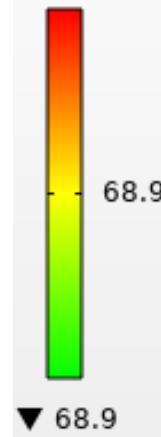


Thermal and Electromagnetics simulation – Part# SN270-151M-7.0AH– Current rated 7A @ 1kHz

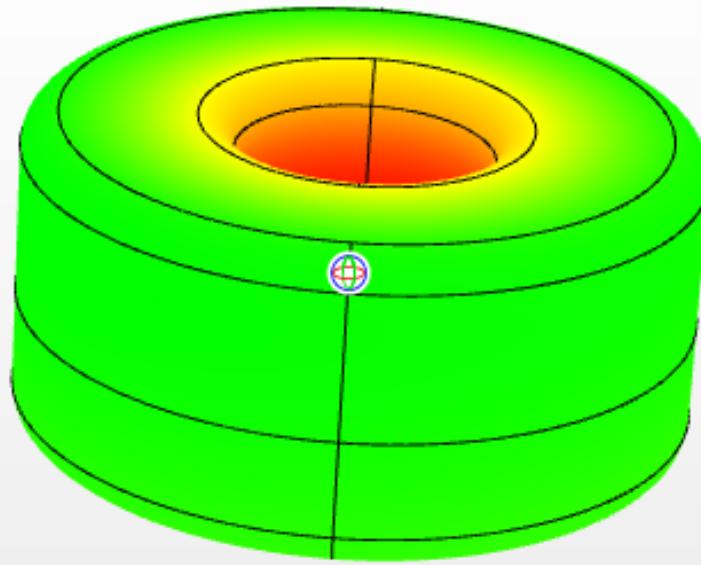
Lp=2.1 A, Ar=5

Current 30% (2.1A)
No Airflow
Natural convection

degC
▲ 68.9



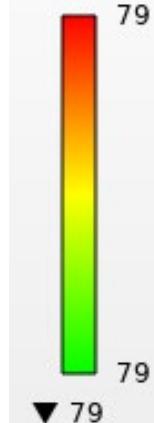
Surface: Temperature (degC)



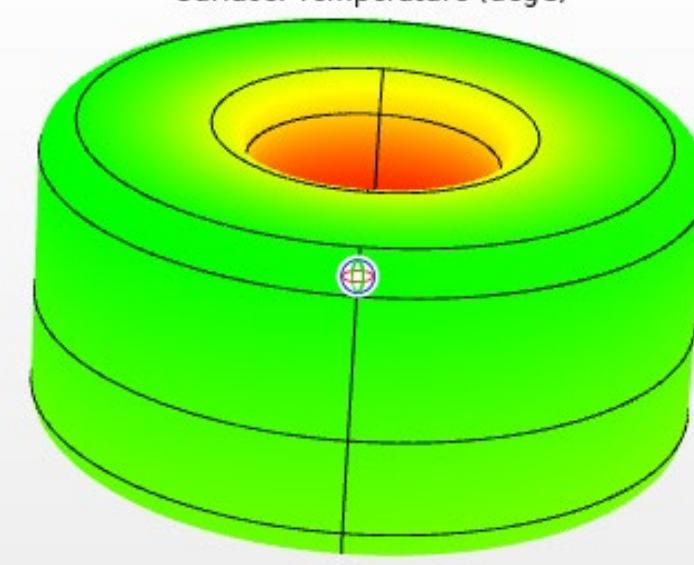
Lp=4.9 A, Ar=15

Current 70% (4.9A)
15 W/ (m²K) or 3 m/s
air flow.

degC
▲ 79

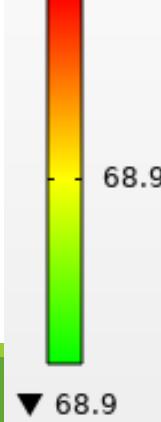


Surface: Temperature (degC)

