

# HIGH-EPSILON MICROWAVE FERRITE

**NEW**

# EPSILON 21

Introducing our latest innovation: a new groundbreaking high epsilon microwave ferrite designed specifically for isolator and circulator applications.

With the ability to reduce the size of current circulators, it offers a compact solution without compromising performance.

Available in multiple power levels, it caters to diverse needs, ensuring versatility and adaptability in various applications of microwave ferrites.

## DESCRIPTION:

Yttrium - Bismuth - Calcium - Zirconium garnet ceramic ferrite with high permittivity/dielectric constant

Also available in assembly with dielectric material (availability of several dielectric material:  $\epsilon_r = 10 ; 16 ; 20 ; 37 ; 44$ ).

## APPLICATIONS:

Circulators, isolators, phase-shifters, filters, diplexers.

## SPECIFICATIONS:

Type	Ms (Gauss) ±5%	Tc (°C)	g <sub>eff</sub>	ΔH (Oe) ±20%	ΔHk (Oe) ±1%	ε ±5%	Tgδ 10 <sup>-3</sup> max.	α 10 <sup>-3</sup> /°C ±0.2
YK21-19	1900	255	2.1	100	4.5	21	1	2.7
DK21-19	1850	255	2.1	100	8.5	21	1	2.7
YK21-18	1800	250	2.1	100	4.5	21	1	3.0
YK21-16	1600	250	2.1	100	4.5	21	1	2.7
DK21-16	1550	250	2.1	100	8.5	21	1	2.7
YK21-13	1300	245	2.1	100	4.5	21	1	2.6
DK21-13	1250	245	2.1	100	8.5	21	1	2.6

$$* \quad d = k \frac{\lambda}{2} \quad \lambda = \frac{\lambda_0}{\sqrt{\epsilon\mu}}$$

λ = wavelength in the material      μ = permeability  
 λ<sub>0</sub> = wavelength in the air      d = dimension  
 ε = permittivity

## HOW TO ORDER :

Exemple: **YK21-16 S50.8x50.8x0.635 M**

<b>YK21-16</b>	<b>S</b>	<b>50.8</b>	<b>50.8</b>	<b>0.635</b>	<b>M</b>
<b>Material type</b>	<b>Shape</b> D : Disk S : Square T : Triangle	<b>Dimension 1</b> Diameter for D Length for S Incircle diam. for T	<b>Dimension 2</b> Thickness for D Width for S Height for T	<b>Dimension 3</b> Thickness for D Thickness for S Thickness for T	<b>Option</b> M : Metallization CF : Chamfer



## FEATURES:

- High permittivity (Eps 21) ferrite for designing smaller microwave devices
- 15%\* the size reduction of your circulator for the same frequency (vs Eps 18 ferrites)
- Two power levels available (ΔHk = 4.5 and ΔHk = 8.5)
- Frequency applications up to X band (12GHz)

