Noise Absorber
Controlled ESR Type

YNA series

YNA18 type

YNA18 1608 [0603 inch]*
* Dimensions code JIS[EIA]
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 these products.

⚠️ REMINDERS

1. Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
2. Before soldering, be sure to preheat components.
   - The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
3. 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.
4. Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
5. Do not use for a purpose outside of the contents regulated in the delivery specifications.
6. 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.
EMC Components

Noise Absorber
Controlled ESR Type

Overview of YNA18 type

 FEATURES
- The special laminated interior structure means ESR values can be controlled.
- An impedance waveform with no pole means anti-resonance is controlled.
- Without decreasing power efficiency, EMI measures can be taken.

 APPLICATION
Countermeasures against ringing of switching power supply for smart phones, tablet PCs, etc.
Countermeasures against anti-resonance of impedance inside a decoupling circuit

 PART NUMBER CONSTRUCTION

<table>
<thead>
<tr>
<th>Series name</th>
<th>L x W dimensions (mm)</th>
<th>Product internal code</th>
<th>ESR-value* (mΩ)</th>
<th>Rated voltage (V)</th>
<th>Capacitance (pF)</th>
<th>Tolerance</th>
<th>Taping</th>
<th>internal code</th>
<th>Reel size (mm)</th>
<th>Internal electrode Ni</th>
</tr>
</thead>
<tbody>
<tr>
<td>YNA18</td>
<td>1.6x0.8</td>
<td>B 2-terminal (with NC terminal)</td>
<td>UJ 50</td>
<td>105</td>
<td>1,000.000 (1.0µF)</td>
<td>±20%</td>
<td>T 0 ø178</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* An ESR value is shown in two characters with a mΩ unit.

 OPERATING TEMPERATURE RANGE

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating temperature range</th>
<th>Storage temperature range</th>
</tr>
</thead>
<tbody>
<tr>
<td>YNA18</td>
<td>−55 to +85</td>
<td>−55 to +85</td>
</tr>
</tbody>
</table>

 PACKAGING STYLE AND SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>Package quantity (piece/reel)</th>
<th>Individual weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YNA18</td>
<td>4,000</td>
<td>0.0051</td>
</tr>
</tbody>
</table>

RoHS Directive Compliant Product: See the following for more details: https://product.tdk.com/info/en/environment/rohs/index.html

Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.
YNA18 type

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING

HAND SOLDERING

REMINDERS FOR HANDLING THESE PRODUCTS

- Before soldering, be sure to preheat components. The ΔT pre-heating temperature must be 150°C max. with attention paid to thermal shock.
- Natural cooling of components in the air is recommended. On the other hand, when dipping them in a solvent for purposes, such as cleaning, make sure that the temperature difference (ΔT) is 100°C.
- When performing hand soldering for circuit modification, apply the soldering iron to the copper foil area of the printed circuit board for 3 seconds or less. The temperature of the iron tip should not exceed 300°C.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- When incorporating the printed circuit board on which this product is mounted into a frame, etc., do not apply stress to the product through local bending of the board by tightening of screws, etc.

\[ \begin{array}{l}
\text{Preheating} \\
\text{Soldering} \\
\text{Slow cooling} \\
\text{(Natural cooling)} \\
\end{array} \]

\[ \begin{array}{c}
\text{Temperature (°C)} \\
260°C \text{ max.} \\
150°C \text{ max.} \\
0 \\
\end{array} \]

\[ \begin{array}{c}
\text{Temperature (°C)} \\
300 \\
150°C \text{ max.} \\
0 \\
\end{array} \]

\[ \begin{array}{c}
\text{Make as short as possible (within three seconds)} \\
\end{array} \]
YNA18 type

SHAPE & DIMENSIONS

RECOMMENDED LAND PATTERN

Dimensions in mm

The lateral terminals are not connected.

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>Part No.*</th>
<th>Capacitance (µF)</th>
<th>Tolerance (%)</th>
<th>Rated voltage Edc (V)</th>
<th>ESR** (mΩ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YNA18B1J0G105MT00</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>50 (±30%)</td>
</tr>
<tr>
<td>YNA18B2A0G105MT00</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>100 (±30%)</td>
</tr>
<tr>
<td>YNA18B2C0G105MT00</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>200 (±30%)</td>
</tr>
<tr>
<td>YNA18B2J0G105MT00</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>500 (±30%)</td>
</tr>
<tr>
<td>YNA18B3U0G105MT00</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>1200 (±30%)</td>
</tr>
</tbody>
</table>

* Please specify reel size code, 0 (ø178) or 9 (ø330)
** Any ESR value can be set if it is the same as or smaller than the maximum ESR value. Contact us if you need an ESR value other than ones shown in the table.

ELECTRICAL CHARACTERISTICS GRAPH (EXAMPLE)

IMPEDEANCE vs. FREQUENCY CHARACTERISTICS

ATTENUATION vs. FREQUENCY CHARACTERISTICS

Private: Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.
YNA18 type

PACKAGING STYLES

REEL DIMENSIONS

<table>
<thead>
<tr>
<th>Reel</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>W</th>
<th>t</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø178</td>
<td>ø178±2.0</td>
<td>ø60±2.0</td>
<td>ø13±0.5</td>
<td>ø21±0.8</td>
<td>2.0±0.5</td>
<td>9.0±0.3</td>
<td>2.0±0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>ø330</td>
<td>ø382 max. (ø330 nom.)</td>
<td>ø50 min.</td>
<td>ø13±0.5</td>
<td>ø21±0.8</td>
<td>2.0±0.5</td>
<td>10.0±1.5</td>
<td>2.0±0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

TAPE DIMENSIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>YNA18</td>
<td>1.10 typ.</td>
<td>1.90 typ.</td>
<td>8.00±0.30</td>
<td>3.50±0.05</td>
<td>1.75±0.10</td>
<td>4.00±0.10</td>
<td>2.00±0.05</td>
<td>4.00±0.10</td>
<td>ø1.50+0.10/-0</td>
<td>1.20 max.</td>
</tr>
</tbody>
</table>

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