

# LTspice Model

## Ferrite Beads

### TOKIN

### SBCP-87HY220H



### Model Information

**Model** An original macro model  
**Call Name** MDC\_SBCP-87HY220H\_LT  
**Pin Assign** 1:1 2:2  
**File List** Model Library MDC\_SBCP-87HY220H\_LT01.lib  
 Model Report MDC\_SBCP-87HY220H\_LT.pdf (this file)

**Verified Simulator Version** LTspice version XVII  
**Note**

### References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 5/24/2019
- Product name SBCP-87HY220H
- Company name TOKIN Corporation
- Characteristics InductanceI<sub>r</sub>[Temp], InductanceFreq[V<sub>r</sub>], InductanceTemp[I<sub>r</sub>], ResistanceI<sub>f</sub>[Temp], ImpedanceFreq[V<sub>r</sub>]

### Simulation Range

This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Temperature	-20	to	105	deg C

Inductor

○ : Implemented  
× : Not Implemented  
— : Not applicable

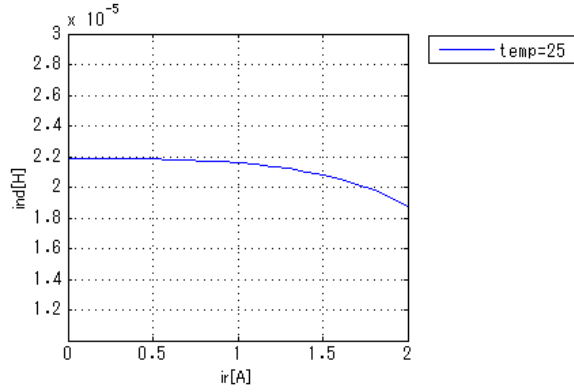
**Model Functions Table**
**RANK=1**

Functions	RANK	Implemented
Impedance-Frequency	1	○
Inductance-Frequency	1	○
Inductance-Current	1	○
Inductance-Temp	1	○
Resistance	1	○

Simulation results are following.  
 Explanatory notes — : simulated

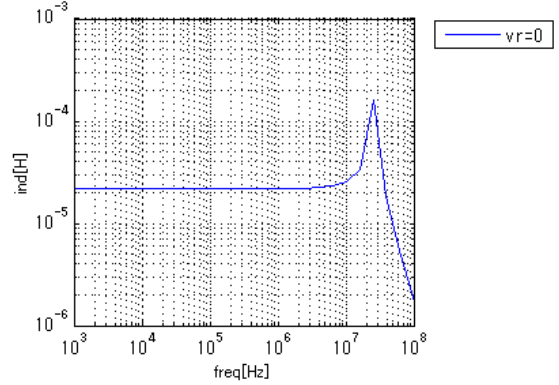
**InductanceIrr[Temp]**

freq = 10000Hz



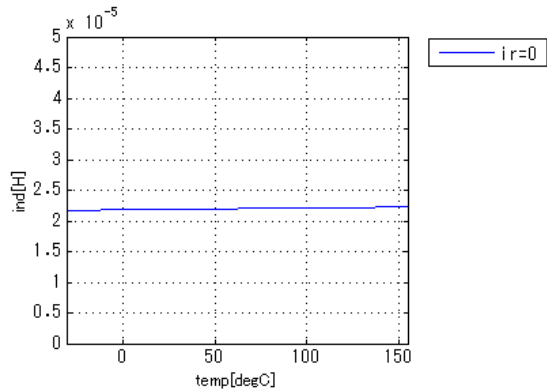
**InductanceFreq[Vr]**

temp = 25degC

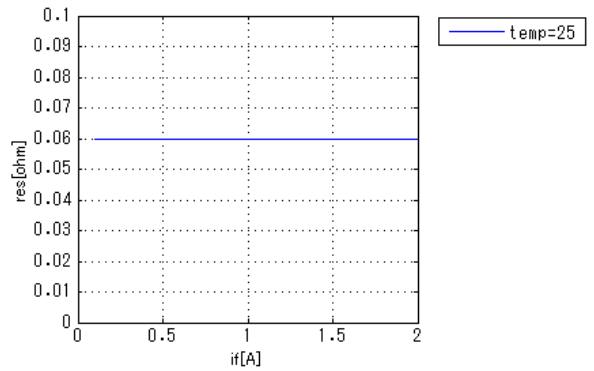


**InductanceTemp[Ir]**

freq = 20000Hz

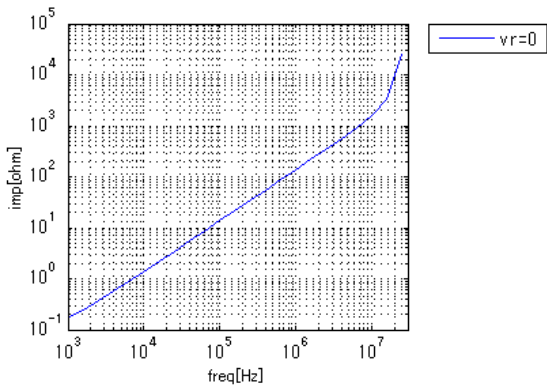


**ResistanceIrr[Temp]**



**ImpedanceFreq[Vr]**

temp = 25degC



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