



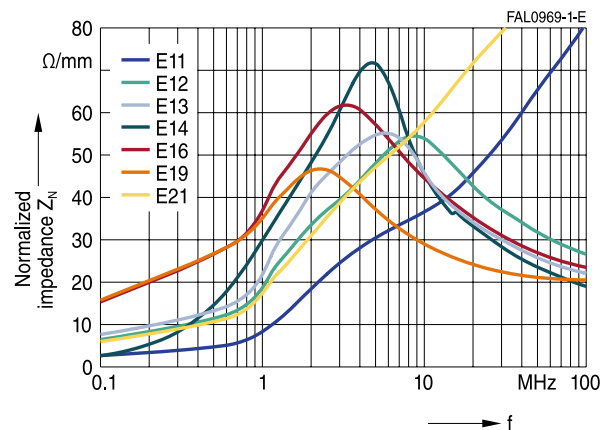
PRODUCT BRIEF 2026

# Ferrites – E Series Materials

The new TDK E ferrite material series is a cost-efficient answer to increasing market demands for EMI suppression solutions. Based on MnZn ferrite powder, the E series is an alternative to NiZn ferrites, nanocrystalline cores, and iron powder cores. The E series includes 7 materials that cover EMI market requirements such as high permeability and high impedance for the low-frequency range, high saturation for common and differential mode chokes, as well as cost-efficient solutions for frequencies up to 300 MHz.

The new materials are available in standard core sizes and shapes, coated (epoxy) and uncoated. Oval and split cores for bus bar filtering, low profile E and U cores as well as customized shapes can be provided upon request.

- E11 and E21  
Wide frequency filtering ranges from 30 to 300 MHz
- E12  
Flat  $\mu_i$  over temperature up to 30 MHz
- E13 and E14  
High saturation meets high impedance up to 30 MHz
- E16 and E19  
High permeability for superior noise suppression in the low frequency range, below 10 MHz for common mode chokes

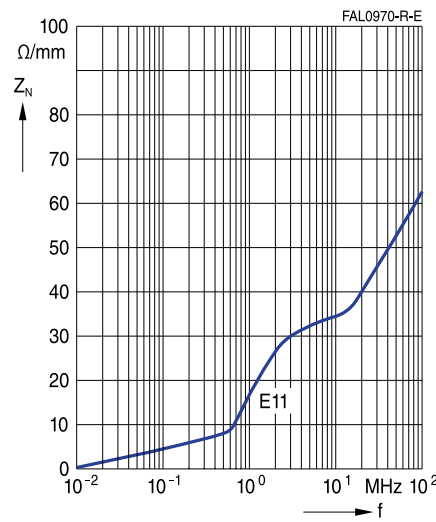
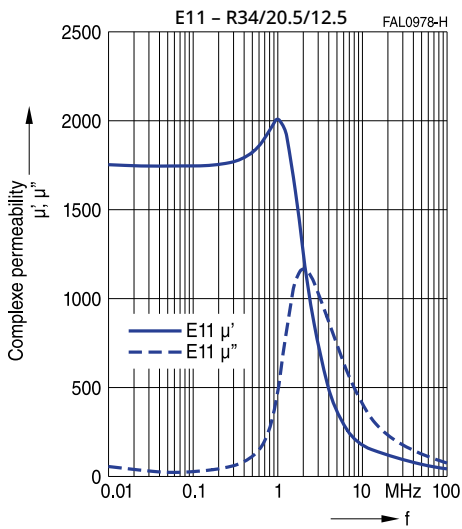


Product details  
[www.tdk-electronics.tdk.com](http://www.tdk-electronics.tdk.com)

