

**MDR 642E** Bandpass 2.45GHz

Multilayer Dielectric Series

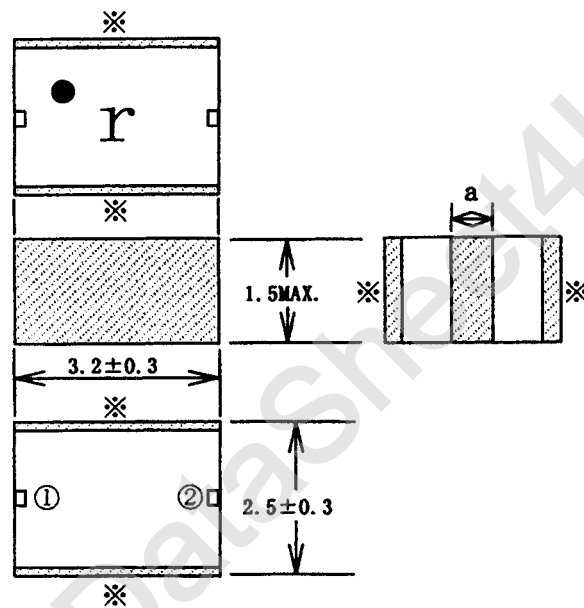
**Product Features**

- 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

$a = 0.6 \pm 0.3$

**Electrical Characteristics**

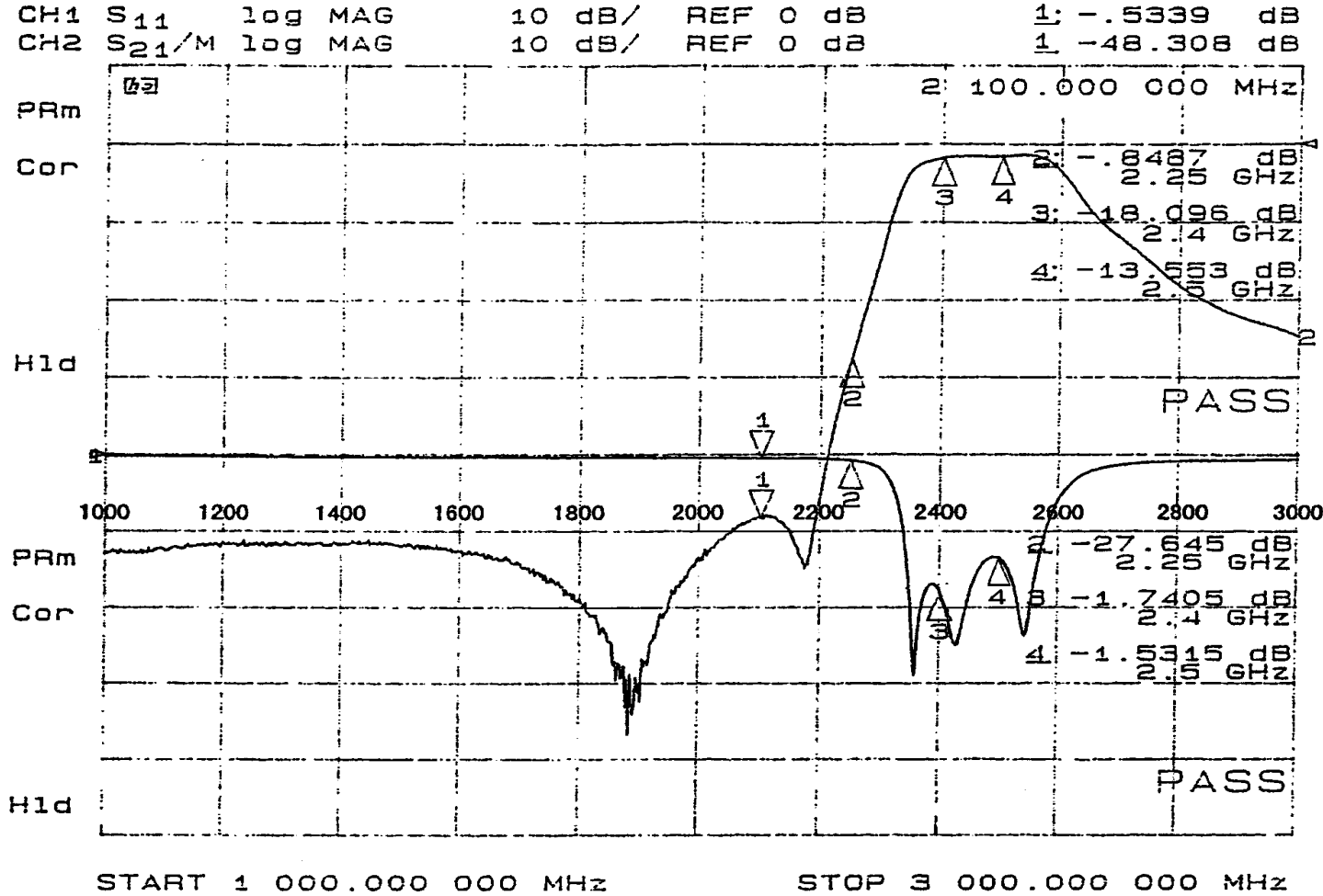
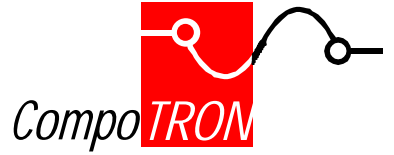
- 1. Zin & Zout : 50 Ω Nominal
- 2. fc : 2450MHz Nominal
- 3. Pass Band : 2400~2500MHz
- 4. Insertion Loss : 2.5 dB MAX. (2400~2500MHz)
- 5. Ripple : 1.2 dB MAX. (2400~2500MHz)
- 6. V.S.W.R : 2.0 MAX. (2400~2500MHz)
- 7. Attenuation : 40 dB MIN. (1750~1950MHz)
- : 35 dB MIN. (at 2100MHz)
- : 20 dB MIN. (at 2250MHz)
- : 30 dB MIN. (4800~5000MHz)

