

# Product Information

Control No. : ARL-810020-E 1

Established on March 27, 2020

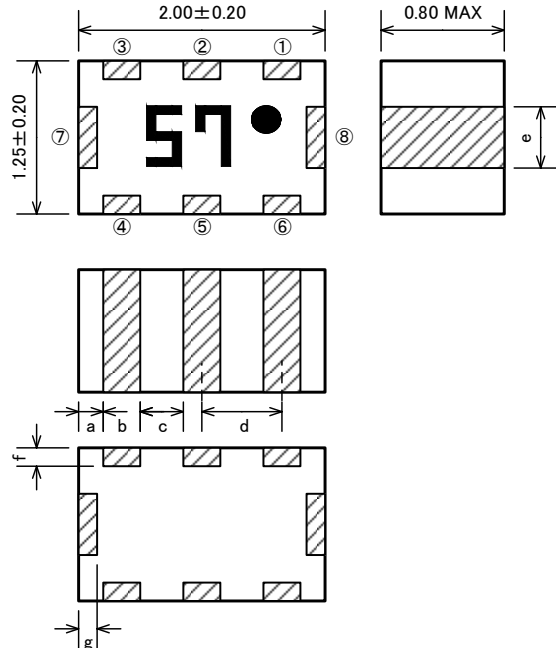
## Application : Balance Filter for Bluetooth & Wireless LAN

### 1. Type No.

DBF81F002 - T

RoHS Compliant Part

### 2. Dimension (Unit : mm)



AEC-Q200 Compliant Part

#### Terminal

|   |           |
|---|-----------|
| ① | Unbalance |
| ② | DC        |
| ③ | NC        |
| ④ | Balance   |
| ⑤ | GND       |
| ⑥ | Balance   |
| ⑦ | GND       |
| ⑧ | GND       |

#### Terminal Dimensions

|   |               |
|---|---------------|
| a | 0.20 +/- 0.15 |
| b | 0.30 +/- 0.10 |
| c | 0.35 +/- 0.10 |
| d | 0.65 +/- 0.10 |
| e | 0.50 +/- 0.10 |
| f | 0.15 Typ.     |
| g | 0.15 Typ.     |

### 3. Electrical characteristics

| Pass band                             | Specification | Typical | Unit | Remark  |
|---------------------------------------|---------------|---------|------|---------|
| fc (Center frequency)                 | 2450          | -       | MHz  |         |
| Pass band frequency                   | 2400-2500     | -       | MHz  |         |
| Unbalance Port Impedance at fc        | 50            | -       | ohm  | Nominal |
| Balance Port Impedance at fc          | 50            | -       | ohm  | Nominal |
| Insertion Loss at 25deg C.            | 2.5 Max.      | 2.05    | dB   |         |
| Insertion Loss at -40 to +125 deg C.  | 2.8 Max.      | -       | dB   |         |
| Unbalance port VSWR in BW             | 2.0 Max.      | 1.57    | -    |         |
| Balance port VSWR in BW               | 2.0 Max.      | 1.27    | -    |         |
| Ripple                                | 1.0 Max.      | 0.19    | dB   |         |
| Amplitude balance                     | 1.0 Max.      | 0.25    | dB   |         |
| Phase differential at -40 to +125 deg | 180±10        | 180.92  | deg  |         |

| Attenuation         | Specification | Typical | Unit | Remark |
|---------------------|---------------|---------|------|--------|
| 880 MHz - 960 MHz   | 35 Min        | 53.04   | dB   |        |
| 1710 MHz - 1910 MHz | 25 Min        | 28.60   | dB   |        |
| 4800 MHz - 5000 MHz | 25 Min        | 53.26   | dB   | 2*f    |
| 7200 MHz - 7500 MHz | 25 Min        | 35.41   | dB   | 3*f    |

### 4. Note

- 4.1 Operating Temperature Range : -40 to +125 deg C.  
 4.2 Storage Temperature Range before soldering in taping package : -20 to +35 deg C.  
 4.3 Minimum Ordering Quantity : 2,000 pcs (per reel, per bag)

|  |             |              |           |
|--|-------------|--------------|-----------|
|  | Approved by | Confirmed by | Raised by |
|  | Y.Mizutani  | T.Hasegawa   | S.Suzuki  |

