

**MDR 641C Bandpass 2.45GHz**

**Multilayer Dielectric Series**

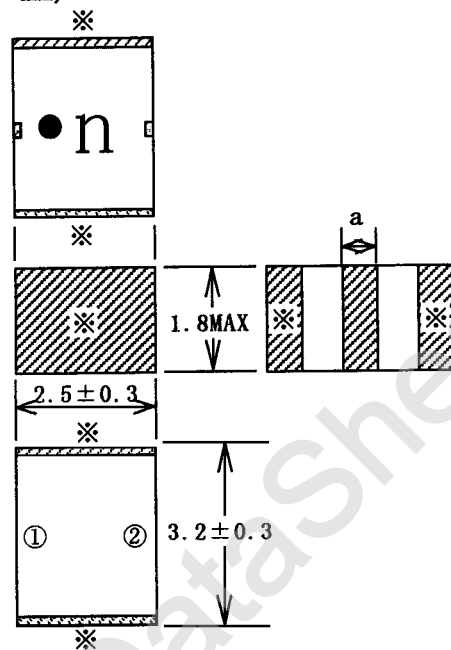
**Product Features**

- Small size
- Low loss and high attenuation
- SMD and reflow soldering is available

**Applications**

- Bluetooth / ISM 2.4

Dimension (Unit : mm)



Terminal	
①	Input
②	Output
※	GND

$a = 0.6 \pm 0.2$

**Electrical Characteristics**

- 1. Zin & Zout : 50 Ω Nominal
- 2. fc : 2450MHz Nominal
- 3. Pass Band : 2400~2500MHz
- 4. Insertion Loss : 1.5 dB MAX. (2400~2500MHz :at 25°C)  
: 2.0 dB MAX. (2400~2500MHz : -20~+60°C)
- 5. Ripple : 0.8 dB MAX. (2400~2500MHz)
- 6. V. S. W. R : 2.0 MAX. (2400~2500MHz)
- 7. Attenuation : 25 dB MIN. (at 1750MHz)  
: 25 dB MIN. (at 2100MHz)  
: 22 dB MIN. (4800~5000MHz)

