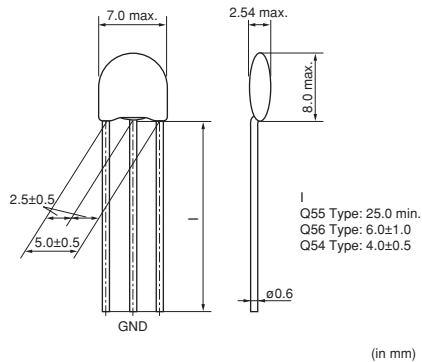


# Leaded EMIFIL® (Three-terminal Capacitor type) Small Type

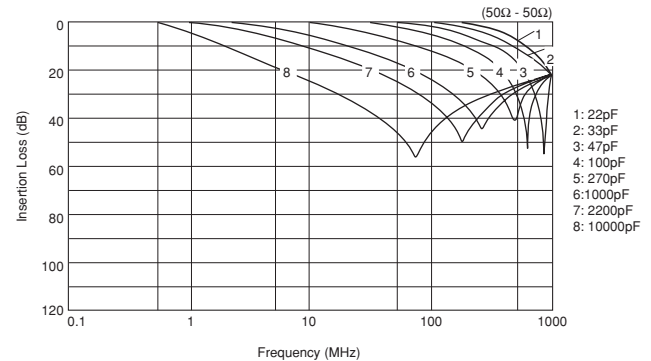
## DSN6/DSS6 Series

### DSN6 Series

#### ■ Dimensions



#### ■ Insertion Loss Characteristics (Main Items)

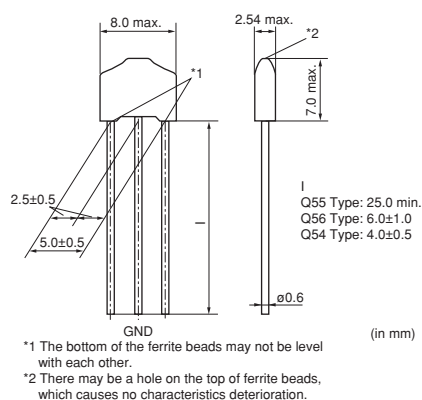


#### ■ Rated Value (□: lead type/packaging code)

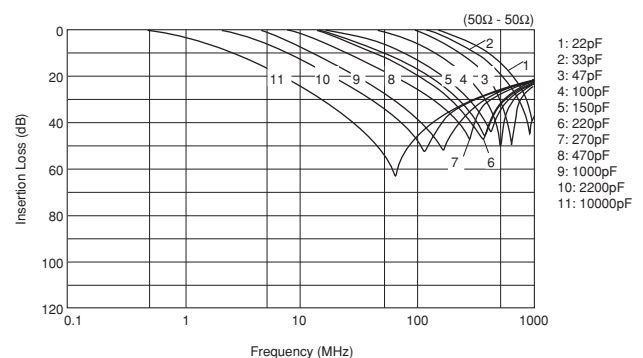
| Part Number   | Capacitance     | Rated Voltage | Rated Current | Operating Temperature Range |
|---------------|-----------------|---------------|---------------|-----------------------------|
| DSN6NC51H220□ | 22pF ±20%       | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H330□ | 33pF ±20%       | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H470□ | 47pF ±20%       | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H101□ | 100pF ±20%      | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H271□ | 270pF ±20%      | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H102□ | 1000pF ±20%     | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NC51H222□ | 2200pF ±20%     | 50Vdc         | 6A            | -25 to +85°C                |
| DSN6NZ81H103□ | 10000pF 80/-20% | 50Vdc         | 6A            | -25 to +85°C                |

### DSS6 Series Straight Type

#### ■ Dimensions



#### ■ Insertion Loss Characteristics (Main Items)



Continued on the following page.

● This data sheet is applied for Lead EMIFIL® Capacitor Type used for General Electronics equipment for your design.

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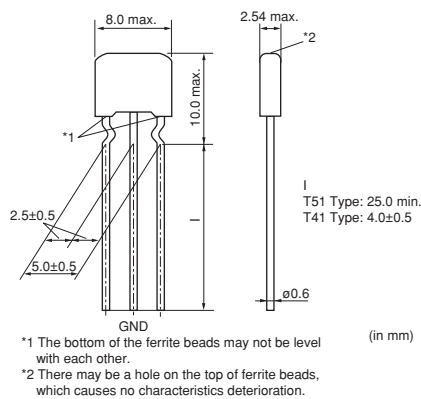
Continued from the preceding page.

