

# EMC Components

## 3-Terminal Filters for Signal Line SMD

### ACF Series ACF321825, 451832 Types

#### FEATURES

- The ACF series are T-type EMC filters incorporating ferrite chip beads and multilayer ceramic chip capacitors.
- The external structure consists entirely of ferrite, enabling these parts to achieve superior attenuation characteristics despite their extremely compact dimensions.
- Because they can be mounted on edge, the ACF series are ideal for high-density circuit configurations.
- Available for reflow soldering.
- It is a product conforming to RoHS directive.

#### PRODUCT IDENTIFICATION

|     |        |       |
|-----|--------|-------|
| ACF | 321825 | - 223 |
| (1) | (2)    | (3)   |

- (1) Series name  
(2) Dimensions  
(3) Capacitance

#### TEMPERATURE RANGES

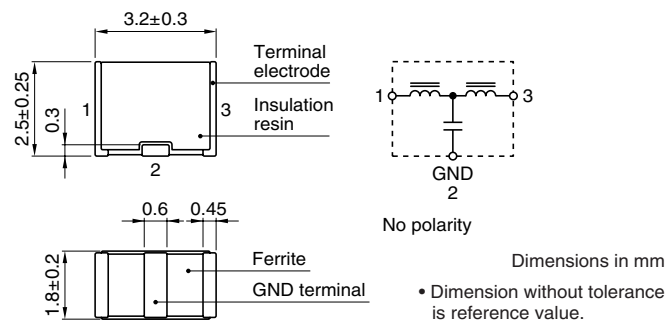
|                   |              |
|-------------------|--------------|
| Operating/Storage | -25 to +85°C |
|-------------------|--------------|

#### PACKAGING STYLE AND QUANTITIES

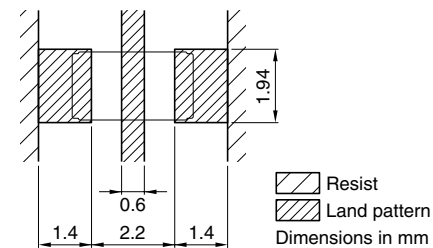
|                 |                  |
|-----------------|------------------|
| Packaging style | Quantity         |
| Taping          | 1000 pieces/reel |

#### ACF321825 TYPE

##### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



##### RECOMMENDED PC BOARD PATTERN REFLOW SOLDERING



#### ELECTRICAL CHARACTERISTICS

| Part No.      | Maximum attenuation frequency (MHz) | 25dB attenuation frequency range (MHz) | Rated voltage Edc (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 | 17                                  | 11 to 55                               | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-103 | 27                                  | 17 to 60                               | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-682 | 37                                  | 22 to 75                               | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-472 | 45                                  | 30 to 85                               | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-332 | 55                                  | 37 to 90                               | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-222 | 65                                  | 45 to 105                              | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-152 | 80                                  | 60 to 115                              | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-102 | 100                                 | 80 to 140                              | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-681 | 120                                 | 95 to 150                              | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-471 | 145                                 | 120 to 180                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-331 | 165                                 | 130 to 210                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-221 | 200                                 | 170 to 250                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-151 | 240                                 | 205 to 280                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-101 | 300                                 | 265 to 340                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-680 | 370                                 | 340 to 420                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-470 | 450                                 | 420 to 500                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-330 | 530                                 | 500 to 600                             | 20                        | 300                    | 0.15                                       | 1000                                                          |
| ACF321825-220 | 650                                 | 600 to 700                             | 20                        | 300                    | 0.15                                       | 1000                                                          |

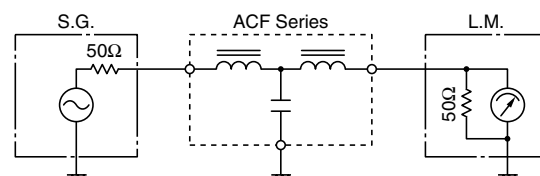
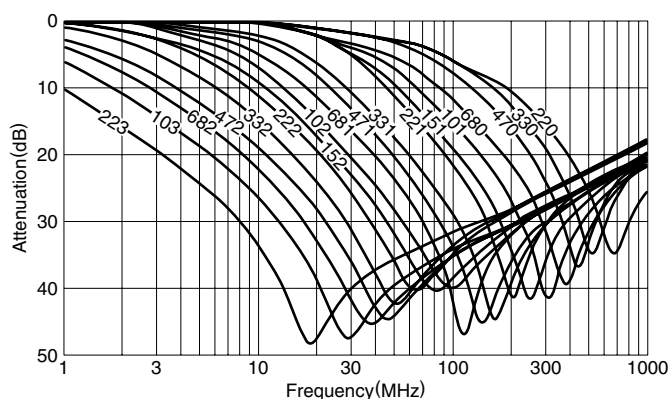
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- Please contact our Sales office when your application are 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.