**Minimum Ordering Quantity : 2,000pcs(per reel, per bag)**

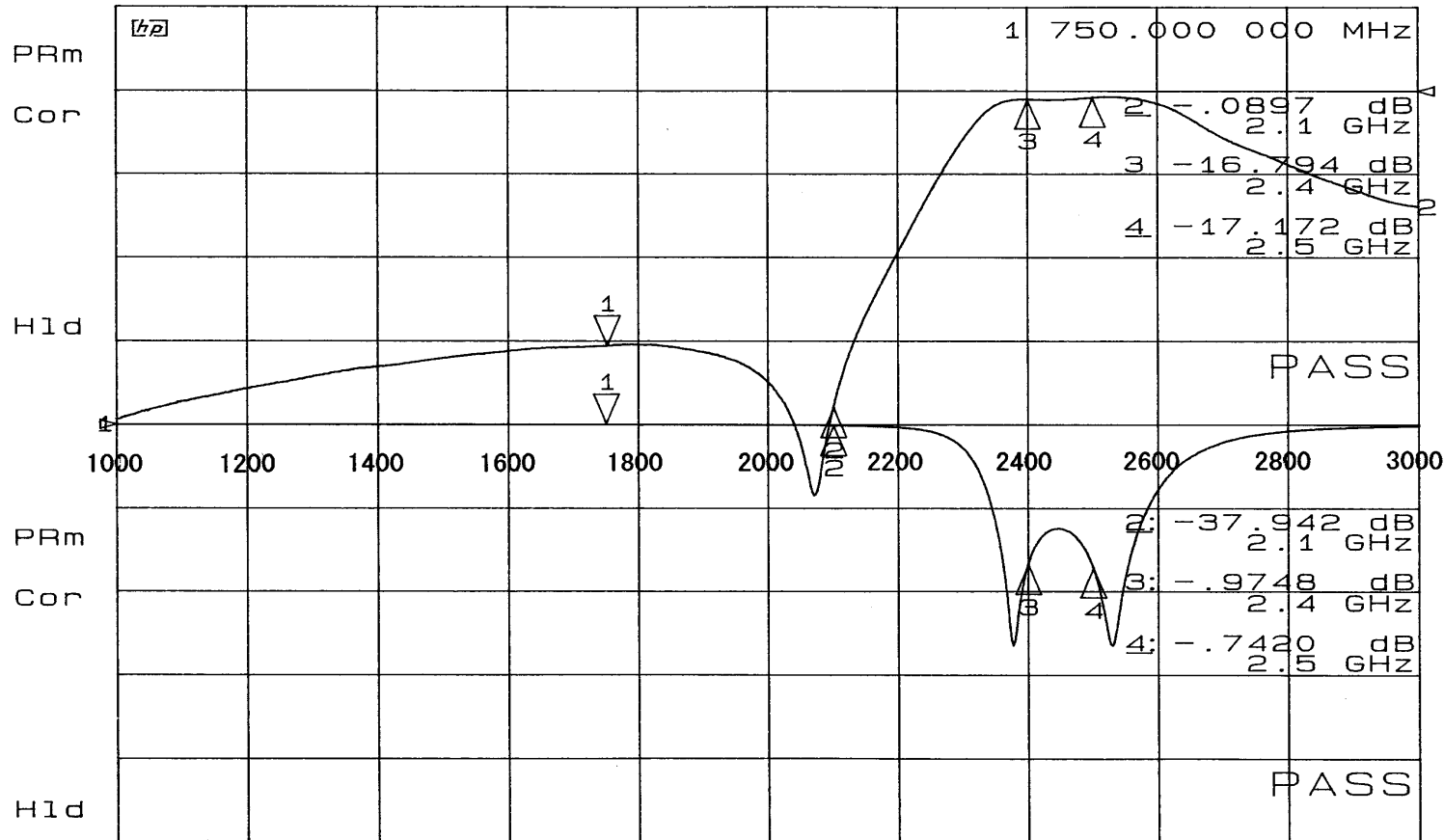


MULTILAYERED FILTERS

MDR641C



CH1 S<sub>11</sub> log MAG 10 dB/ REF 0 dB 1 .0225 dB  
 CH2 S<sub>21</sub>/M log MAG 10 dB/ REF 0 dB 1: -30.534 dB



TYPE  
MDR641C

CH1 (S11)  
 MARK  
 1 : 1750 MHz  
 2 : 2100 MHz  
 3 : 2400 MHz  
 4 : 2500 MHz

CH2 (S21)  
 MARK  
 1 : 1750 MHz  
 2 : 2100 MHz  
 3 : 2400 MHz  
 4 : 2500 MHz

Measurement  
 Instrument  
 HP8753D  
 NETWORK  
 ANALYZER

Date  
 2000/11/16  
 SOSHIN  
 ELECTRIC  
 CO., LTD.

