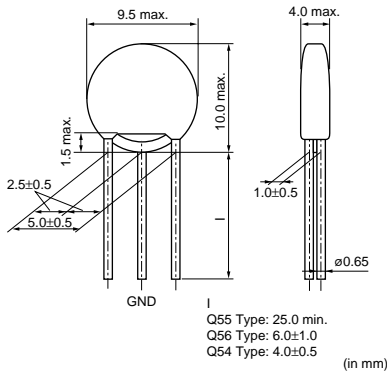


Leaded EMIFIL® (Capacitor type) Standard Type

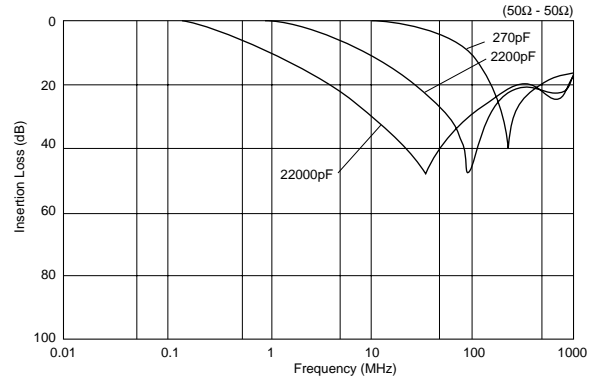
DSN9N/DSS9N/DST9N Series

DSN9N Series

■ Dimensions



■ Insertion Loss Characteristics (Main Items)



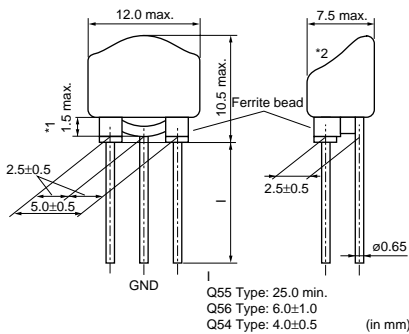
■ Rated Value (□: lead type/packaging code)

Part Number	Capacitance	Rated Voltage	Rated Current	Operating Temperature Range
DSN9NC52A271□	270pF ±20%	100Vdc	7A	-25 to +85°C
DSN9NC52A222□	2200pF ±20%	100Vdc	7A	-25 to +85°C
DSN9NC51H223□	22000pF 50/-20%	50Vdc	7A	-25 to +85°C

Rated current is 6A for taping type and its lead diameter is phi 0.6mm and three terminal in line arrangement.

DSS9N Series

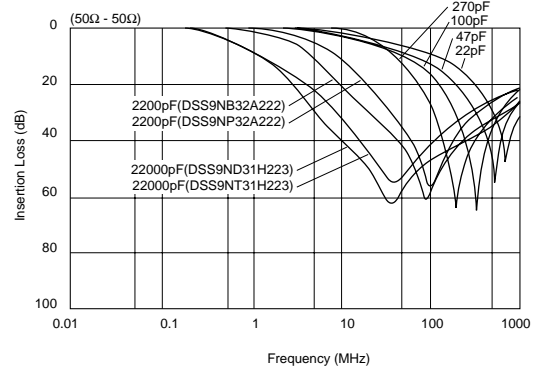
■ Dimensions



*1 Coating extending on leads does not exceed the tangent line. Exposed electrode, if any, is covered by solder, etc.

*2 There should be no exposure of the ferrite bead if there is a hole on top of the filter; the ferrite bead should not be exposed.

■ Insertion Loss Characteristics (Main Items)



Continued on the following page. ↗

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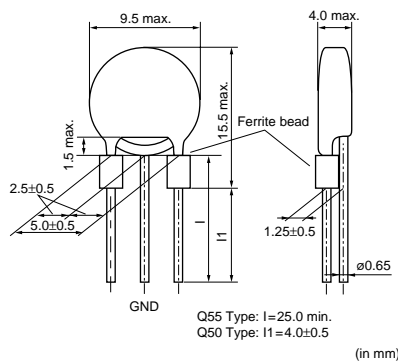
■ Rated Value (□: lead type/packaging code)

Part Number	Capacitance	Rated Voltage	Rated Current	Operating Temperature Range
DSS9NC52A220□	22pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NC52A470□	47pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NC52A101□	100pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NC52A271□	270pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NC52A222□	2200pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NP32A222□	2200pF ±20%	100Vdc	7A	-25 to +85°C
DSS9NC51H223□	22000pF 50/-20%	50Vdc	7A	-25 to +85°C
DSS9NT31H223□	22000pF 50/-20%	50Vdc	7A	-25 to +85°C

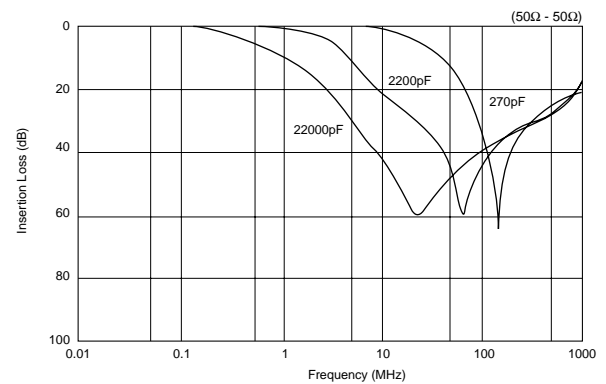
Rated current is 6A for taping type and its lead diameter is phi 0.6mm and three terminal in line arrangement.
DSS9NP32A222/DSS9NT31H223 are low distortion types for audio IF circuits.