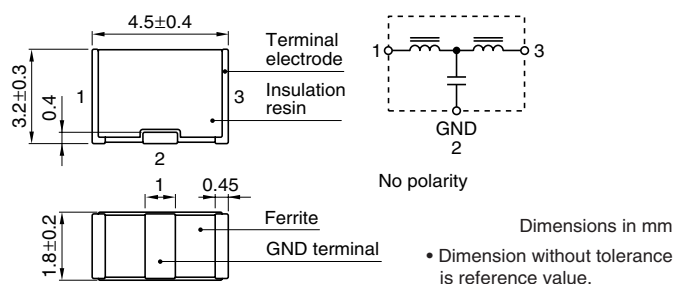
ACF Series ACF321825, 451832 Types

## MEASURING CIRCUIT



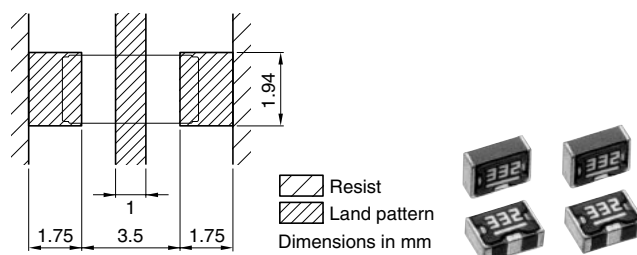
## ACF451832 TYPE

### SHAPES AND DIMENSIONS/CIRCUIT DIAGRAM



## RECOMMENDED PC BOARD PATTERN

### REFLOW SOLDERING



## ELECTRICAL CHARACTERISTICS

| Part No.      | Maximum attenuation<br>frequency<br>(MHz) | 25dB attenuation<br>frequency range<br>(MHz) | Rated voltage Edc<br>(V)max. | Rated current<br>(mA)max. | DC resistance<br>(Ω)max.<br>[Terminal No.1 to 3] | Insulation resistance<br>(MΩ)min.<br>[Terminal No.1 to 2/No.2 to 3] |
|---------------|-------------------------------------------|----------------------------------------------|------------------------------|---------------------------|--------------------------------------------------|---------------------------------------------------------------------|
| ACF451832-333 | 12                                        | 7 to 60                                      | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-223 | 15                                        | 9 to 65                                      | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-153 | 18                                        | 11 to 70                                     | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-103 | 23                                        | 15 to 75                                     | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-682 | 35                                        | 20 to 85                                     | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-472 | 40                                        | 25 to 90                                     | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-332 | 50                                        | 35 to 100                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-222 | 60                                        | 40 to 110                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-152 | 75                                        | 50 to 130                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-102 | 90                                        | 65 to 150                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-681 | 105                                       | 75 to 160                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-471 | 125                                       | 95 to 180                                    | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-331 | 150                                       | 115 to 205                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-221 | 190                                       | 150 to 250                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-151 | 230                                       | 190 to 290                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-101 | 280                                       | 235 to 335                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-680 | 340                                       | 295 to 395                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-470 | 410                                       | 360 to 460                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-330 | 500                                       | 450 to 550                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |
| ACF451832-220 | 600                                       | 550 to 650                                   | 50                           | 300                       | 0.15                                             | 1000                                                                |



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## TDK:

[ACF451832-102-TLD01](#) [ACF451832-103-TLD01](#) [ACF451832-151-TLD01](#) [ACF451832-153-TL](#) [ACF451832-153-TLD01](#) [ACF451832-333-TL](#) [ACF451832-333-TLD01](#) [ACF451832-681-TLD01](#) [ACF451832-101-TD01](#) [ACF451832-103-TD01](#) [ACF451832-102-TD01](#) [ACF451832-220-TD01](#) [ACF451832-222-TD01](#) [ACF451832-223-TD01](#) [ACF451832-221-TD01](#) [ACF451832-471-TD01](#) [ACF451832-472-TD01](#) [ACF451832-470-TD01](#) [ACF451832-333-TD01](#) [ACF451832-332-TD01](#) [ACF451832-331-TD01](#) [ACF451832-330-TD01](#) [ACF451832-151-TD01](#) [ACF451832-153-TD01](#) [ACF451832-152-TD01](#) [ACF321825-220-TD01](#) [ACF321825-222-TD01](#) [ACF321825-221-TD01](#) [ACF321825-223-TD01](#) [ACF321825-472-TD01](#) [ACF321825-470-TD01](#) [ACF321825-471-TD01](#) [ACF451832-681-TD01](#) [ACF321825-152-TD01](#) [ACF321825-151-TD01](#) [ACF321825-330-TD01](#) [ACF321825-332-TD01](#) [ACF321825-331-TD01](#) [ACF451832-680-TD01](#) [ACF451832-682-TD01](#) [ACF321825-103-TD01](#) [ACF321825-102-TD01](#) [ACF321825-101-TD01](#) [ACF321825-680-TD01](#) [ACF321825-682-TD01](#) [ACF321825-681-TD01](#) [ACF451832-101-TLD01](#) [ACF451832-223-TLD01](#) [ACF451832-472-TLD01](#) [ACF451832-332-TLD01](#) [ACF451832-222-TLD01](#) [ACF451832-152-TLD01](#) [ACF451832-471-TLD01](#) [ACF451832-331-TLD01](#) [ACF451832-221-TLD01](#) [ACF451832-680-TLD01](#) [ACF451832-470-TLD01](#) [ACF451832-330-TLD01](#) [ACF451832-220-TLD01](#) [ACF451832-682-TLD01](#)