



RoHS Compliant

### Features

- Distributed constant type LC filter. Prevents ringing caused by circuit impedance.
- Stable noise attenuation over wide frequency range.
- Low profile (T=0.95mm max.) suitable for miniature electronic equipments.
- First class auto-placement

### Applications

- PCs, Laser Printers, Cellular Phone, Clock Data Lines for LCD Display
- High Speed Video Signal Circuits and Interface Circuits
- High Speed Digital Circuits

### How to Order

KNF 21 100 C65 DA 3T S  
① ② ③ ④ ⑤ ⑥ ⑦

① Series

② Size Code

21 2012 (EIA: 0805)

③ Cut off Frequency

|     |        |     |        |
|-----|--------|-----|--------|
| 025 | 25MHz  | 200 | 200MHz |
| 050 | 50MHz  | 400 | 400MHz |
| 100 | 100MHz |     |        |

④ Capacitance

|     |      |      |       |
|-----|------|------|-------|
| C17 | 17pF | C130 | 130pF |
| C33 | 33pF | C235 | 235pF |
| C65 | 65pF |      |       |

⑤ Application

DA Digital Circuit in General

⑥ Packaging

3T T&R: 3000 pcs. (Std.)

⑦ Termination

S Std.

### Specifications

| Part Number       | Cut off Frequency | Capacitance (+50/-20%) | Attenuation (Typical)  | Rated Current | Rated Voltage | Operating Temperature |
|-------------------|-------------------|------------------------|------------------------|---------------|---------------|-----------------------|
| KNF21025C235DA3TS | 25MHz             | 235pF                  | 200 to 600MHz (@20dB)  | 150mA         | 25VDC         | -25 to +85°C          |
| KNF21050C130DA3TS | 50MHz             | 130pF                  | 350 to 850MHz (@20dB)  | 150mA         | 25VDC         |                       |
| KNF21100C65DA3TS  | 100MHz            | 65pF                   | 450 to 950MHz (@20dB)  | 150mA         | 25VDC         |                       |
| KNF21200C33DA3TS  | 200MHz            | 33pF                   | 700 to 1200MHz (@20dB) | 150mA         | 25VDC         |                       |
| KNF21400C17DA3TS  | 400MHz            | 17pF                   | 900 to 1400MHz (@20dB) | 150mA         | 25VDC         |                       |

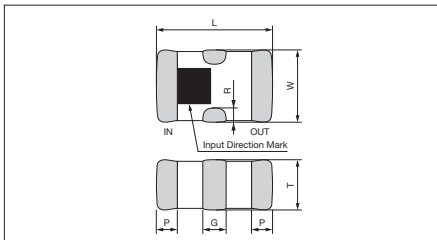
• Storage condition

Temperature: -10 to +45°C

Humidity: 45 to 75%RH

### Dimensions

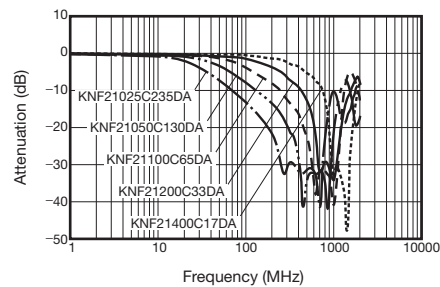
(Unit: mm)



| CODE       | L         | W         | T         |
|------------|-----------|-----------|-----------|
| Dimensions | 2.00±0.20 | 1.25±0.20 | 0.80±0.15 |
| CODE       | G         | P         | R         |
| Dimensions | 0.40±0.30 | 0.30±0.20 | ≥0.01     |