START 1 000.000 000 MHz

STOP 3 000.000 000 MHz



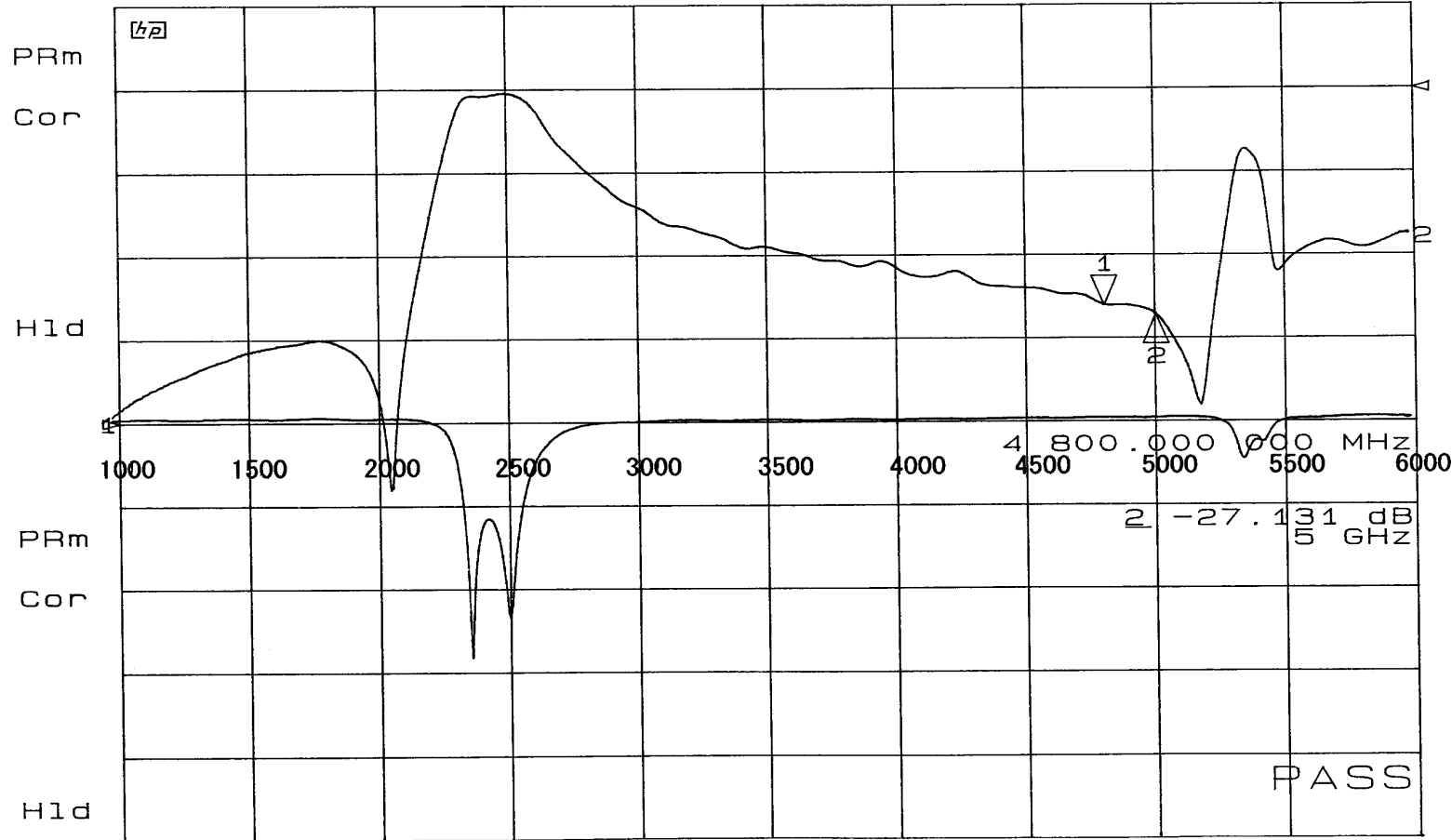
MULTILAYERED FILTERS

MDR641C



CH1 S<sub>11</sub> log MAG 10 dB/ REF 0 dB  
 CH2 S<sub>21</sub> log MAG 10 dB/ REF 0 dB

1 -26.123 dB



TYPE  
MDR641C

MARK  
1 : 4800 MHz  
2 : 5000 MHz

Measurement  
Instrument  
HP8753D  
NETWORK  
ANALYZER

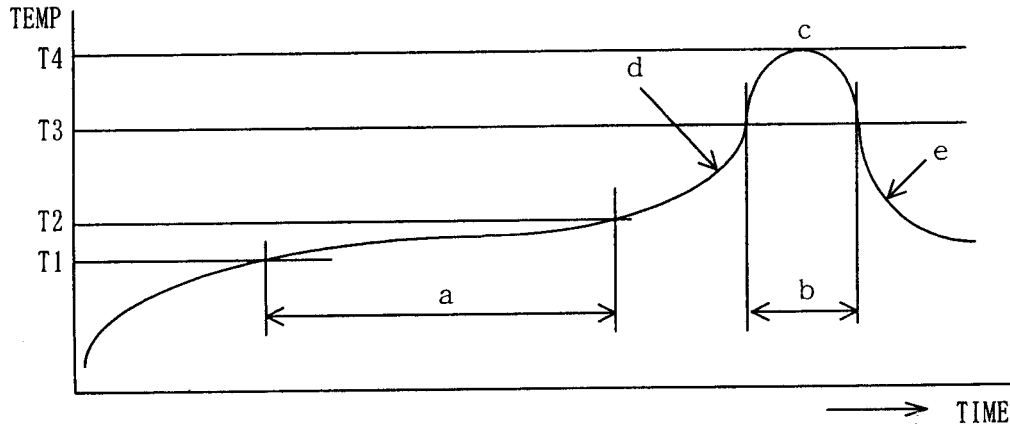
Date  
2000/11/16  
SOSHIN  
ELECTRIC  
CO., LTD.