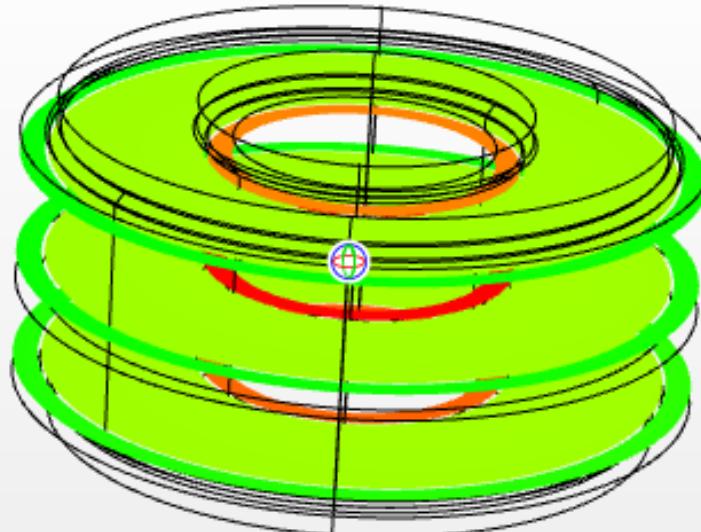


Lp=2.1 A, Ar=5

degC
▲ 68.9



Slice: Temperature (degC)

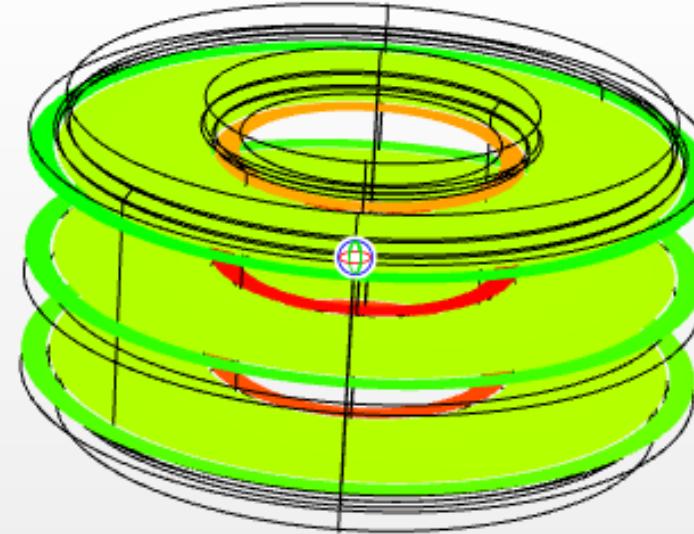


Lp=4.9 A, Ar=15

degC
▲ 79



Slice: Temperature (degC)



