

规格书编号

SPEC NO :

# 产品规格书

# SPECIFICATION

CUSTOMER 客户: \_\_\_\_\_  
PRODUCT 产品: **SAW FILTER**  
MODEL NO 型号: **HDF4177**  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ D A T E 日期: 2008-7-25

|                         |             |         |
|-------------------------|-------------|---------|
| 客户确认 CUSTOMER RECEIVED: |             |         |
| 审核 CHECKED              | 批准 APPROVED | 日期 DATE |
|                         |             |         |

无锡市好达电子有限公司  
Shoulder Electronics Limited



## 1 Features

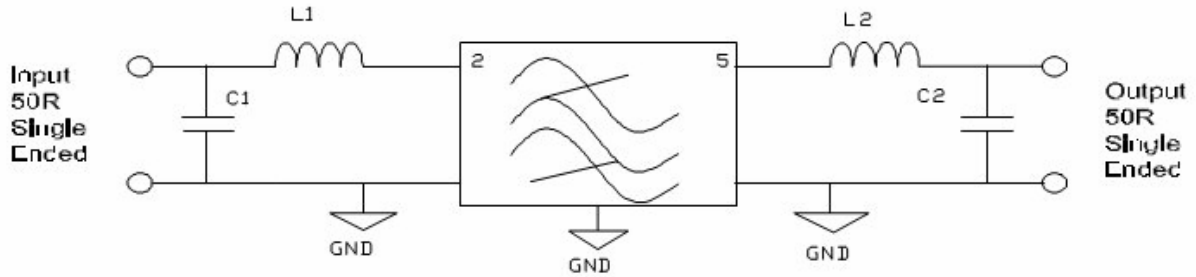
- SAW Filter
- ROHS Compliant
- Leadless Surface Mount
- Application in CDMA Base Station

## 2 Technical Characteristics

| Parameter  | Min <sup>(1)</sup> | Typ <sup>(1)</sup> | Max <sup>(1)</sup> | Units  | Cpk |
|--|--------------------|--------------------|--------------------|--------|-----|
| Center Frequency ( $f_0$ )   |                    | 177                |                    | MHz    |     |
| 1dB Pass Bandwidth <sup>(6)</sup>                                    | 20                 | 20                 |                    | MHz    |     |
| Insertion Loss (Passband) <sup>(2)</sup>                             |                    | 8                  | 9                  | dB     |     |
| Insertion Loss (Passband) Variation Over Operating Temperature Range |                    |                    | 1                  | dB     |     |
| Passband Ripple (Passband) <sup>(4)</sup>                            |                    | 1.0                | 1.2                | dB p-p |     |
| Rejection <sup>(3)</sup>   | 10 MHz to 149 MHz  | 40                 |                    | dBc    |     |
|  | 209 MHz to 350 MHz | 40                 |                    |        |     |
| Absolute Delay at Passband   |                    | 0.40               |                    | us     |     |
| Group Delay Variation (Passband)                                     |                    | 70                 | 80                 | ns p-p |     |
| Input Impedance  |                    | 50 <sup>(2)</sup>  |                    | ohm    |     |
| Output Impedance   |                    | 50 <sup>(2)</sup>  |                    | ohm    |     |
| Input VSWR <sup>(2)</sup>  | 6.0                | 8.0                |                    | dB     |     |
| Output VSWR <sup>(2)</sup>   | 6.0                | 8.0                |                    | dB     |     |
| Operating Temperature Range  | -40                | 25                 | 85                 | °C     |     |

### Notes:

- (1) Typical values are nominal performances at room temperature, minimum and maximum values take into account the variations over the temperature range and the variations of standard matching elements ( $\pm 5\%$  for inductors and capacitors).
- (2) With external matching networks.
- (3) The amplitude of rejection is as the maximum insertion loss for reference.
- (4) The Passband Ripple is defined as the maximum level minus minimum level over the Passband.
- (5) All the electrical specifications must be satisfied over operating temperature range.
- (6) If the rejections can be ensured, the passband should be as wider as possible.