2 -27.131 dB  
5 GHz

START 1 000.000 000 MHz

STOP 6 000.000 000 MHz

Reflow-soldering conditions (For reference)



- (1) High temperature reflow-soldering conditions (No more than 2 flows allowed)
- T1 :  $130 \pm 10^\circ\text{C}$  , T2 :  $150 \pm 10^\circ\text{C}$  , T3 :  $200^\circ\text{C}$  , T4 :  $240^\circ\text{C}$
- a : Preheating 40 to 120 seconds
- b : Heating 50 seconds
- c : Peak temperature  $240^\circ\text{C}$ , max.
- d : Temperature rising slope  $10^\circ\text{C}/1$  second, max.
- e : Temperature falling slope  $8^\circ\text{C}/1$  second, max.

Dip-soldering conditions (For reference)

- (1) Preheating : 100 to  $150^\circ\text{C}$
- (2) Solder bath temperature :  $260 \pm 5^\circ\text{C}$
- (3) Dipping time :  $5 \pm 1$  seconds

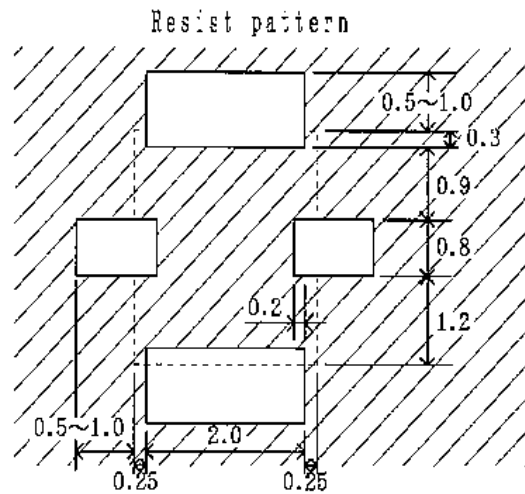
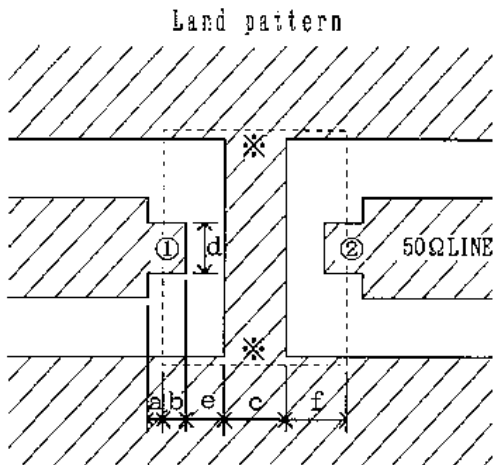
Cleaning conditions

- (1) Cleaning agent : Isopropyl alcohol
- (2) Dip cleaning : 30 minutes, max., at  $40^\circ\text{C}$
- (3) Vapor cleaning : 30 minutes, max.
- (4) Ultrasonic cleaning : 1 minutes, max, with a maximum power of 10w

Recommended Repair Soldering Conditions

- (1) Preheating Conditions
- The temperature difference between soldering iron and device surface must be under  $100^\circ\text{C}$ .
- (2) Recommended Condition of Soldering Iron
- ① Power : 20W MAX.
- ② Chip temperature :  $270^\circ\text{C}$  MAX.
- ③ Dimension of iron chip :  $\sim 1 \phi$
- ④ Soldering time : 3 Seconds MAX.

Recommendation Pattern (Unit : mm)



Terminal	
①	Input
②	Output
*	GND

- a=0.2
  - b=0.3
  - c=1.0
  - d=0.6
  - e=0.45
  - f=0.75
- (Unit : mm)

Example : t=1.0mm  
Glass-epoxy board