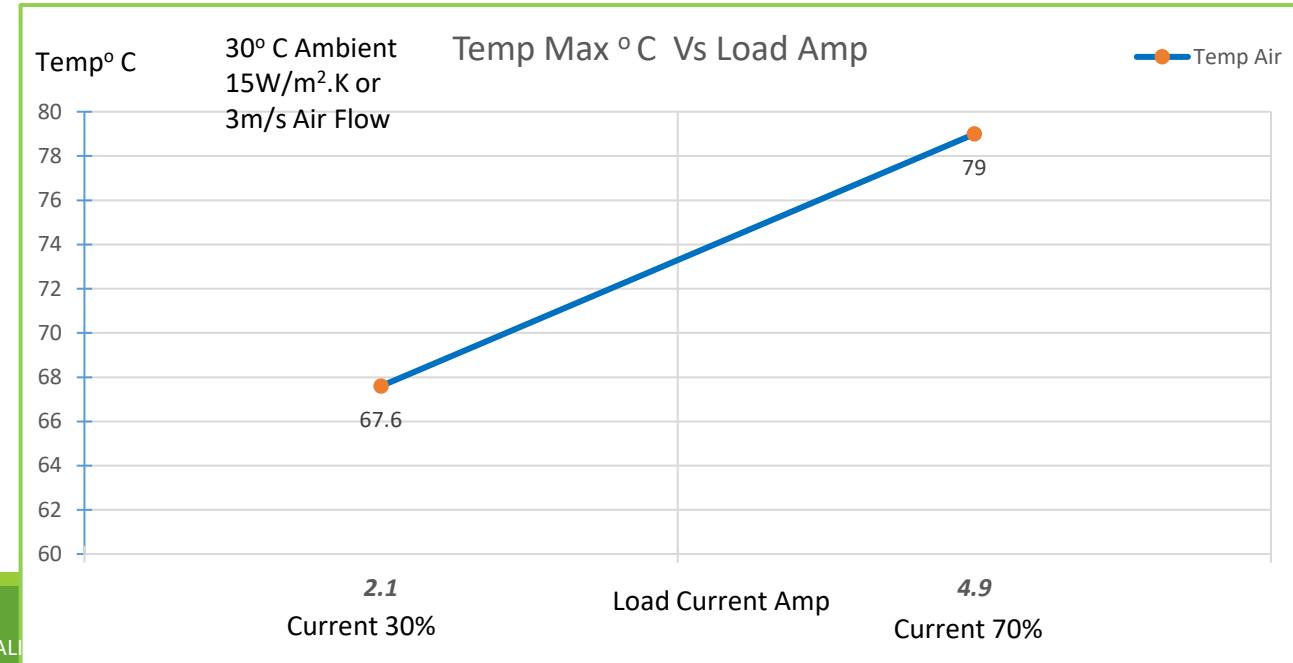
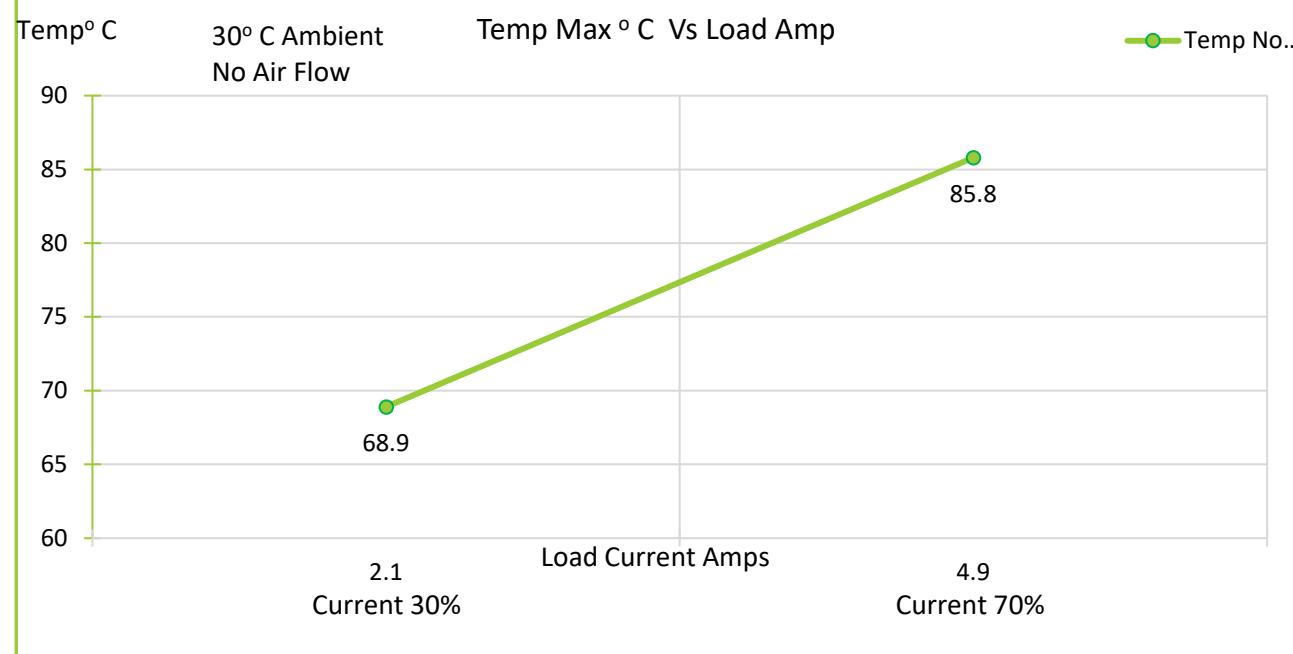
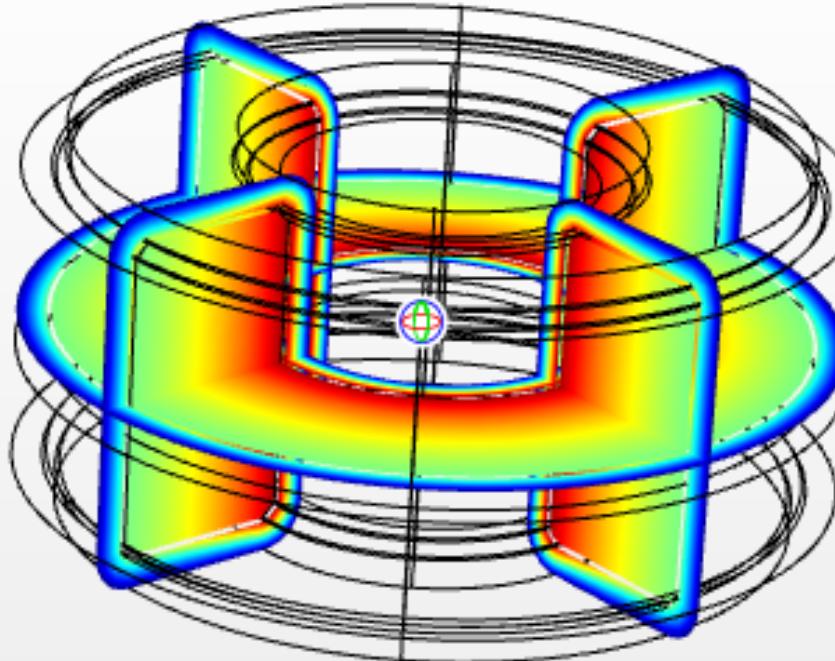
Thermal and Electromagnetics simulation – Part# SN270-151M-7.0AH– Current rated 7A @ 1kHz