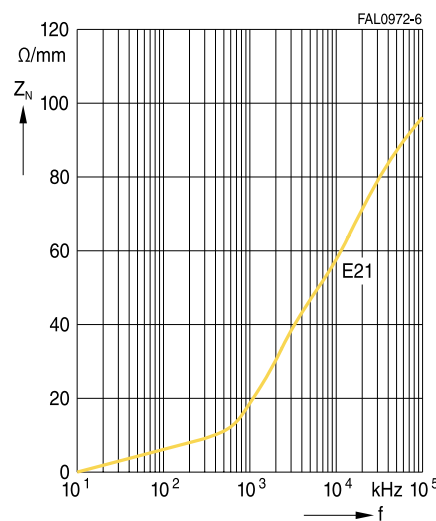
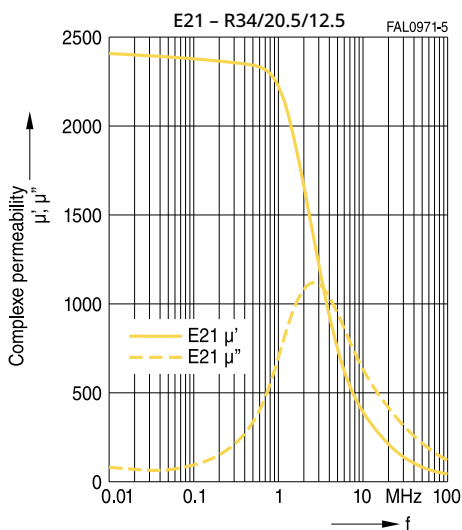
 **TDK**  
In Everything, Better

# Ferrites – E Series Materials

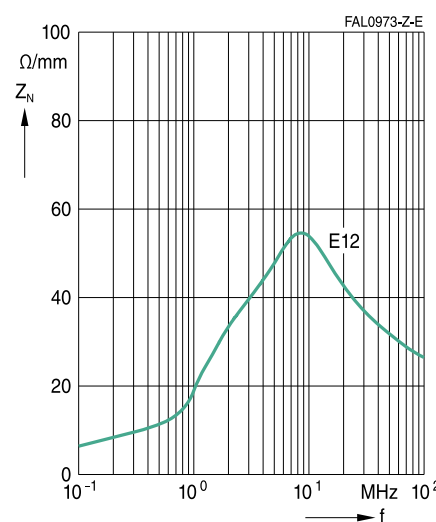
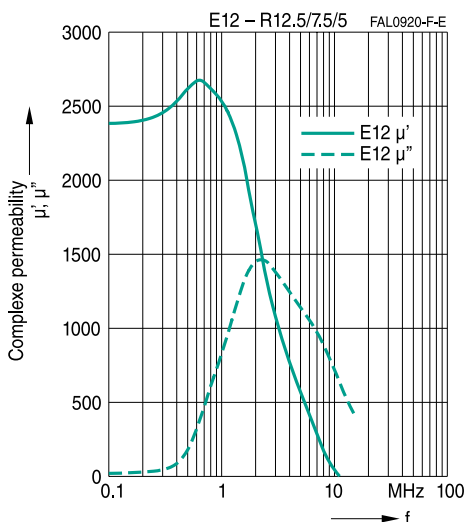
## E11, E21



E11 and E21 offer cost-efficient solutions for high-frequency EMI suppression over nanocrystalline and NiZn ferrite cores in the frequency range of 30 MHz to 300 MHz. Curie temperatures above +150 °C qualify the material for automotive applications.