### ■ Rated Value (□: lead type/package code)

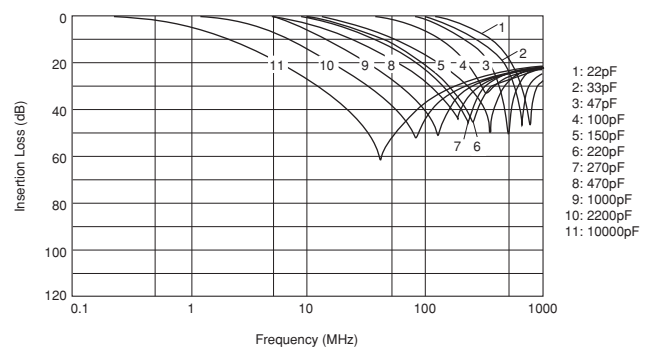
| Part Number   | Capacitance    | Rated Voltage | Rated Current | Operating Temperature Range |
|---------------|----------------|---------------|---------------|-----------------------------|
| DSS6NC52A220□ | 22pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A330□ | 33pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A470□ | 47pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A101□ | 100pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A151□ | 150pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A221□ | 220pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A271□ | 270pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A471□ | 470pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A102□ | 1000pF ±20%    | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NE52A222□ | 2200pF 80/-20% | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NZ82A103□ | 10000pF ±30%   | 100Vdc        | 6A            | -25 to +85°C                |

### DSS6 Series Incrimp Type

### ■ Dimensions



### ■ Insertion Loss Characteristics (Main Items)



### ■ Rated Value (□: lead type/package code)

| Part Number   | Capacitance    | Rated Voltage | Rated Current | Operating Temperature Range |
|---------------|----------------|---------------|---------------|-----------------------------|
| DSS6NC52A220□ | 22pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A330□ | 33pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A470□ | 47pF ±20%      | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A101□ | 100pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A151□ | 150pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A221□ | 220pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A271□ | 270pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A471□ | 470pF ±20%     | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NC52A102□ | 1000pF ±20%    | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NE52A222□ | 2200pF 80/-20% | 100Vdc        | 6A            | -25 to +85°C                |
| DSS6NZ82A103□ | 10000pF ±30%   | 100Vdc        | 6A            | -25 to +85°C                |

Continued on the following page.

● This data sheet is applied for Lead EMIFIL® Capacitor Type used for General Electronics equipment for your design.

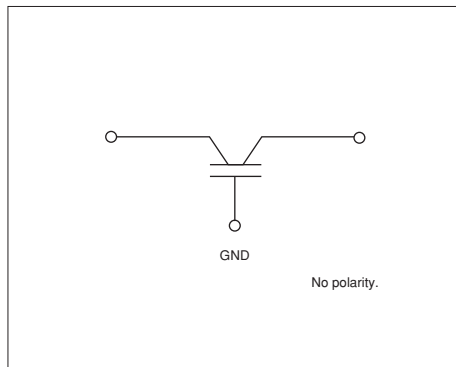
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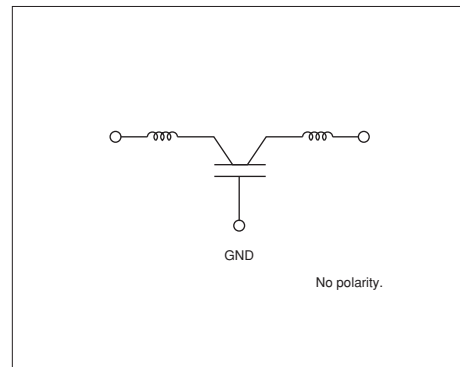
## ■ Equivalent Circuit

### DSN6 Series



## ■ Equivalent Circuit

### DSS6 Series



## ■ Packaging

### ● Minimum Quantity

| Part Number | Minimum Order Quantity (order in sets only) (Pcs.) |                   |                                |
|-------------|----------------------------------------------------|-------------------|--------------------------------|
|             | Ammo Pack                                          | ø320mm Paper reel | Bulk (Bag)                     |
| DS□6 Series | 2000                                               | —                 | 250 Q55/T51<br>500 Q54/Q56/T41 |

### ● Lead Type/Packaging

| Code | Lead Type | Lead Length* (mm) | Packaging | Series                |
|------|-----------|-------------------|-----------|-----------------------|
| Q55B | Straight  | 25.0 min.         | Bulk      | All series            |
| Q50B |           | 4.0±0.5           |           | DST9N/H               |
| Q52B |           | 6.0±1.0           |           | DST9N                 |
| Q54B |           | 4.0±0.5           |           | DSN6N/9N, DSS6N       |
| Q56B |           | 6.0±1.0           |           |                       |
| T41B | Incrimp   | 4.0±0.5           |           | DSS6N                 |
| T51B |           | 25.0 min.         |           |                       |
| Q91A | Straight  | 20.0±1.0          | Ammo Pack | DS□6N, DSN9N/H, DSS1N |
| Q92A |           | 16.5±1.0          |           | DS□6N, DS□9N/H        |
| Q93A |           | 18.5±1.0          |           |                       |
| U21A | Incrimp   | 16.5±1.0          |           | DSS6N                 |
| U31A |           | 18.5±1.0          |           |                       |

\*Lead Distance between Reference and Bottom Planes Except for Bulk.