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



MULTILAYERED FILTERS

MDR642E



TYPE  
MDR 642E

CH1 (S11)  
MARK  
1 : 2100 MHz  
2 : 2250 MHz  
3 : 2400 MHz  
4 : 2500 MHz

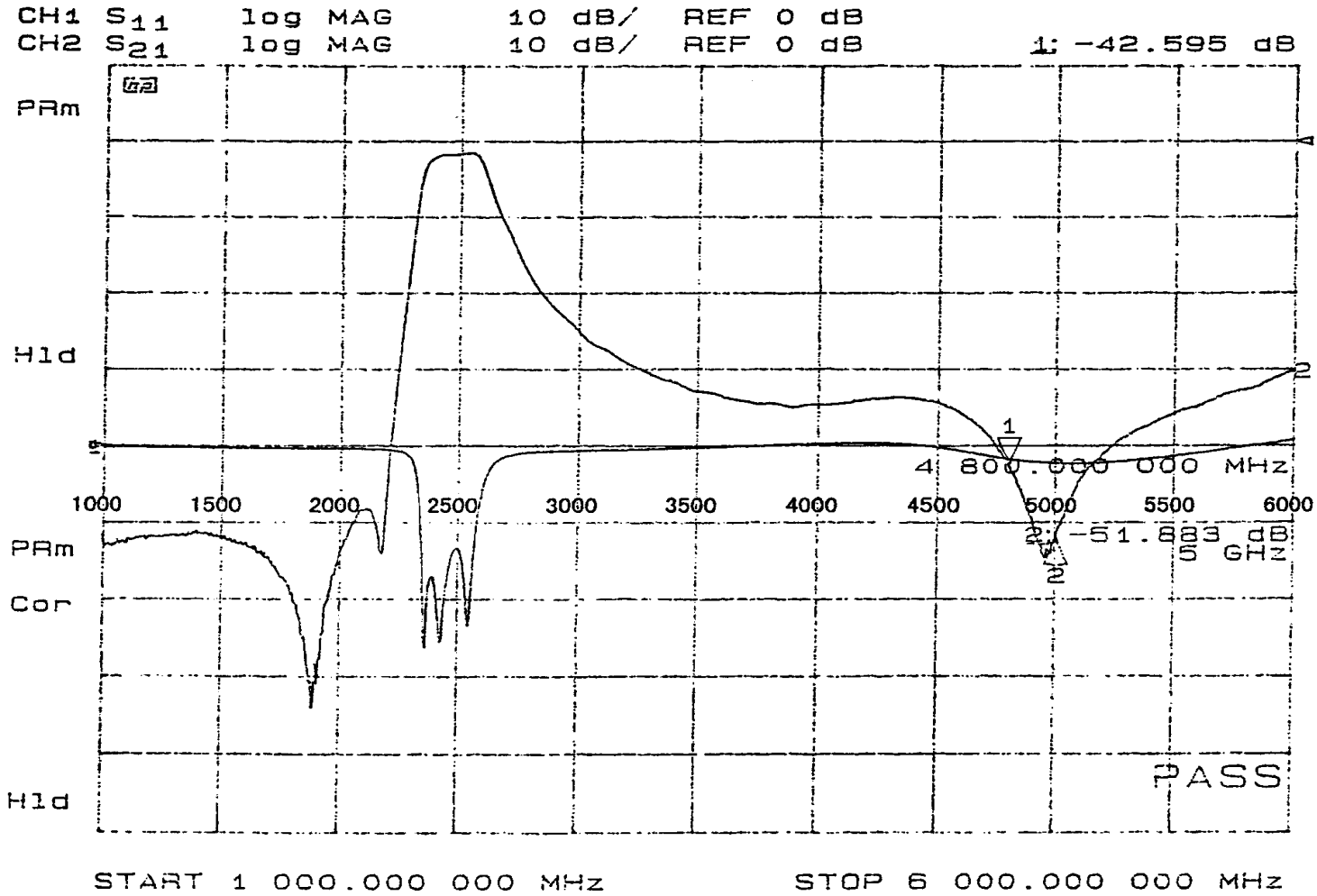
CH2 (S21)  
MARK  
1 : 2100 MHz  
2 : 2250 MHz  
3 : 2400 MHz  
4 : 2500 MHz

Measurement  
Instrument  
HP8753D  