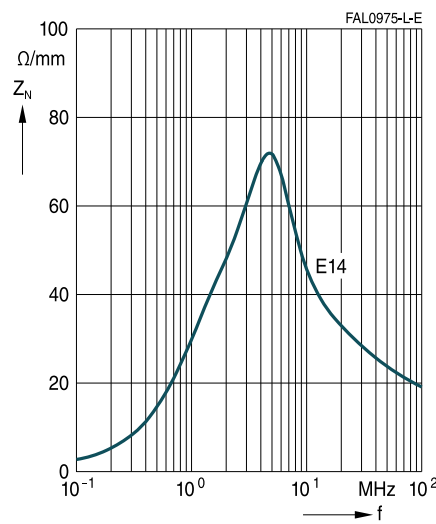
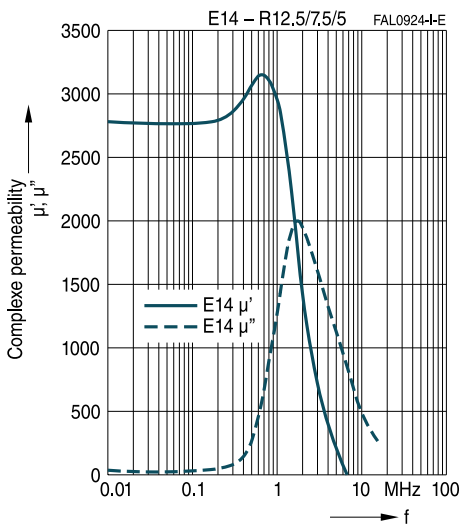
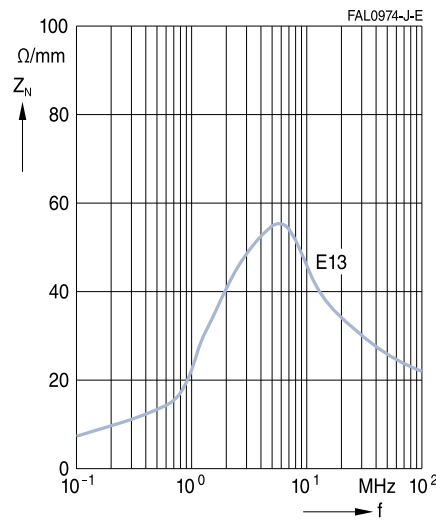
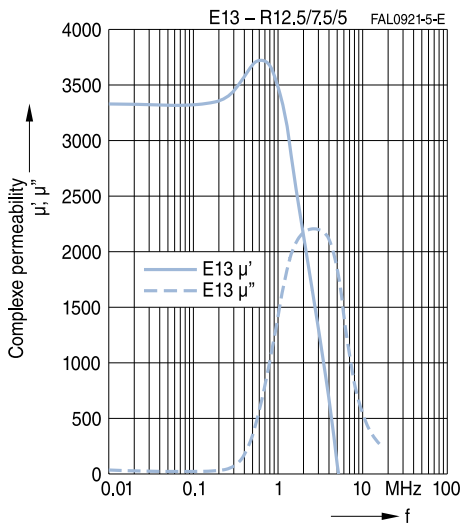
## E12



E12 provides flat  $\mu_i$  over the temperature with a Curie temperature above +170 °C.

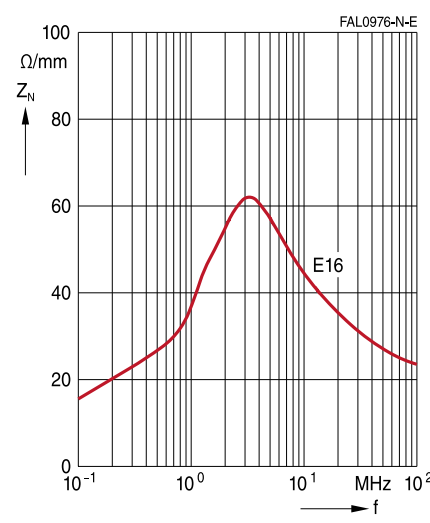
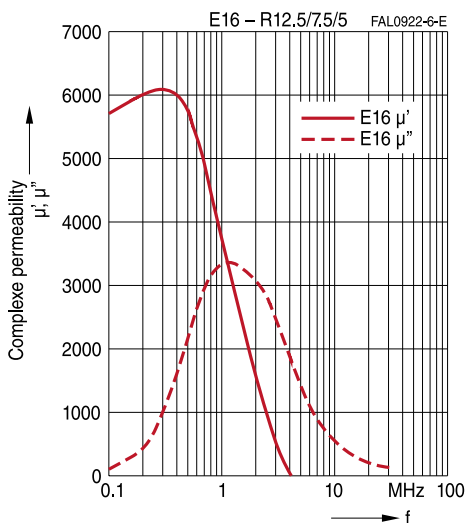
# Ferrites – E Series Materials

## E13, E14



E13 and E14 as new materials bring together high saturation and high impedance up to 30 MHz for high-temperature applications. The Curie temperature exceeds +220 °C for E13 and +255 °C for E14.

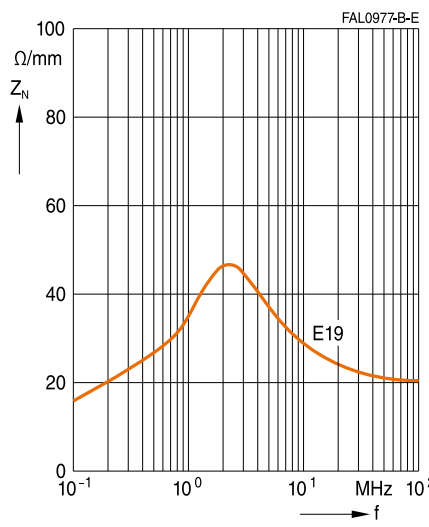
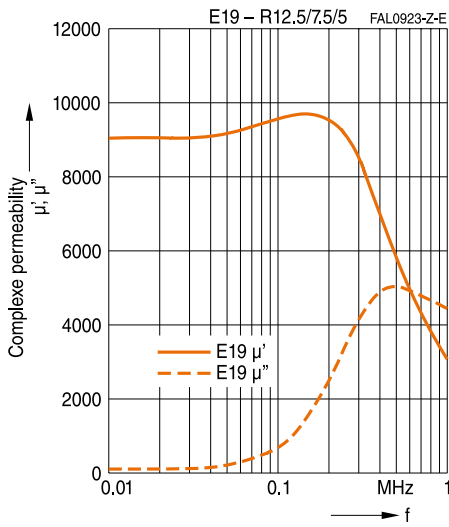
## E16, E19



E16 and E19 are developed to address low-frequency EMI suppression reaching into the MHz frequency with extended Curie temperatures above +150 °C for industrial and automotive applications.

Graphs E19 see the next page.

## E16, E19



E16 and E19 are developed to address low-frequency EMI suppression reaching into the MHz frequency with extended Curie temperatures above +150 °C for industrial and automotive applications.

|              |         |          |        | E19  | E16  | E14  | E13  | E12  | E11  | E21  |    |     |
|--------------|---------|----------|--------|------|------|------|------|------|------|------|----|-----|
| $\mu_i$      | 10 kHz  | 0.25 mT  | 25 °C  | 9000 | 6000 | 3300 | 3100 | 2400 | 1700 | 2300 |    |     |
| $B_s$ [mT]   | 10 kHz  | 1200 A/m | 25 °C  | 440  | 460  | 550  | 520  | 440  | 400  | 430  |    |     |
|              |         |          | 100 °C | 320  | 320  | 435  | 410  | 290  | 270  | 280  |    |     |
| $Z_N$ [Ω/mm] | 0.3 MHz | 0.25 mT  | 25 °C  | 23   |      |      |      |      |      |      |    |     |
|              | 1 MHz   |          |        | 35   | 40   |      |      |      |      |      |    |     |
|              | 3 MHz   |          |        | 45   | 60   | 60   | 42   |      |      |      |    |     |
|              | 5 MHz   |          |        |      |      | 70   | 47   | 48   |      |      |    |     |
|              | 10 MHz  |          |        |      |      |      |      | 55   |      |      |    |     |
|              | 30 MHz  |          |        |      |      |      |      |      |      | 50   | 80 |     |
|              | 100 MHz |          |        |      |      |      |      |      |      |      | 80 | 100 |
|              | 300 MHz |          |        |      |      |      |      |      |      |      |    | 90  |
| $T_c$ [°C]   |         |          |        | >150 | >150 | >255 | >220 | >170 | >150 | >150 |    |     |

### Important information

Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products. We expressly point out that these statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. It is incumbent on the customer to check and decide whether a product is suitable for use in a particular application. This publication is only a brief product survey which may be changed from time to time. Our products are described in detail in our data sheets. The *Important notes* ([www.tdk-electronics.tdk.com/ImportantNotes](http://www.tdk-electronics.tdk.com/ImportantNotes)) and the product-specific *Cautions and warnings* must be observed. All relevant information is available through our sales offices.



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