### SHOULDER ELECTRONICS LIMITED

## 1. SCOPE

This specification shall cover the characteristics of SAW Filter with F49A used for the cordless-phone.

## 2. ELECTRICAL SPECIFICATION

2.1 Maximum Rating  $(Ta = 25 \square)$ 

| Characteristics               |   | Ratings | Unit |
|-------------------------------|---|---------|------|
| Input signal voltage          |   | 5       | Vp-p |
|                               | between input<br>between output<br>Between others | 3<br>15 | V    |
| AC voltage: 50-60 Hz          |   | 10      | Vp-p |
| Operating temperature rang -2 |   | 20 – 70 |      |
| Storage temperature range -   |   | 55 – 85 |      |

## 2.2 Electrical Characteristics

| Туре       | 3dB<br>passband<br>(MHz) | Insertion-lo<br>ss<br>MAX(dB) | Stop-band<br>Atten.<br>MIN(dB) | Loop-loss<br>MIN(dB) | Out-band<br>Atten.<br>(dB) | Impedance |
|------------|--------------------------|-------------------------------|--------------------------------|----------------------|----------------------------|-----------|
| HD<br>F49A | 49.67~                   | 4                             | 30                             | 42                   | 30                         | 50/50     |

\_

# 3. ENVIRONMENTAL PERFORMANCE CHARACTERISTICS

| Item Test condition  | Allowable change of absolute Level in pass band(dB)                   |
|--|---|
| High temperature test<br>85 □ 500H                                 | < 1.0   |
| Low temperature test<br>-40 □ 500H                                 | <1.0  |
| Humidity test<br>40 □ 90-95% 500H                                  | <1.0  |
| Thermal shock<br>-20 □ ==25 □ ==80 □ 5 cycle<br>30M 10M 30M        | <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 |

## **4.MECHANICAL TEST**

| Item                                 | Allowable change of absolute |  |  |
|--------------------------------------|------------------------------|--|--|
| Test condition                       | Level in pass band(dB)       |  |  |
| Vibration test                       |                              |  |  |
| 600-3300rpm amplitude 1.5mm          | <1.0                         |  |  |
| 3 directions 2 H each                |                              |  |  |
| Drop test                            |                              |  |  |
| On maple plate from 1m high          | <1.0                         |  |  |
| 3 times                              |                              |  |  |
| Lead pull test                       |                              |  |  |
| Pull with 1 kg force                 | <1.0                         |  |  |
| For 30 seconds                       |                              |  |  |
| Lead bend test                       |                              |  |  |
| 90 $\square$ bending.with 500g weigh | <1.0                         |  |  |
| 2times                               |                              |  |  |

# 5. VOLTAGE DISCHARGE TEST

| Item Test condition                     | Allowable Chang of absolute Level in pass band(dB) |  |
|---|--|--|
| Surge test<br>Between any two electrode | <1.0   |  |
| 100V 1000pF 4Mohm                       |  |  |

## **6.DIMENSION**