NETWORK  
ANALYZER



MULTILAYERED FILTERS

MDR642E

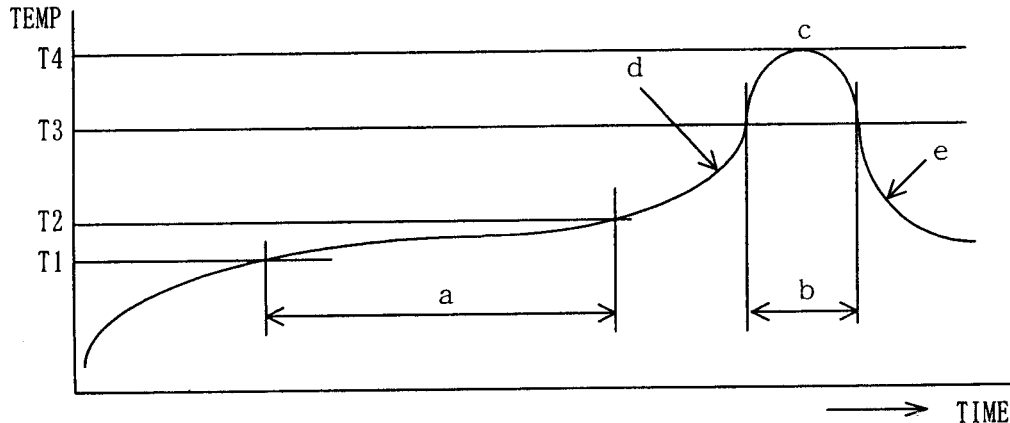


TYPE  
MDR 642E

MARK  
1 : 4800 MHz  
2 : 5000 MHz

Measurement  
Instrument  
HP8753D  
NETWORK  
ANALYZER

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.

Recommended application conditions

1. Standard land dimensions (Unit : mm)

