Noise suppression filter
For audio lines (Class-D amplifier noise suppression)
MAF series

RoHS REACH Halogen Free Lead Free

MAF1608F type

Product Portal Search Simulation Model Selection Guide Tech Library Tech Note Application Guides

FEATURES

- A compact noise suppression component for audio lines that accommodates high currents.
- Distortions are greatly reduced during insertion with the adoption of newly-developed low distortion ferrite materials.
- Small reductions in volume due to its low resistance, and optimal for devices that require high sound quality as the generating of sound distortions is controlled.
- High efficacy is put for high frequency noise suppression of class-D amplifier harmonics in 100 to 400MHz because of high damping property.
- Operating temperature range: –55 to +125°C

APPLICATION

- Sound lines for devices such as smartphones and tablets (earphones, microphones, and speakers).
- Sound lines for portable game machines.

PART NUMBER CONSTRUCTION

MAF	1608	F	AD	121	C	T	000
Series name	L×W×Tdimensions 1.6×0.8x0.8 mm	Characteristics	Internal code	Impedance (Ω) at 100MHz	Internal code	Packaging style	Internal code

CHARACTERISTICS SPECIFICATION TABLE

Impedance [100MHz] (Ω)Typ.	DC resistance (Ω)max.	(Ω)Typ.	Rated current* (A)max.	Part No.
120	0.105	0.085	1.35	MAF1608FAD121CT000
150	0.130	0.100	1.10	MAF1608FAD151CT000

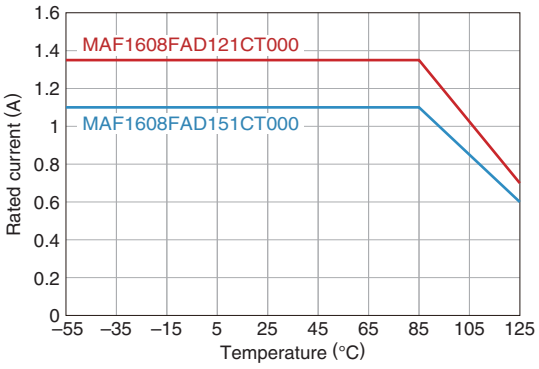
* Please refer to the graph of rated current vs. temperature characteristics (derating) about the rating current at 85°C or more in temperature of the product.

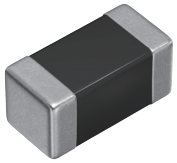
Measurement equipment

Measurement item	Product No.	Manufacturer
Impedance	E4991A+16192A	Keysight Technologies
DC resistance	Type-7556	Yokogawa

* Equivalent measurement equipment may be used.

Rated current vs. temperature characteristics (derating)

