# EMC Components

**⊗TDK** 

### Noise suppression filter

For audio lines (Bluetooth and WiFi bands suppression) MAF series



# MAF1005GW type



## FEATURES

- A noise suppression component for audio lines.
- O 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.
- O The high-attenuation characteristics of the Bluetooth band, WiFi band, and cellular band are highly effective in preventing degradation of the reception sensitivity of radio equipment.
- $\bigcirc$  Operating temperature range: -55 to +125°C

#### APPLICATION

- Sound lines for devices such as smartphones, tablets, Bluetooth headset, headset, hearing aids and wearable equipments (earphones, microphones, and speakers).
- Sound lines for portable game machines.

# PART NUMBER CONSTRUCTION

MAF		1005	G	WZ	102	A	Т	000
Series	s name	L×W×T dimensions 1.0×0.5x0.5 mm	Characteristics	Internal code	Impedance (Ω) at 900MHz	Туре	Packaging style	Internal code

#### CHARACTERISTICS SPECIFICATION TABLE

Impedance	1				DC resistanc	e	Rated current	Part No.
[100MHz]	[900MHz]		[1.7GHz]	[2.4GHz]				
<b>(</b> Ω <b>)Τyp</b> .	<b>(</b> Ω <b>)Τyp.</b>	(Ω)Min.	<b>(</b> Ω <b>)Τyp.</b>	<b>(</b> Ω <b>)Τyp.</b>	<b>(</b> Ω <b>)Τур.</b>	<b>(</b> Ω <b>)max.</b>	(mA)max.	
160	1000	600	2300	2800	1.30	1.60	150	MAF1005GWZ102AT000

Measurement equipment

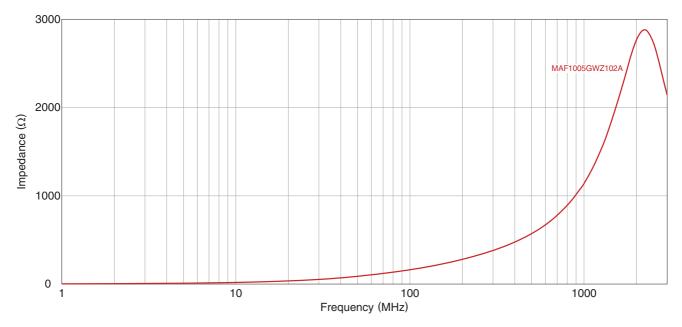
Measurement item	Product No.	Manufacturer		
Impedance	E4991A+16192A	Keysight Technologies		
DC resistance	Type-7556	Yokogawa		
* Equivalent measurement equipment may be used				

\* Equivalent measurement equipment may be used.

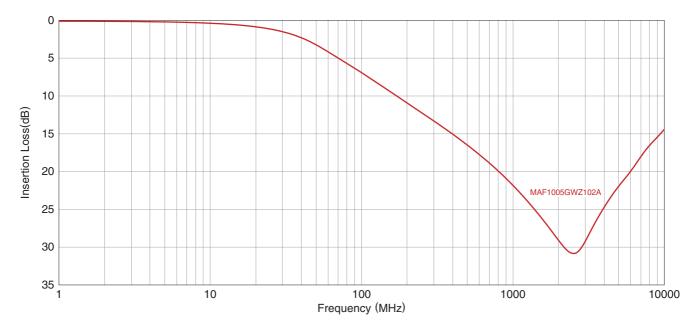


# MAF1005GW type

# Z FREQUENCY CHARACTERISTICS



# ■ INSERTION LOSS VS. FREQUENCY CHARACTERISTICS

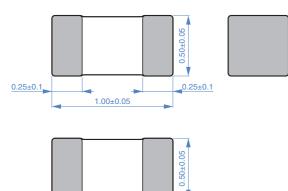


A Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. (2/4) Please note that the contents may change without any prior notice due to reasons such as upgrading.

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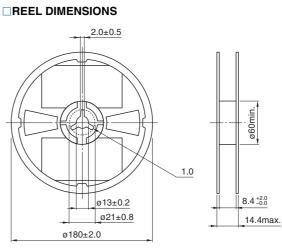
# MAF1005GW type

## SHAPE & DIMENSIONS



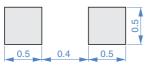
Dimensions in mm

### PACKAGING STYLE



Dimensions in mm

### RECOMMENDED LAND PATTERN



Dimensions in mm

RECOMMENDED REFLOW PROFILE

Preheating

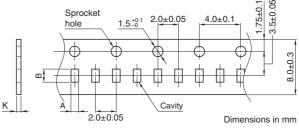
60 to 120s

Temperature

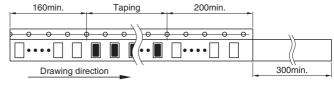
150°C



**TAPE DIMENSIONS** 



Туре	А	В	К
MAF1005GW	0.65±0.1	1.15±0.1	0.8max.



Dimensions in mm

#### **PACKAGE QUANTITY**

Package quantity 10,000 pcs/reel

#### **TEMPERATURE RANGE, INDIVIDUAL WEIGHT**

Operating temperature range	Storage temperature range*	Individual weight	
-55 to +125	-55 to +125	1 mg	
The storage temperature range is for after the assembly			

temperature range is for after the assembly

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Natural

cooling

230°C

Soldering

Peak

250 to 260°C

10s

30 to 60s

230°C

180°C

Time

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# **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.

<ul> <li>The storage period is within 12 months. Be sure to follow the stor less).</li> <li>If the storage period elapses, the soldering of the terminal electroopies.</li> </ul>					
Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).					
<ul> <li>Before soldering, be sure to preheat components.</li> <li>The preheating temperature should be set so that the temperature does not exceed 150°C.</li> </ul>	e difference between the solder temperature and chip temperature				
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.					
<ul> <li>Carefully lay out the coil for the circuit board design of the non-mag A malfunction may occur due to magnetic interference.</li> </ul>	gnetic shield type.				
$\bigcirc$ Use a wrist band to discharge static electricity in your body through	n the grounding wire.				
$\bigcirc$ Do not expose the products to magnets or magnetic fields.					
$\bigcirc$ Do not use for a purpose outside of the contents regulated in the d	elivery specifications.				
ment, industrial robots) under a normal operation and use conditio The products are not designed or warranted to meet the requireme ity require a more stringent level of safety or reliability, or whose fa person or property.	ment, personal equipment, office equipment, measurement equip-				
<ul> <li>(1) Aerospace/aviation equipment</li> <li>(2) Transportation equipment (cars, electric trains, ships, etc.)</li> <li>(3) Medical equipment</li> <li>(4) Power-generation control equipment</li> <li>(5) Atomic energy-related equipment</li> <li>(6) Seabed equipment</li> <li>(7) Transportation control equipment</li> </ul> When designing your equipment even for general-purpose application tection circuit/device or providing backup circuits in your equipment.	<ul> <li>(8) Public information-processing equipment</li> <li>(9) Military equipment</li> <li>(10) Electric heating apparatus, burning equipment</li> <li>(11) Disaster prevention/crime prevention equipment</li> <li>(12) Safety equipment</li> <li>(13) Other applications that are not considered general-purpose applications</li> </ul>				

A Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. (4/4) Please note that the contents may change without any prior notice due to reasons such as upgrading.