TDK

July 2016

Chip beads

For general signal line

HF-ACB series (for automobiles)

HFxxACB4532 Type

HFxxACB4532 [1812 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 this products.

⚠ Reminders

- The storage period is less than 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.).
- Before soldering, be sure to preheat components.
  The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
- 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 (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.

Chip beads

For general signal line

Product compatible with RoHS directive
Halogen-free
Compatible with lead-free solders
AEC-Q200

Overview of HFxxACB4532 type

FEATURES

- Noise reduction solution for general signal line.
- Achieves various frequency characteristics by using 3 materials with different features.
- There is no directivity.

APPLICATION

Various ECUs, powertrains, body controls, and car multimedia (telematics).

PART NUMBER CONSTRUCTION

HF70 ACB 453215 - T D25

Material name	Series name	L×W×T dimensions (mm)		Packaging style		Internal code
HF70		453215	4.5×3.2×1.5	T	Taping	D25
HF50						
HF30						

OPERATING TEMPERATURE RANGE, PACKAGE QUANTITY, PRODUCT WEIGHT

Type	Temperature ranges		Package quantity	Individual weight
	Operating temperature (°C)	Storage temperature* (°C)	(pieces/reel)	(mg)
HFxxACB4532	–40 to +125	–40 to +125	1,000	94

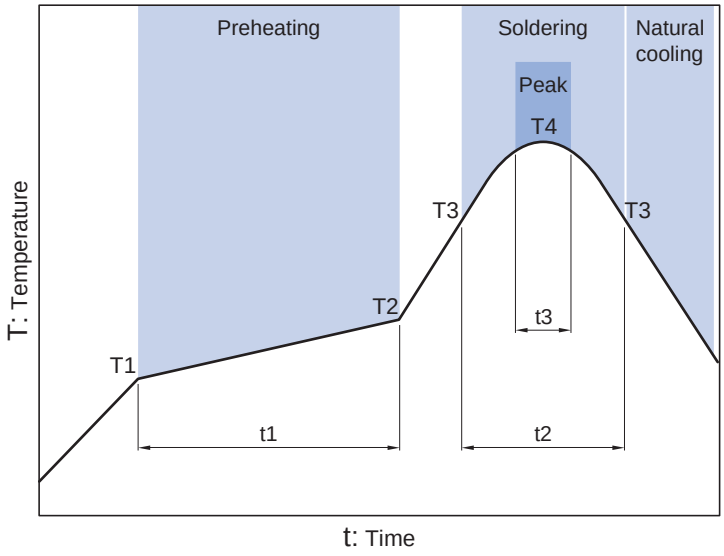
* The storage temperature range is for after the circuit board is mounted.

- RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/en/environment/rohs/index.html
- Halogen-free: indicates that Cl content is less than 900ppm, Br content is less than 900ppm, and that the total Cl and Br content is less than 1500ppm.

⚠ 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.

HFxxACB4532 type

RECOMMENDED REFLOW PROFILE

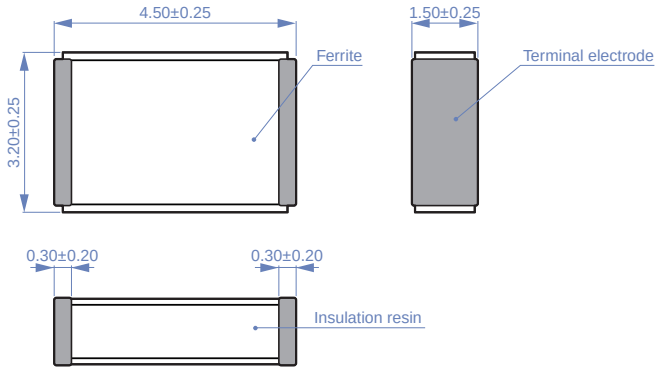


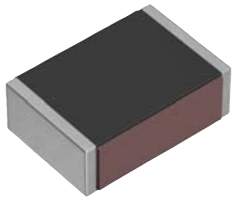
Preheating			Soldering		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3
150°C	180°C	60 to 120s	230°C	30 to 60s	250 to 260°C	10s

