefficient			-72			ppm/k

Isolation between 46 and 49:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25℃

Item	Freq	min	typ	max	
attenuation	46.61~46.97MHz	40.0	48.0		dB
	49.67~49.99MHz	38.0	44.0		dB

3.3 Environmental Performance Characteristics

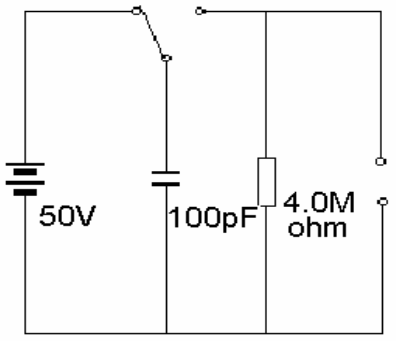
Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70℃ 16H ,	< 1.0
Low temperature test -25℃ 2H	< 1.0

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

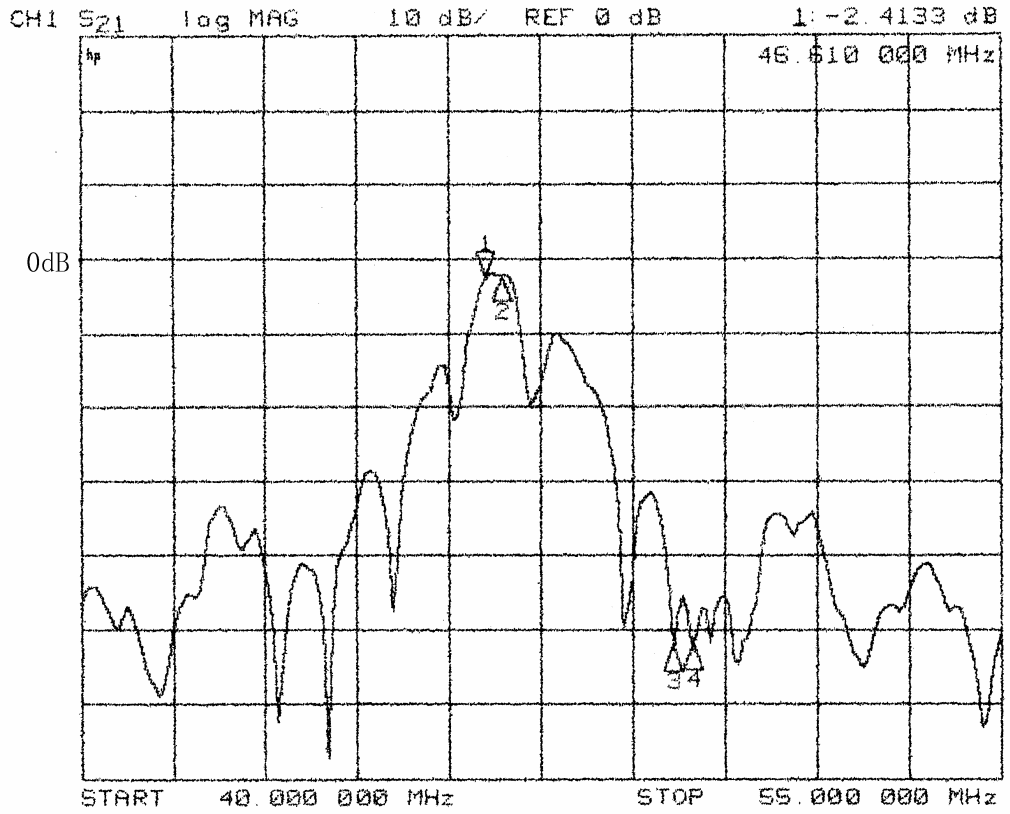
Item Test condition	Allowable change of absolute Level at center frequency(dB)
Vibration test Frequency 10~55Hz amplitude 1.5mm 3 directions 2 H each	<1.0
Drop test On maple plate frome 1 m high 3 times	<1.0
Lead pull test Pull with 1 kg force for 30 seconds	<1.0
Lead bend test 90^{o} bending with 500g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