DST9N Series

■ Dimensions




■ Insertion Loss Characteristics (Main Items)



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

Part Number	Capacitance	Rated Voltage	Rated Current	Operating Temperature Range
DST9NC52A271□	270pF ±20%	100Vdc	7A	-25 to +85°C
DST9NC52A222□	2200pF ±20%	100Vdc	7A	-25 to +85°C
DST9NC51H223□	22000pF 50/-20%	50Vdc	7A	-25 to +85°C

Rated current is 6A for taping type and its lead diameter is phi 0.6mm and three terminal in line arrangement.

Continued on the following page. 

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

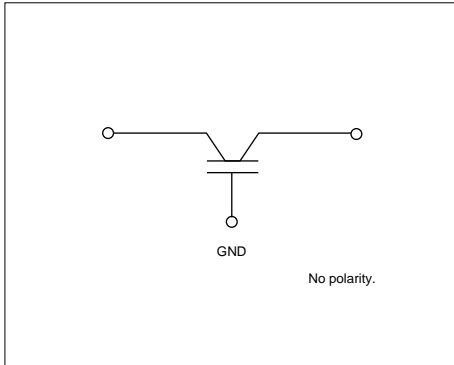
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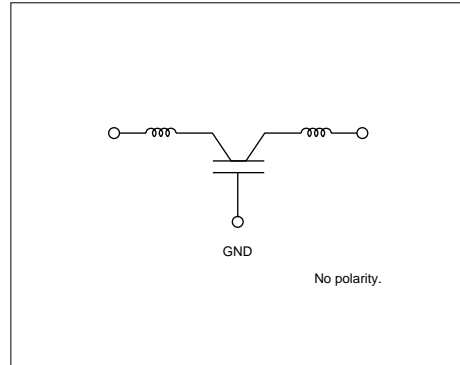
Equivalent Circuit

DSN9N Series



Equivalent Circuit

DSS9N/DST9N Series



Packaging

Minimum Quantity

Part Number	Minimum Order Quantity (order in sets only) (Pcs.)		
	Ammo Pack	ø320mm Paper reel	Bulk (Bag)
DSN9 Series	2000	—	250 Q55 500 Q54/Q56
DST9 Series	1000	—	200 Q55 250 Q50/Q52
DSS9 Series	—	800	200 Q55 500 Q54/Q56

Lead Type/Packaging

Code	Lead Type	Lead Length* (in 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		DSN6/9, DSS6/9		
Q56B		6.0±1.0		DSS6N		
T41B	Incrimp	4.0±0.5	Paper Reel (ø320mm)	DSS9N/H		
T51B		25.0 min.				
Q91J	Straight	20.0±1.0			Ammo Pack	DS□6, DSN9N/H
Q92J		16.5±1.0				
Q93J		18.5±1.0				
Q91A		20.0±1.0				
Q92A		16.5±1.0				
Q93A	18.5±1.0	All series except DSS9N/H				
U21A	Incrimp				16.5±1.0	DSS6N
U31A					18.5±1.0	


*Lead Distance between Reference and Bottom Planes except Bulk.

Continued on the following page.

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■ Caution•Notice

 Caution

● Rating

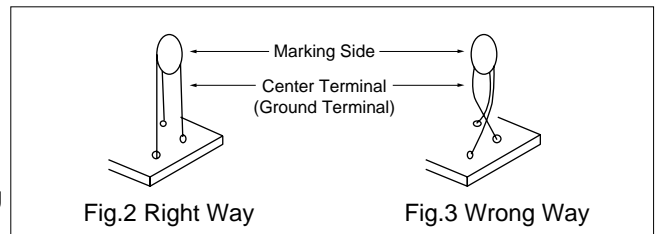
Do not use products beyond the rated current and rated voltage as this may create excessive heat and deteriorate the insulation resistance.


● 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/DSS9/DST9/DSN9H/DSS9H/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.2. (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.3. (The center terminal and the other terminals cross when viewing the product from the side.)




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.

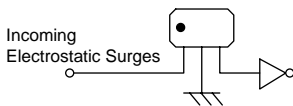
(2) Do not store products in a chemical atmosphere such as chlorine gas, acid or sulfide gas.

(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.

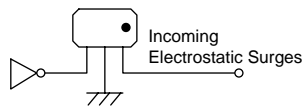
<Using EMIGUARD® effectively>

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).

Example of input terminal



Example of output terminal



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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