$L_p=4.9$ A, $A_r=15$

T
▲ 4.45×10^{-3}
 $\times 10^{-4}$

40
35
30
25
20
15
10
5

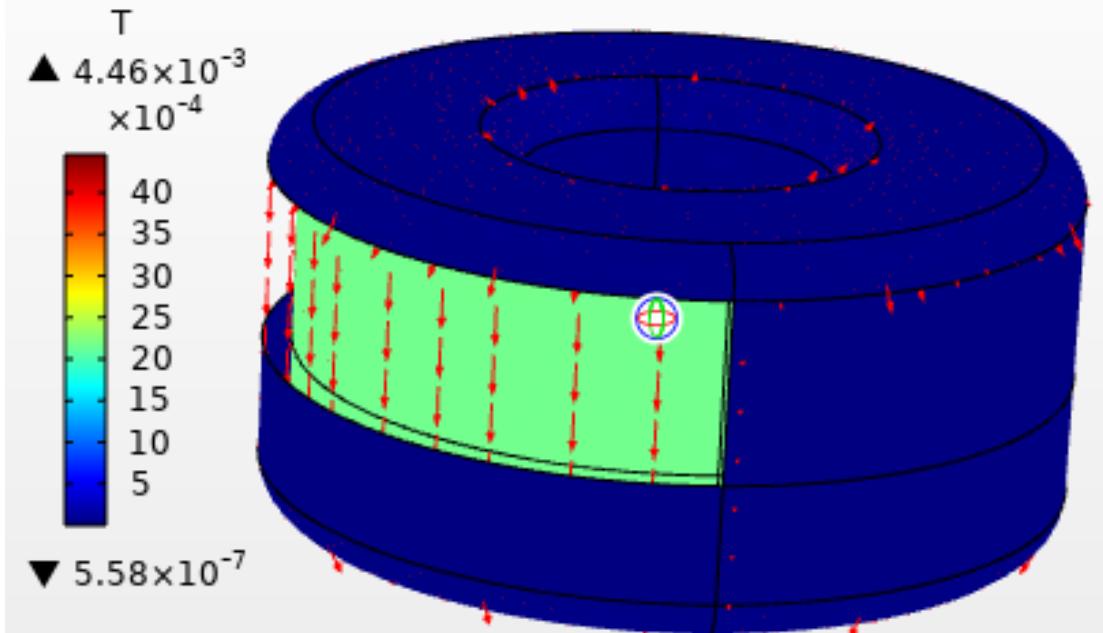
▼ 6.91×10^{-7}



Magnetics Flux in Coil

$L_p=4.9$ A, $A_r=15$

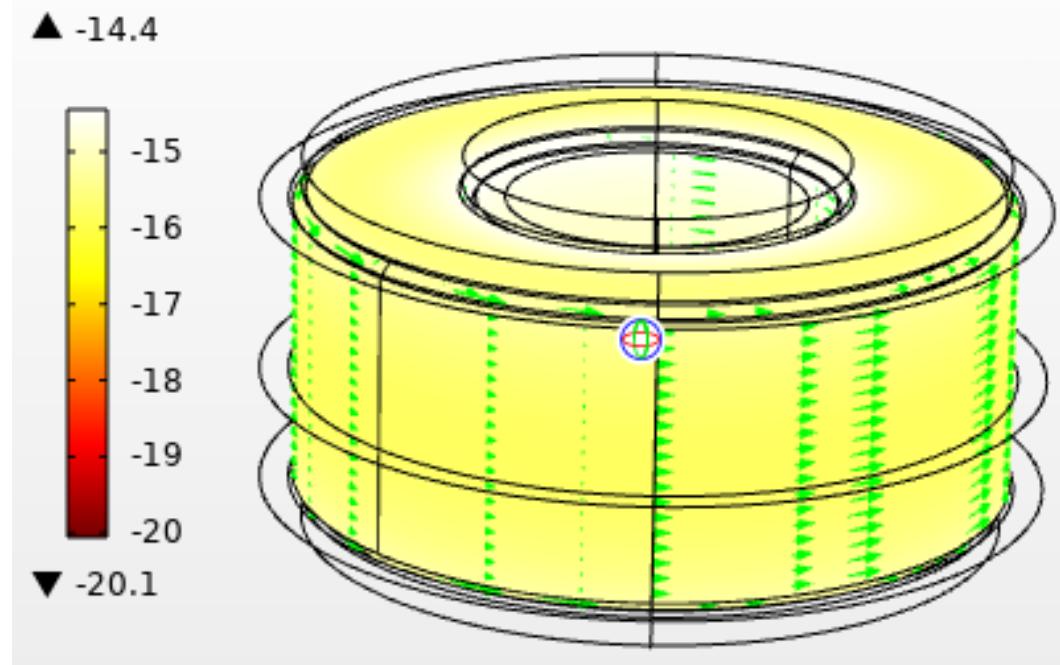
Surface: Magnetic flux density norm (T)
Arrow Volume: Current density
Arrow Surface: Conductive heat flux



Magnetic Flux in Core

$L_p=4.9$ A, $A_r=15$

Arrow Volume: Magnetic flux density
Volume: log(mf.norm)



Abbreviations

Ld	: Current rated Amps
Ar	: Airflow
W/m ² .K	: Watts / Sq meter .Kelvin – Heat Convection rate
m/s	: Meter/ Second - Airflow
degC	: Temperature in Deg C
T	: Tesla – Magnetic Flux density
Temp	: Temperature
Temp max:	Temperature Maximum
Amb	: Ambient Temperature
Amps	: Ampere Load current.
Slice	: Sectional view

Note : For the modeling purpose the winding is considered as homogenous multilayer winding .

Disclaimer :

- Simulation MODEL is an effective tool for evaluating product performance by simulation; however, it does not simulate product performance in all test environments and is not intended to be a replacement for testing of the actual device by means of a test board or otherwise.
- Simulation results are for reference purposes only; CUSTOMER shall perform thorough testing using the actual device.