SOSHIN ELECTRIC CO., LTD

# Product Information

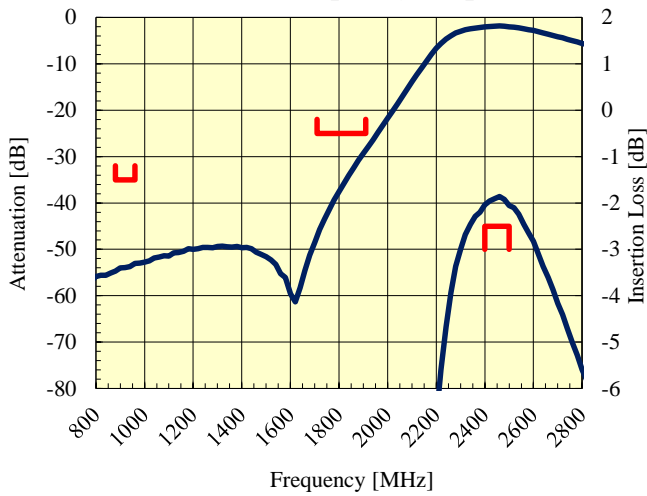
Control No. : ARL-810020-E 2

Established on March 27, 2020

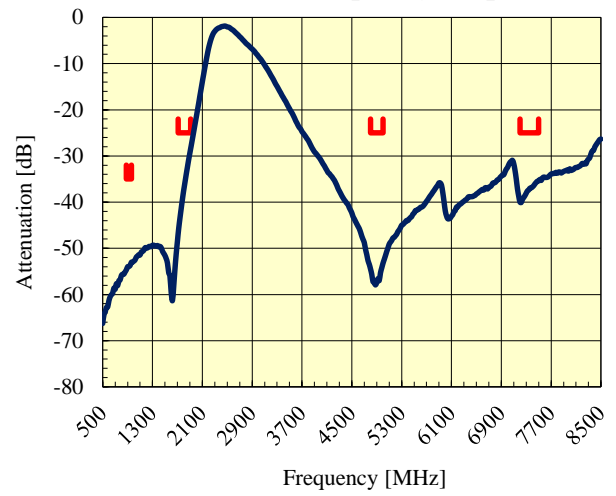
## 5. Representative characteristics

Measured data

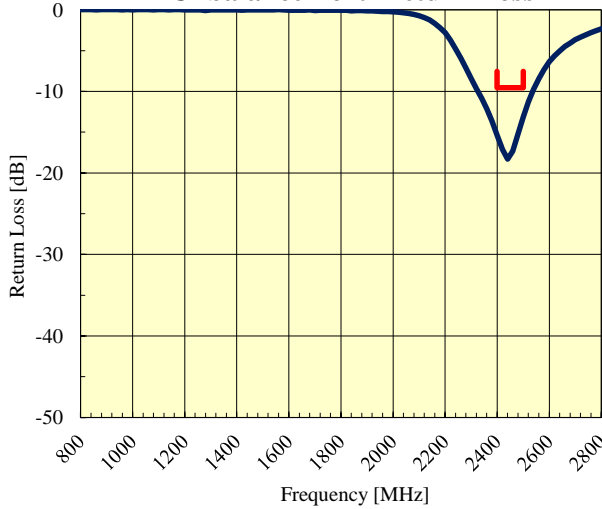
### Pass Band Frequency Response



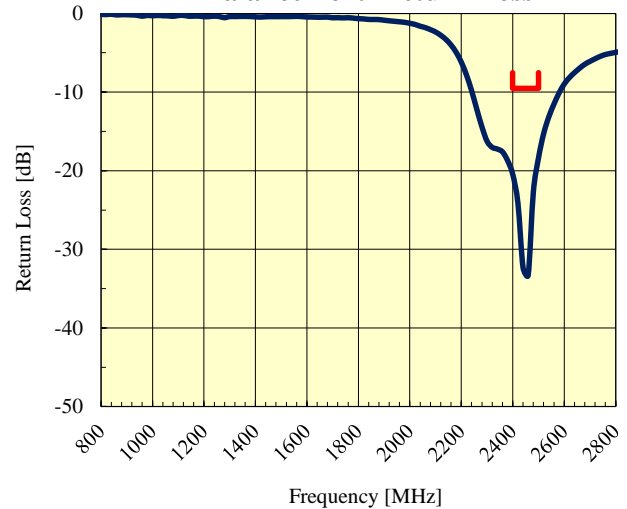
### Broad Band Frequency Response



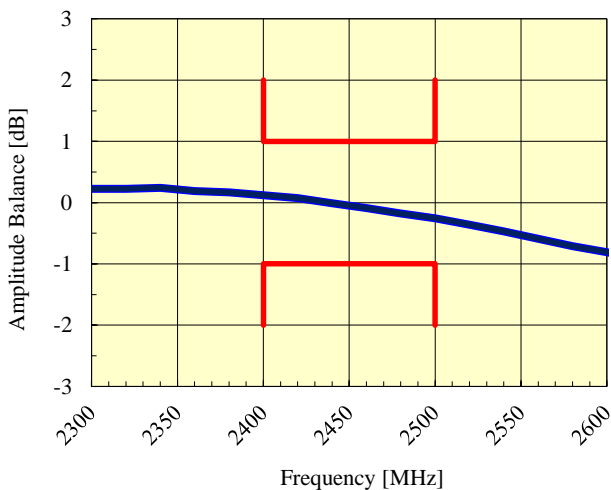
### Unbalance Port Return Loss



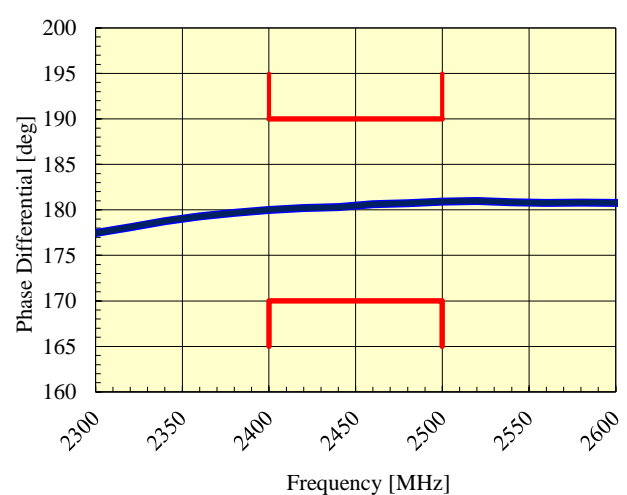
