Mn-Zn

Ferrite Cores for Switching Power Supplies

T series
REMINDERS FOR USING THESE PRODUCTS

Please be sure to read this manual thoroughly before using the products.

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.

When using the products for specific purposes, please first make confirmations in areas such as safety, reliability, and quality.

Please understand that we are not in a position to be held responsible for any damage or the like caused by any use exceeding the range or conditions of this specification sheet or by any use in the specific applications.

- (1) Aerospace/Aviation equipment
- (2) Transportation equipment (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 using this product in general-purpose standard applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc to ensure higher safety.
Ferrite Cores for Switching Power Supplies

Overview of the T Series

**FEATURES**
- Select from three high permeability magnetic materials of $\mu_i = 7000, 10000, 12000$ to match the frequency band used.
- Paraxylene coating is available.

**APPLICATION**
- Common mode choke coils, inductors, current sensors, EMI/RFI filters

**PART NUMBER CONSTRUCTION**

<table>
<thead>
<tr>
<th>HS72</th>
<th>T</th>
<th>22</th>
<th>6.5</th>
<th>14</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Core shape</td>
<td>Outside Diameter</td>
<td>Thickness</td>
<td>Inside Diameter</td>
<td>Coating</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>E</td>
<td>Epoxy</td>
</tr>
</tbody>
</table>

- Can be coated with epoxy. If epoxy-coated products are desired, please suffix E to part No. when ordering.
  Product number example: HS72 T22 × 6.5 × 14E

**RANGE OF USE AND STORAGE TEMPERATURE**

<table>
<thead>
<tr>
<th>Temperature range</th>
<th>Operating temperature ($^\circ$C)</th>
<th>Storage temperature ($^\circ$C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-30 to +105</td>
<td>-30 to +85</td>
</tr>
</tbody>
</table>


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.
Mn-Zn  T Core

SHAPES AND DIMENSIONS

R or C

R or C

øA

øB

øC

øA

øB

øC

øA

øB

øC

Part No. | JIS C 2569 | Dimensions (mm) | øA | øB | C
---|---|---|---|---|---
HS72 T14-7-8 | 14.0±0.3 | 8.0±0.3 | 7.0±0.3
HS10 T14-7-8 | 16.0±0.3 | 12.0±0.3 | 8.0±0.3
HS72 T16-8-12 | 18.0±0.3 | 10.0±0.3 | 10.0±0.3
HS10 T16-8-12 | 19.0±0.3 | 12.0±0.3 | 10.0±0.3
HS72 T18-10-10 | FOR-18-10-10 | 20.0±0.4 | 12.0±0.4 | 10.0±0.3
HS10 T18-10-10 | FOR-20-10-12 | 22.0±0.4 | 14.0±0.4 | 6.5±0.3

Effective parameter

Part No. | Core factor \(C_1\) (mm\(^{-1}\)) | Effective cross-sectional area \(A_e\) (mm\(^2\)) | Effective magnetic path length \(l_e\) (mm) | Effective core volume \(V_e\) (mm\(^3\)) | R or C | Weigh (g) | Electrical characteristics
---|---|---|---|---|---|---|---
HS72 T14-7-8 | 1.60 | 20.5 | 32.8 | 671 | C0.5 | 3.4 | 5100±25% 6800±30% 100kHz 10kHz 10mV 5Ts
HS10 T14-7-8 | 2.73 | 15.9 | 43.4 | 689 | C0.3 | 3.4 | 3400±25% 4500±30% 100kHz 10kHz 10mV 5Ts
HS72 T16-8-12 | 1.07 | 38.9 | 41.5 | 1610 | C0.5 | 8.3 | 8800±25% 10150±30% 100kHz 10kHz 10mV 5Ts
HS10 T16-8-12 | 1.23 | 39.1 | 48.1 | 1880 | C0.5 | 9.5 | 7800±25% 10000±30% 100kHz 10kHz 10mV 5Ts
HS72 T18-10-10 | 2.14 | 25.6 | 54.7 | 1400 | C0.5 | 6.9 | 4400±25% 5750±30% 100kHz 10kHz 10mV 10Ts
HS10 T18-10-10 | 2.14 | 25.6 | 54.7 | 1400 | C0.5 | 6.9 | 4400±25% 5750±30% 100kHz 10kHz 10mV 10Ts

Can be coated with epoxy. If epoxy-coated products are desired, please suffix E to part No. when ordering. Example: HS72 T22 × 6.5 × 14E

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Mn-Zn  T Core

SHAPES AND DIMENSIONS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>JIS C 2569</th>
<th>Dimensions (mm)</th>
<th>øA</th>
<th>øB</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS72 T25-13-15</td>
<td></td>
<td>25.0±0.4</td>
<td>15.0±0.4</td>
<td>13.0±0.3</td>
<td></td>
</tr>
<tr>
<td>HS10 T25-13-15</td>
<td></td>
<td>28.0±0.4</td>
<td>16.0±0.4</td>
<td>13.0±0.3</td>
<td></td>
</tr>
<tr>
<td>HS72 T28-13-16</td>
<td>FOR-28-13-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS10 T28-13-16</td>
<td></td>
<td>31.0±0.5</td>
<td>19.0±0.5</td>
<td>8.0±0.3</td>
<td></td>
</tr>
<tr>
<td>HS72 T31-8-19</td>
<td></td>
<td>38.0±0.5</td>
<td>22.0±0.5</td>
<td>14.0±0.4</td>
<td></td>
</tr>
<tr>
<td>HS10 T31-8-19</td>
<td></td>
<td>44.5±0.5</td>
<td>30.0±0.5</td>
<td>13.0±0.4</td>
<td></td>
</tr>
</tbody>
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  Product number example: HS72 T22 × 6.5 × 14E

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<tr>
<th>Part No.</th>
<th>JIS C 2569</th>
<th>Effective parameter</th>
<th>Electrical characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Core factor (C1) (mm⁻¹)</td>
<td>Effective cross-sectional area (Ae) (mm²)</td>
</tr>
<tr>
<td>HS72 T25-13-15</td>
<td></td>
<td>0.946</td>
<td>63.6</td>
</tr>
<tr>
<td>HS10 T25-13-15</td>
<td></td>
<td>0.864</td>
<td>76.0</td>
</tr>
<tr>
<td>HS72 T28-13-16</td>
<td></td>
<td>1.60</td>
<td>47.1</td>
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<tr>
<td>HS10 T28-13-16</td>
<td></td>
<td>0.821</td>
<td>109</td>
</tr>
<tr>
<td>HS72 T31-8-19</td>
<td></td>
<td>1.23</td>
<td>93</td>
</tr>
</tbody>
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