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HFxxACB4532 type

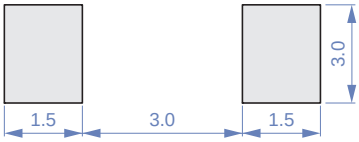
SHAPE & DIMENSIONS





Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

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HFxxACB4532 type

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Impedance [100MHz] (Ω)	Tolerance	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
120	±25%	0.4	300	HF70ACB453215-TD25
125	±25%	0.4	300	HF50ACB453215-TD25
70	±25%	0.4	300	HF30ACB453215-TD25

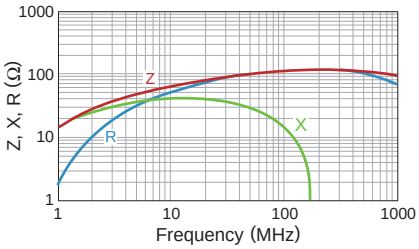
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HFxxACB4532 type

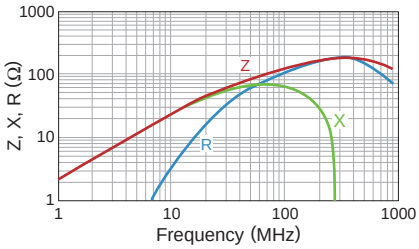
■ELECTRICAL CHARACTERISTICS

□Z, X, R VS. FREQUENCY CHARACTERISTICS

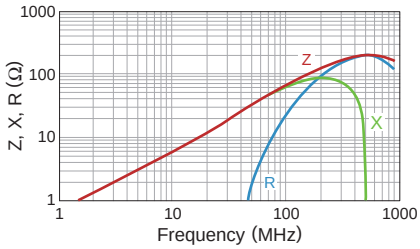
HF70ACB453215-TD25



HF50ACB453215-TD25



HF30ACB453215-TD25

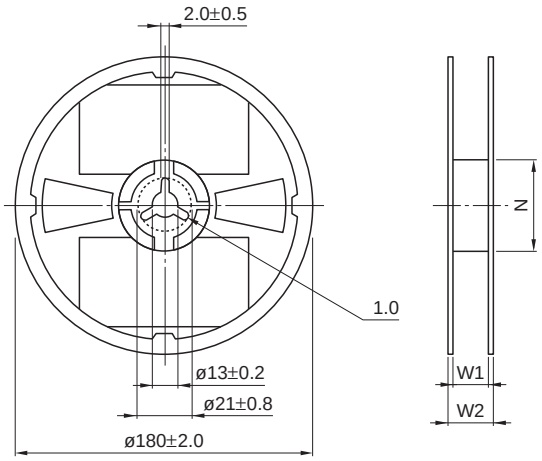


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HFxxACB4532 type

■PACKAGING STYLE

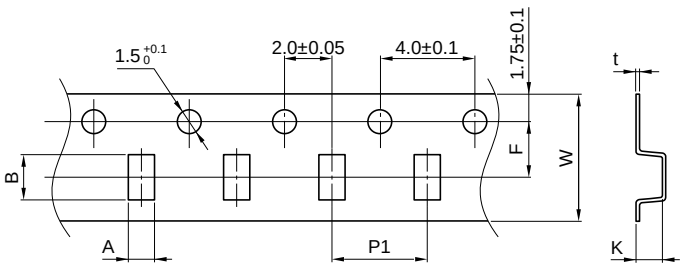
□REEL DIMENSIONS



Type	W1	W2	N
HFxxACB4532	13.0±0.3	17.0±1.4	ø61min.

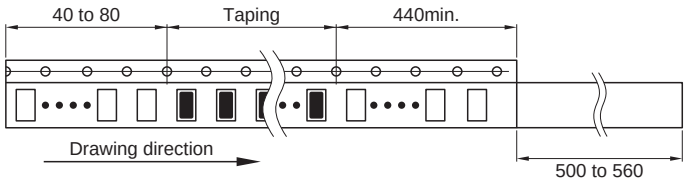
Dimensions in mm

□TAPE DIMENSIONS



Dimensions in mm

Type	A	B	F	P1	W	K	t
HFxxACB4532	3.37±0.1	4.75±0.1	5.5±0.05	8.0±0.1	12.0±0.3	1.8max.	0.4max.



Dimensions in mm

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