3.5 Voltage Discharge Test

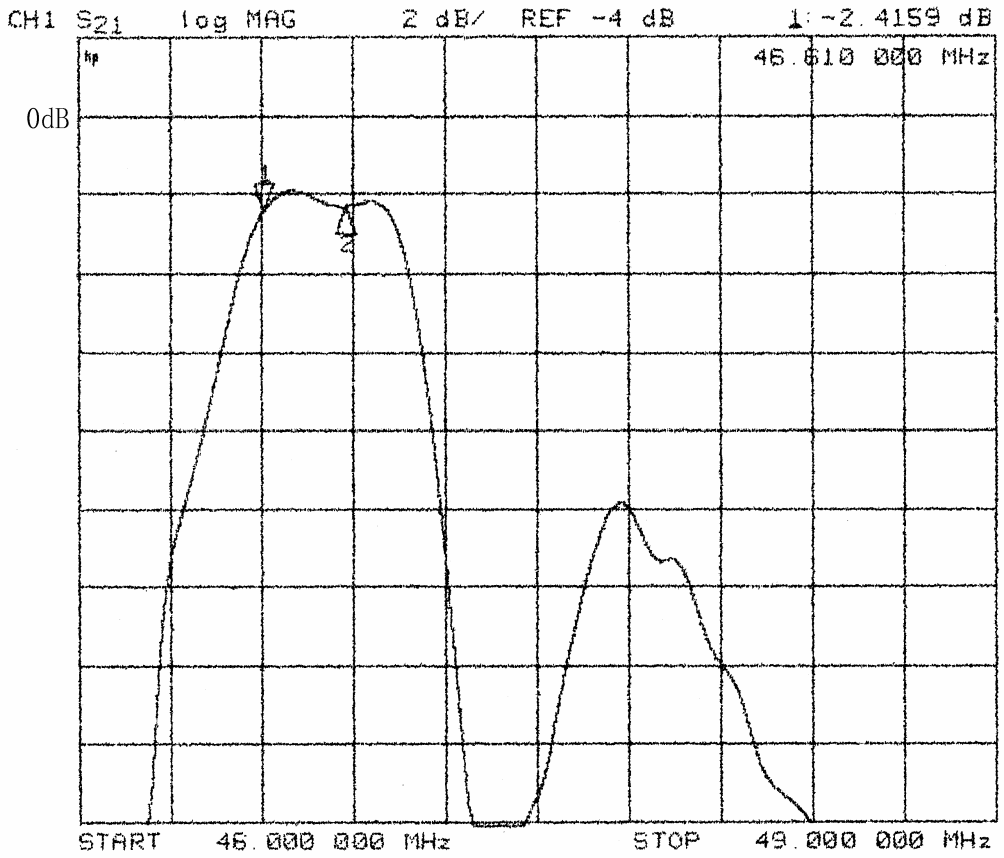
Item Test condition	Allowable change of absolute Level at center frequency(dB)
Surge test Between any two electrode 	<1.0

3.6 Frequency response

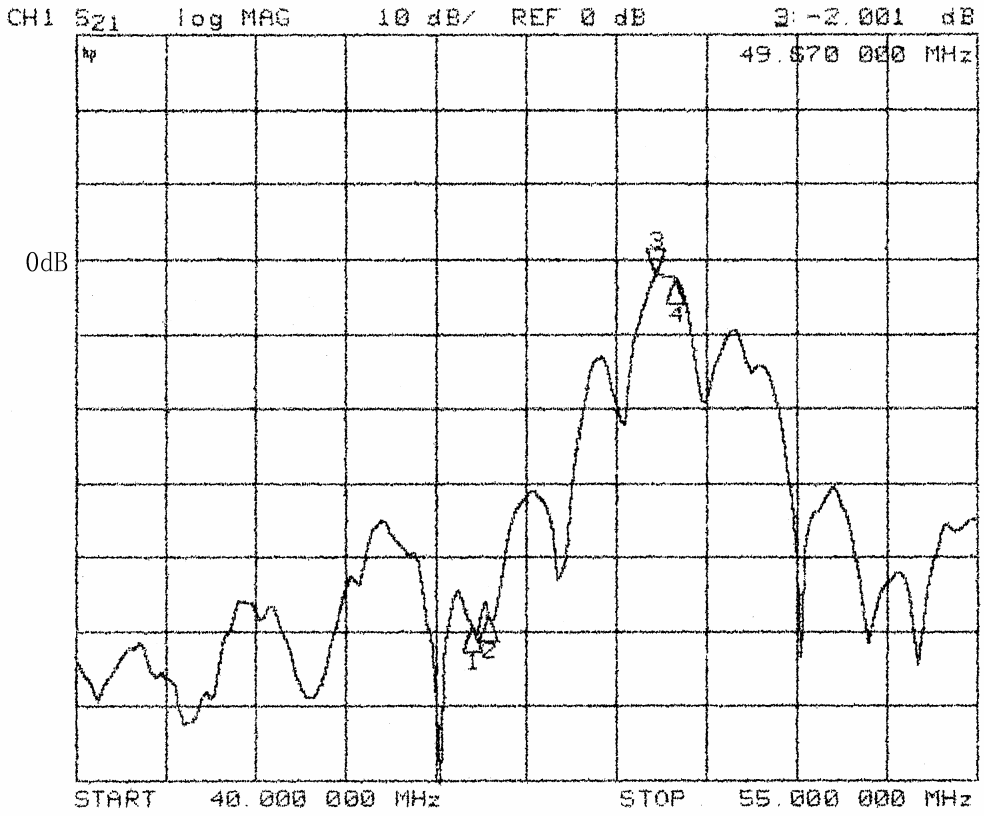
Transfer function channel 46:



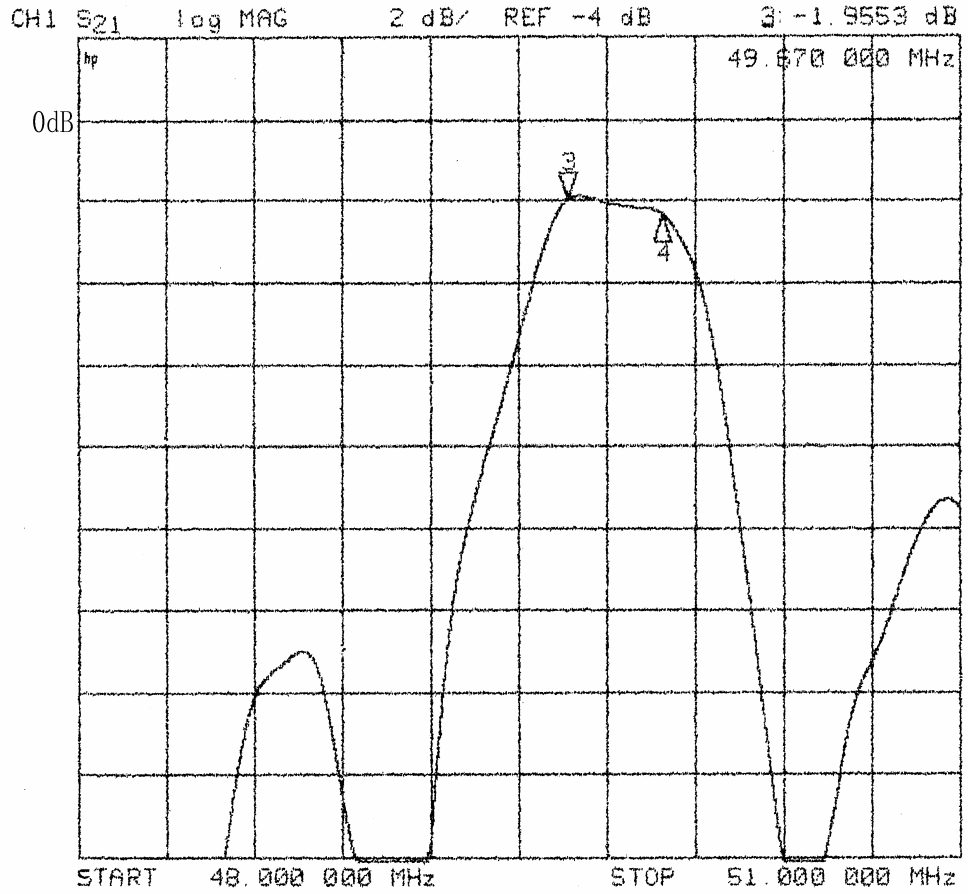
Transfer function channel 46(pass band**):**



Transfer function channel 49:



Transfer function channel 49(pass band**):**



Isolation between 46 and 49: