



**THE DATASHEET OF  
ACF451832-681-TD01**



## 3-terminal Filters

For signal line

### ACF series

|       |         |              |
|-------|---------|--------------|
| Type: | ACF3225 | [1210 inch]* |
|       | ACF4532 | [1812 inch]  |

\* Dimensions Code [EIA]

Issue date: September 2011

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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# 3-terminal Filters For Signal Line

Conformity to RoHS Directive

## ACF Series ACF321825, ACF451832

### FEATURES

- The ACF series consists of products with superior attenuation characteristics, in which the T-type filter circuit is magnetically shielded with ferrite.
- The series offers even greater attenuation characteristics when used in a stable circuit on the ground.
- The ACF series is ideal for high-density circuit design, since the series is vertically mounted and does not require much mounting space.
- Available for reflow soldering.
- It is a product conforming to RoHS directive.

### PRODUCT IDENTIFICATION

ACF 321825 - 223 - T D□□  
 (1) (2) (3) (4) (5)

- (1) Series name  
 (2) Dimensions  
 (3) Type  
 (4) Packaging style  
 (5) TDK internal code

### TEMPERATURE RANGES

|                   |              |
|-------------------|--------------|
| Operating/Storage | -25 to +85°C |
|-------------------|--------------|

### PACKAGING STYLE AND QUANTITIES

| Packaging style | Quantity         |
|-----------------|------------------|
| Taping          | 1000 pieces/reel |

### HANDLING AND PRECAUTIONS

- Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- The inductance value may change due to magnetic saturation if the current exceeds the rated maximum.
- Do not expose the inductors to stray magnetic fields.
- Avoid static electricity discharge during handling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 350°C. Soldering time should not exceed 3 seconds.

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• Please contact our Sales office when your application is considered the following:  
 The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

## ACF321825 TYPE

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



### RECOMMENDED PC BOARD PATTERN REFLOW SOLDERING

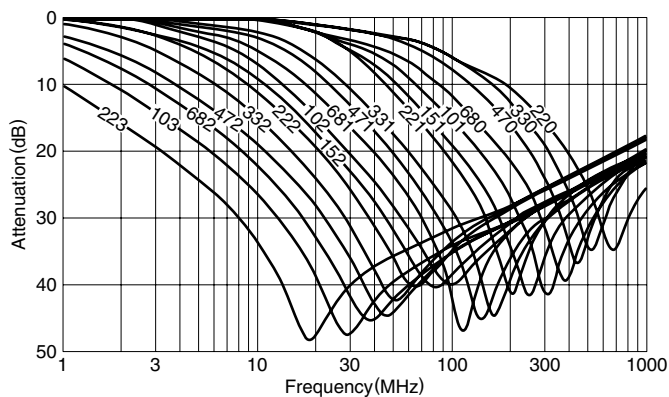


### ELECTRICAL CHARACTERISTICS

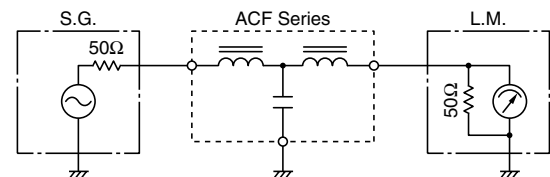
| Part No.      | 25dB attenuation frequency range (MHz) | Rated voltage E <sub>dc</sub> (V)max. | Rated current (mA)max. | DC resistance (Ω)max. [Terminal No.1 to 3] | Insulation resistance (MΩ)min. [Terminal No.1 to 2/No.2 to 3] |
|---------------|--|---------------------------------------|------------------------|--|---|
| ACF321825-223 | 11 to 55                               | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-103 | 17 to 60                               | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-682 | 22 to 75                               | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-472 | 30 to 85                               | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-332 | 37 to 90                               | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-222 | 45 to 105                              | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-152 | 60 to 115                              | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-102 | 80 to 140                              | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-681 | 95 to 150                              | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-471 | 120 to 180                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-331 | 130 to 210                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-221 | 170 to 250                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-151 | 205 to 280                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-101 | 265 to 340                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-680 | 340 to 420                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-470 | 420 to 500                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-330 | 500 to 600                             | 20                                    | 300                    | 0.15                                       | 1000  |
| ACF321825-220 | 600 to 700                             | 20                                    | 300                    | 0.15                                       | 1000  |

### TYPICAL ELECTRICAL CHARACTERISTICS

#### ATTENUATION vs. FREQUENCY CHARACTERISTICS



#### MEASURING CIRCUIT

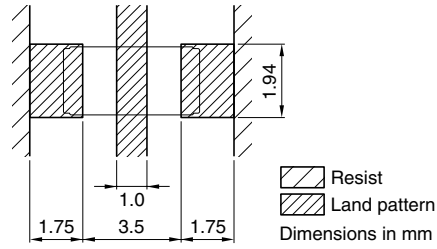


## ACF451832 TYPE

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



### RECOMMENDED PC BOARD PATTERN REFLOW SOLDERING



### ELECTRICAL CHARACTERISTICS

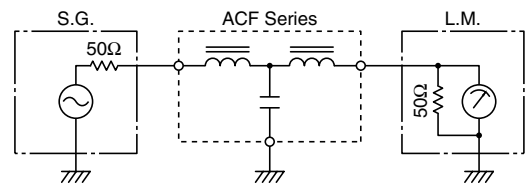
| Part No.      | 25dB attenuation frequency range (MHz) | Rated voltage E <sub>dc</sub> (V)max. | Rated current (mA)max. | DC resistance (Ω)max. [Terminal No.1 to 3] | Insulation resistance (MΩ)min. [Terminal No.1 to 2/No.2 to 3] |
|---------------|--|---------------------------------------|------------------------|--|---|
| ACF451832-333 | 7 to 60                                | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-223 | 9 to 65                                | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-153 | 11 to 70                               | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-103 | 15 to 75                               | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-682 | 20 to 85                               | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-472 | 25 to 90                               | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-332 | 35 to 100                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-222 | 40 to 110                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-152 | 50 to 130                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-102 | 65 to 150                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-681 | 75 to 160                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-471 | 95 to 180                              | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-331 | 115 to 205                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-221 | 150 to 250                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-151 | 190 to 290                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-101 | 235 to 335                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-680 | 295 to 395                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-470 | 360 to 460                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-330 | 450 to 550                             | 50                                    | 300                    | 0.15                                       | 1000  |
| ACF451832-220 | 550 to 650                             | 50                                    | 300                    | 0.15                                       | 1000  |

### TYPICAL ELECTRICAL CHARACTERISTICS

#### ATTENUATION vs. FREQUENCY CHARACTERISTICS



#### MEASURING CIRCUIT



## PACKAGING STYLES

### REEL DIMENSIONS



### TAPE DIMENSIONS



| Type   | A             | B             | C             | D              | T       |
|--------|---------------|---------------|---------------|----------------|---------|
| 321825 | $2.2 \pm 0.2$ | $3.7 \pm 0.2$ | $4.0 \pm 0.1$ | $2.0 \pm 0.05$ | 3.3max. |
| 451832 | $2.2 \pm 0.2$ | $5.2 \pm 0.2$ | $4.0 \pm 0.1$ | $2.0 \pm 0.05$ | 3.8max. |



## Looking for pricing, stock, or lifecycle information?

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- ⊖ [TDK Corporation](#) Information

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- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management