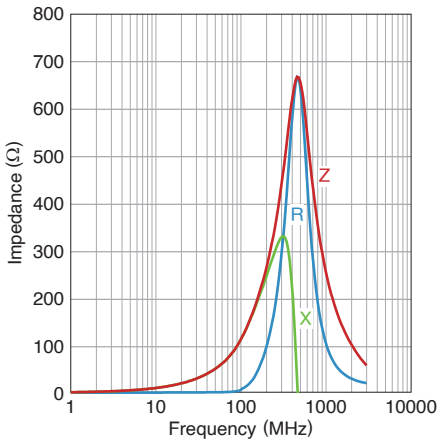




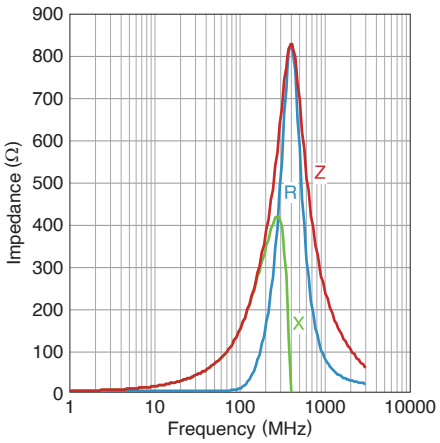
MAF1608F type

Z, X, R vs. frequency characteristics

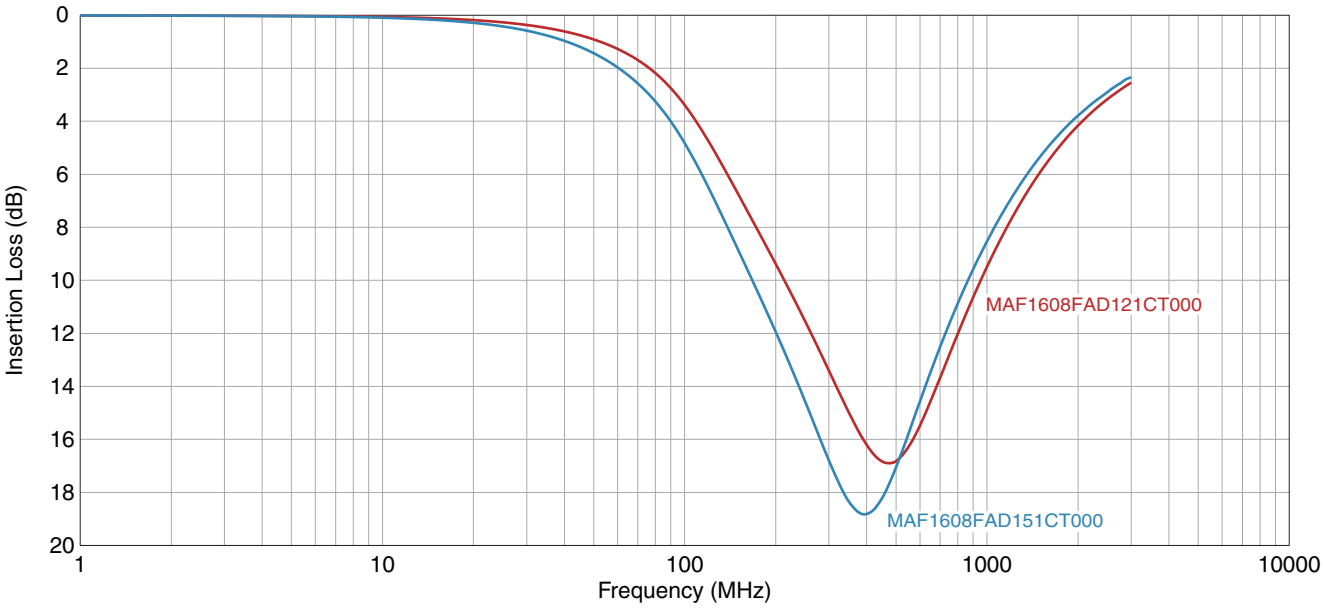
MAF1608FAD121CT000



MAF1608FAD151CT000

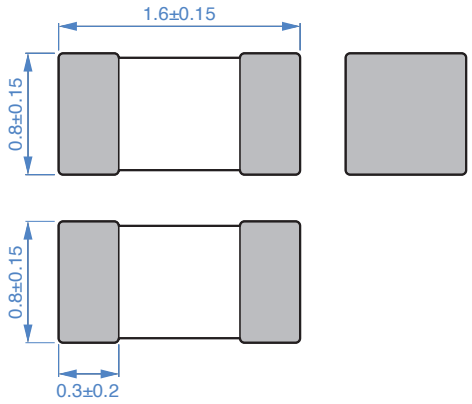


INSERTION LOSS VS. FREQUENCY CHARACTERISTICS



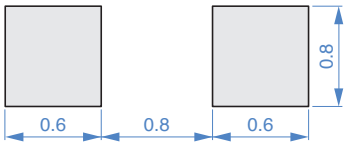
MAF1608F type

SHAPE & DIMENSIONS



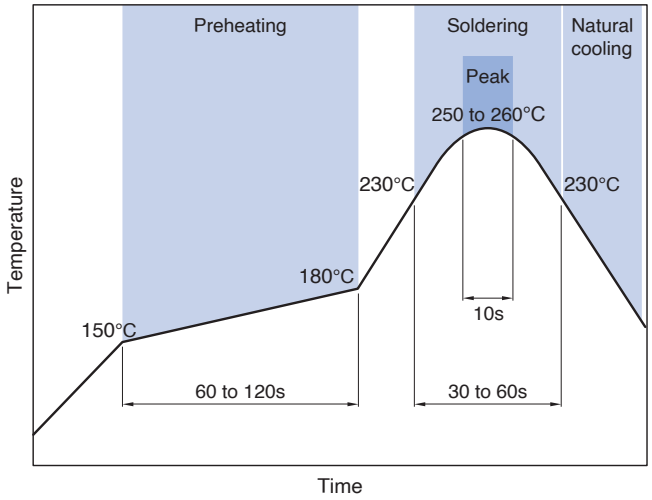
Dimensions in mm

RECOMMENDED LAND PATTERN



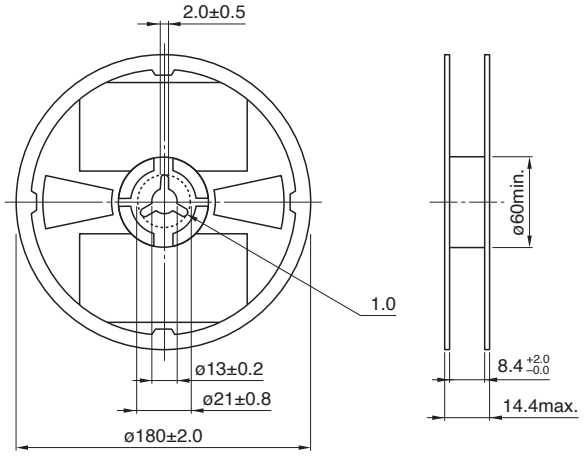
Dimensions in mm

RECOMMENDED REFLOW PROFILE



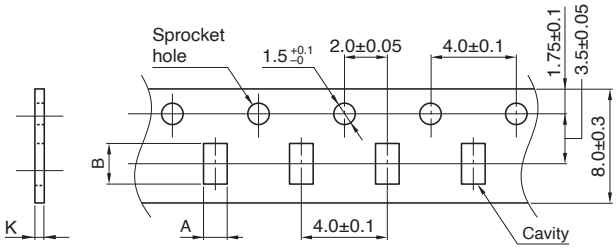
PACKAGING STYLE

REEL DIMENSIONS



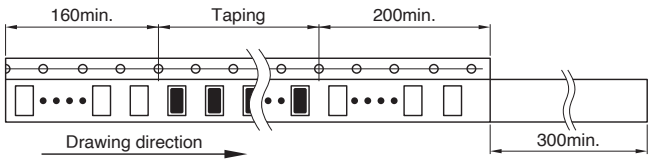
Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm

Type	A	B	K
MAF1608F	1.1±0.2	1.9±0.2	1.1max.



Dimensions in mm

PACKAGE QUANTITY

Package quantity	4,000 pcs/reel

TEMPERATURE RANGE, INDIVIDUAL WEIGHT

Operating temperature range *	Storage temperature range **	Individual weight
−55 to +125°C	−55 to +125°C	4 mg

* Operating temperature range includes self-temperature rise.
** The storage temperature range is for after the assembly.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products

REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).
  If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications.
  If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- Carefully lay out the coil for the circuit board design of the non-magnetic shield type.
  A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
  The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
  If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

(1) Aerospace/aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.