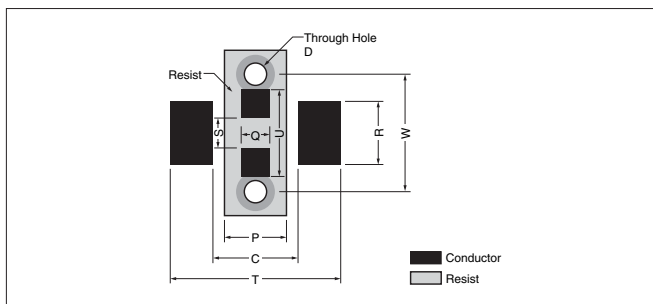
### Attenuation Characteristics

KNF21 Series



### Recommended Land Pattern

(Unit: mm)

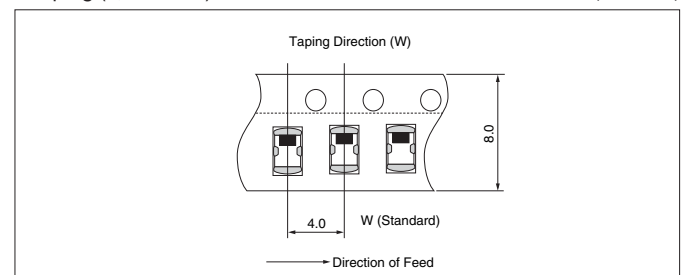


| CODE       | T    | W    | R    | C    | P    | Q    | S    | D          | U    |
|------------|------|------|------|------|------|------|------|------------|------|
| Dimensions | 3.20 | 2.30 | 1.00 | 1.20 | 0.80 | 0.40 | 0.60 | 0.3 to 0.4 | 2.00 |

### Packaging Specification

- Taping (3,000/ reel)

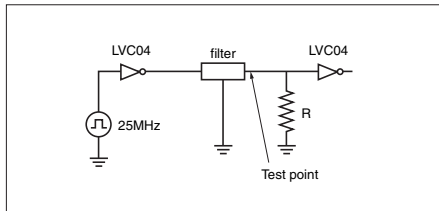
(Unit: mm)



### <Impedance Matching Free>

- Stable attenuation against impedance change
- Good impedance matching without ringing or distortion even at the time of IC ON/ OFF and pattern layout change

### Test circuit



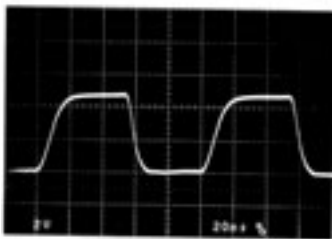
### Output Waveform (Clock frequency 25MHz)

| R            | LC filter | KNF21100 |
|--------------|-----------|----------|
| 1M $\Omega$  |           |          |
| 300 $\Omega$ |           |          |

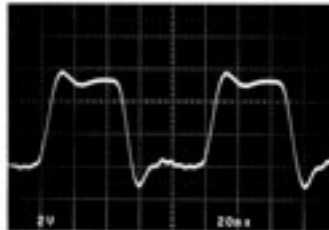
### <No Ringing>

### Excellent Impedance Matching

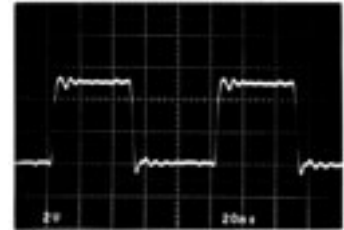
KNF series  
Output waveform



LC filter  
Output waveform



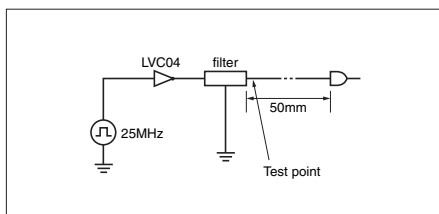
No filter  
Output waveform



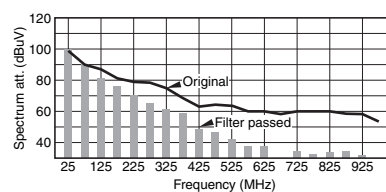
- Wide attenuation up to high frequency range without distortion

### Attenuation Bandwidth

### Test Circuit



KNF21100



LC Filter (T-Type)

