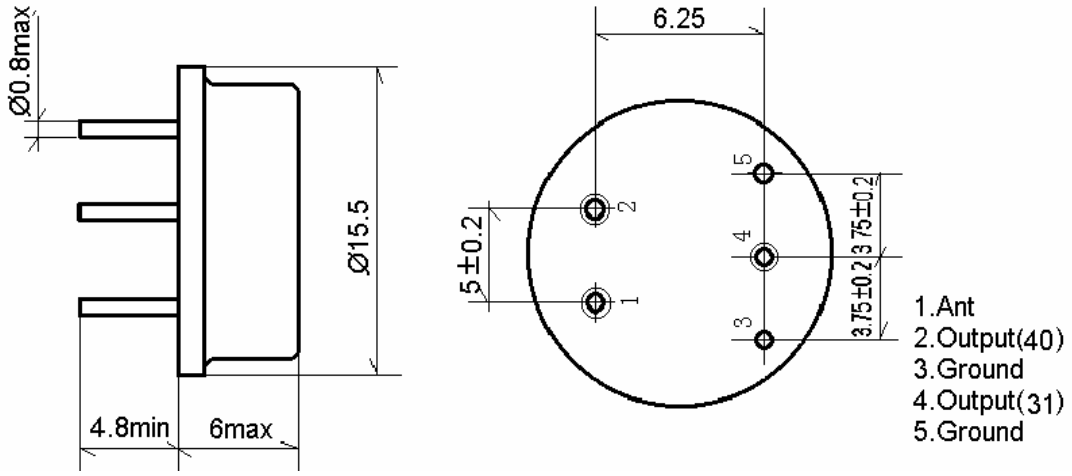
1.SCOPE

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

2.Construction

2.1 Dimension and materials

Type : D31/40



3.Characteristics

Standard atmospheric conditions

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

Ambient temperature : 15C to 35C
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. -10C ~ +50C

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. -40C ~ +70C

Reference temperature +25C

3.1 Maximum Rating

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

3.2 Electrical Characteristics

Characteristics of channel 31:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25C

Item		Freq	min	typ	max	
Nominal frequency		f_N	-	31.175	-	MHz
Insertion attenuation 31.025~31.325MHz				5.0	6.0	dB
attenuation	20.00~28.50MHz		30.0	35.0		dB
	39.925~40.225MHz		40.0	47.0		dB
	40.225~80.00MHz		30.0	35.0		dB
Temperature coefficient			-72			ppm/k

Characteristics of channel 40:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25C

Item		Freq	min	typ	max	
Nominal frequency		f_N	-	40.075	-	MHz
Insertion attenuation 39.925~40.225MHz				3.0	5.0	dB
attenuation	20.00~31.025MHz		30.0	35.0		dB
	31.025~31.325MHz		40.0	47.0		dB
	43.50~80.00MHz		30.0	35.0		dB
Temperature coefficient			-72			ppm/k

Isolation between 31 and 40:

Source impedance Zs=50Ω

Load impedance Z_L=50Ω T_A=25C

Item	Freq	min	typ	max	
attenuation	31.025~31.325MHz	40.0	48.0		dB
	39.925~40.225MHz	38.0	44.0		dB

3.3 Environmental Performance Characteristics

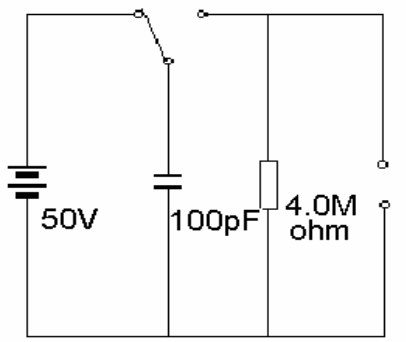
Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70C 16H ,	< 1.0

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