🌔 Murata Software

Q: How is the magnetic analysis performed when the required data is out of the domain of the B-H curve table? (Magnetic field/B-H curve)

A: When the required data is out of the domain of the B-H curve table, the data can be extrapolated using any method below.

1. Permeability of vacuum:

The data can be extrapolated using the value of permeability of vacuum, $\mu 0=4*pi*1e-7$.

2. Slope between last two points:

The data can be extrapolated using the slope determined from the last two points in the table.

3. Quadratic curve:

If the data falls within the range up to saturated magnetization, it can be extrapolated using a quadratic curve. If the data falls outside the range, it can be extrapolated using the value of permeability of vacuum. To perform this extrapolation, specify the saturated magnetization, $M=B+\mu 0*H$ [T].

Please refer to the Femtet help menu below for more information on B-H curve tables. Home>How to Set Body Attribute, Material Property and Boundary Condition>Material Property Tab>Permeability Tab

Additional Information



B-H Curve Table			×	
B-H Curve				
No. Magne	tic Field Magnet 🔨	Insert Rows		
1 0.0	0.0	Insert Rows		
2		Delete Rows		
3				
4		I <u>m</u> port		
6				
7		<u>G</u> raph		
8				
9		Interpolation Method		
10		O Linear Interpolation		
11		Smooth Interpolation		
13				
14		Extrapolation Method		
15	×	Permeability in the Free Space		
<	>	⊖ Gradient of the Last Two Points		
Unit A/m T OQuadratic Curve			Click the [Help]	
		0.4		button for more B-H
				curve information.
		4		
	ОК	Cancel <u>H</u> elp		
	B			