### Balance Port Return Loss



### Amplitude Balance



### Phase Differential



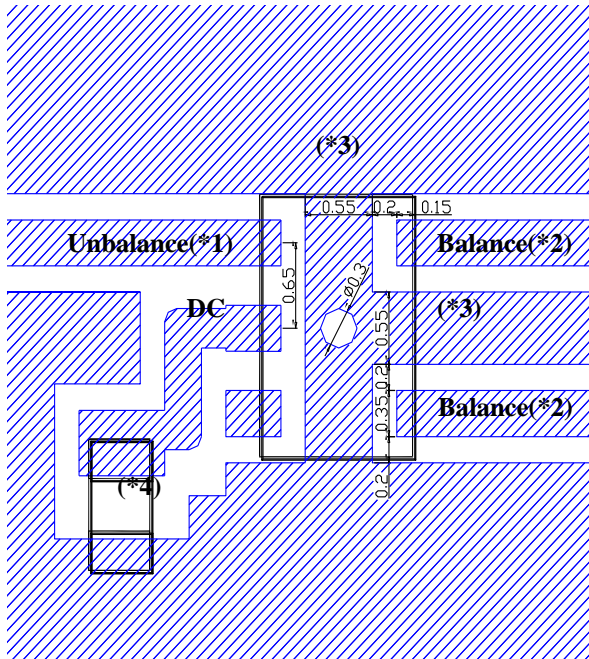
# Product Information

Control No. : ARL-810020-E 3

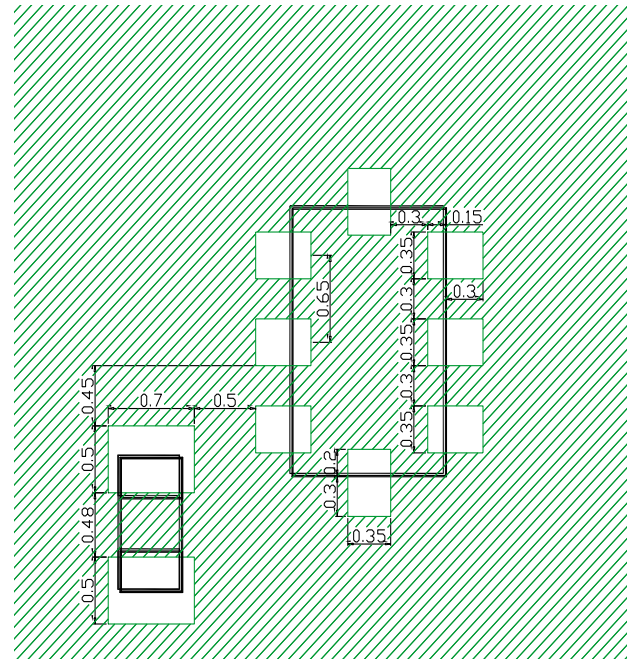
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## 6.Recommendation Land Pattern (Unit:mm)

Land Pattern



Resist Pattern



- \*1 50 ohm impedance Line
- \*2 50 ohm impedance Line
- \*3 Ground Plane
- \*4 Decoupling Capacitor = 100pF