**L1=125.6nH      L2=120 nH**

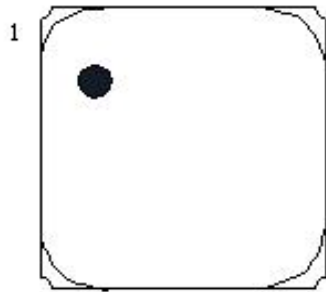
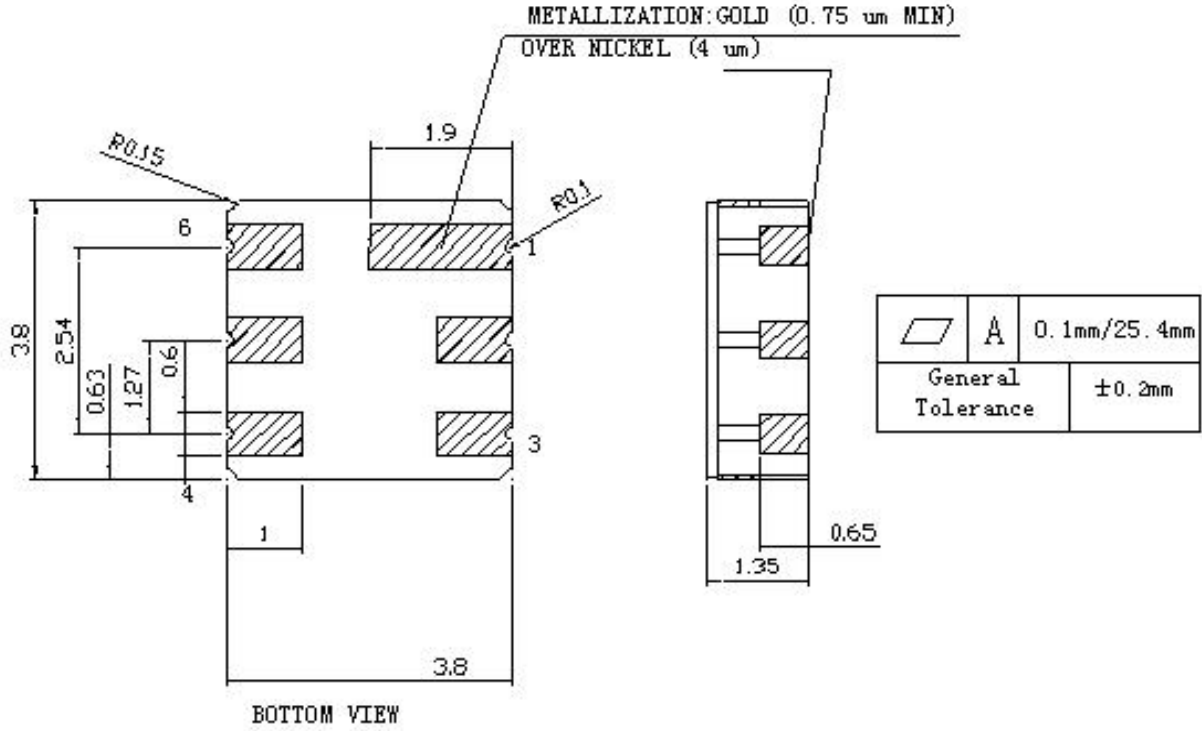
**C1=14 pF          C2=20pF**

### 3 Absolute Maximum Ratings

| Parameter                                | Ratings    |
|--|------------|
| Operating Temperature Range              | -40~85 °C  |
| Storage Temperature                      | -50~125 °C |
| DC Voltage                               | 0V         |
| Max.Input CW Power (Continuous stress)   | 10dBm      |
| ESD Class (Human Body Model)             | 1A         |
| Voltage Supported (Human Body Model)     | 250V       |
| ESD Class (Charged Device Model)         | 5C         |
| Voltage Supported (Charged Device Model) | 1000V      |

**4 Package Information and Pin Description**

Outline Drawing is listed below . Dimension unit is mm



Top view and Marking:  
The black point is pin 1 identifier.  
RNNN=Product name  
Lotcode includes the manufacturing year and month.

| Function | Pin Configuration |
|----------|-------------------|
| Input    | 2                 |
| Output   | 5                 |
| Gnd      | 1,3,4,6           |