Continued on the following page. 

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## ■ Caution · Notice

### Caution

#### ● Rating

Do not use products beyond the rated current and rated voltage as this may create excessive heat and deteriorate the insulation resistance.

#### ● Soldering and Mounting

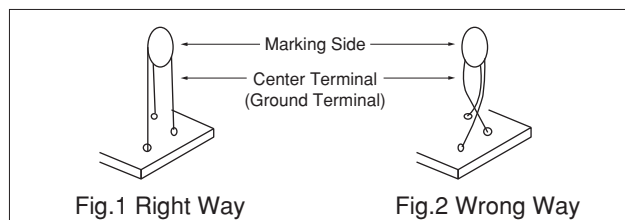
1. Mounting holes should be designed as specified in these specifications. Other designs than those shown in these specifications may cause cracks in ceramics that may lead to smoking or firing.

##### 2. DSN9/DST9/DSN9H/DST9H/VFS9V Series

Mounting for PCB. (Applies only to bulk type.)

The form of the mounting hole of the bulk item is a triangle.

The product should be inserted and soldered to each hole in the correct way as in Fig.1. (The center terminal and the other terminals become parallel when viewing the product from the side.) Smoking and firing may be caused by incorrect mounting as in Fig.2. (The center terminal and the other terminals cross when viewing the product from the side.)



3. Take care not to apply any mechanical stress to product body at the lead terminal bending process for product angle adjustment after insertion.

For DST9, please do not bend the lead terminal at the point between the dielectric part and the ferrite bead.

Continued on the following page. 

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### Notice

## ● Storage and Operating Conditions

### <Operating Environment>

1. Do not use products in a chemical atmosphere such as chlorine gas, acid or sulfide gas.
2. Do not use products near water, oil or organic solvents. Avoid environments where dust or dirt may adhere to the product.

### <Storage and Handling Requirements>

#### 1. Storage Period

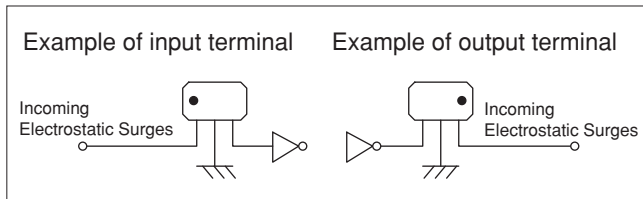
Use the products within 12 months after delivery.  
Solderability should be checked if this period is exceeded.

#### 2. Storage Conditions

- (1) Storage temperature: -10 to 40 degrees C  
Relative humidity: 15 to 85%  
Avoid sudden changes in temperature and humidity.
- (2) Do not store products in a chemical atmosphere such as chlorine gas, acid or sulfide gas.
- (3) When restoring taping type (BL01RN1A1F1J), please attach the spacer between the flanges of the reel. The spacer is corrugated paper that is attached when shipping.

### <Using EMIGUARD® effectively>

1. Terminal (with mark) should be properly connected to the line of incoming electrostatic surge. (There is polarity.) Otherwise, no effect in ESD suppression can be expected (VFR3V).



2. Products should be used at rated voltage or less and rated current or less.
3. Products should not be applied for the absorption of surges that have large energy (e.g., induced lightning surges, switching surges) because it is designed for the absorption of electrostatic surges (VFR3V).
4. Electrostatic testing should be done on the following conditions (VFR3V).  

$$n \cdot [C / R \cdot V^2]^2 < 8.0 \times 10^5$$

n: Times applied  
C: Charging Capacitance (pF)  
V: Testing Voltage (kV)  
R: Charging Resistance (Ω)

## ● Soldering and Mounting

### 1. Washing

Failure and degradation of a product are caused by the washing method. When you wash in conditions that are not in the mounting information, please contact Murata engineering.

### 2. Soldering

Reliability decreases with improper soldering methods. Please solder by the standard soldering conditions shown in the mounting information.

### 3. Other

Noise suppression levels resulting from Murata's EMI suppression filters EMIFIL® may vary, depending on the circuits and ICs used, type of noise, mounting pattern, lead wire length, mounting location, and other operating conditions. Be sure to check and confirm in advance the noise suppression effect of each filter, in actual circuits, etc. before applying the filter in a commercial-purpose equipment design.

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