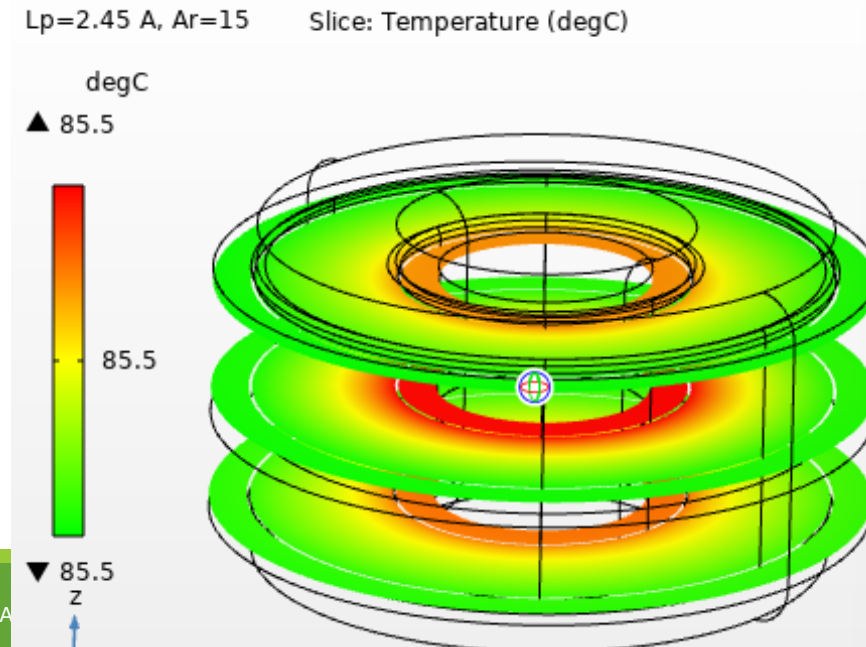
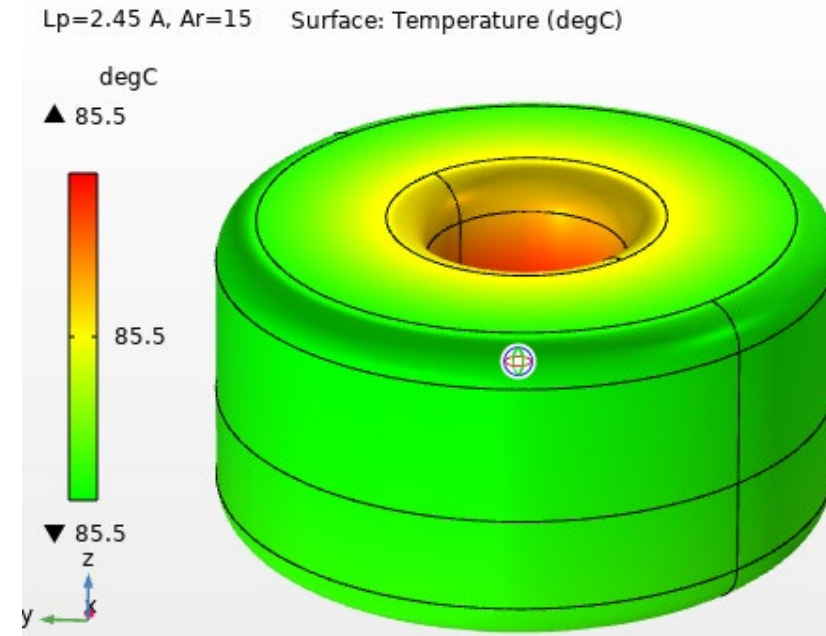
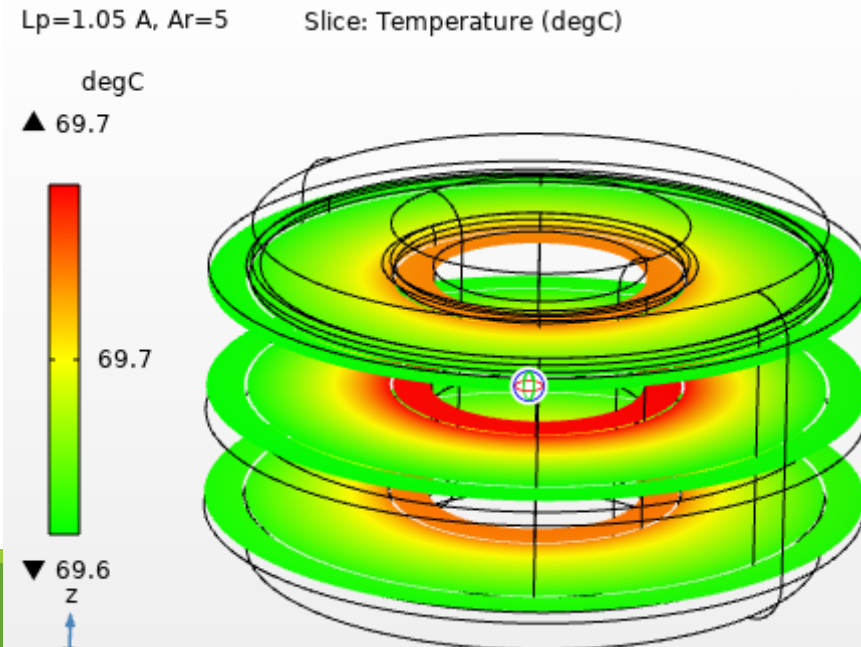
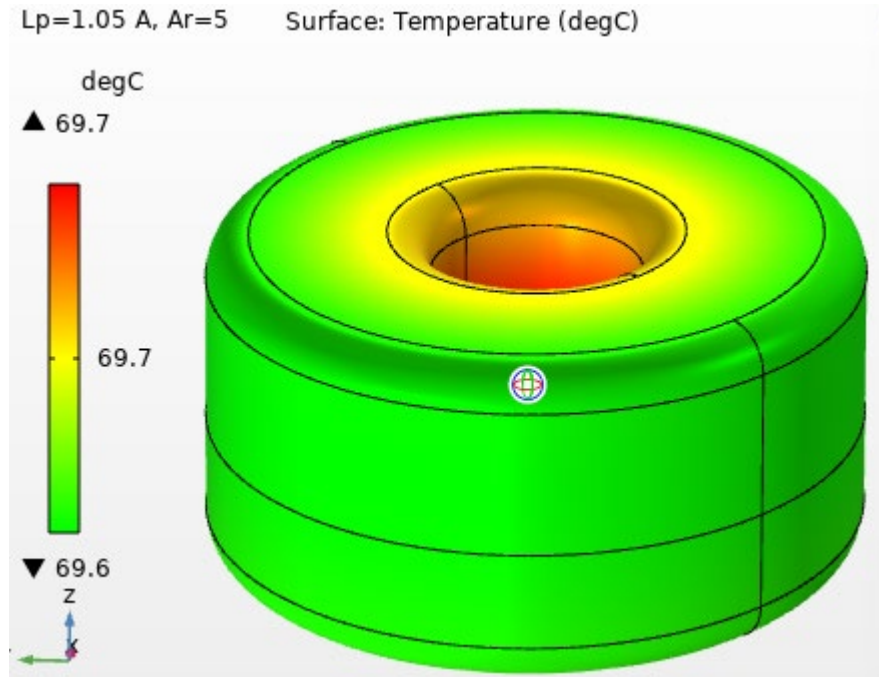


# Thermal and Electromagnetics simulation – Part # SN270-102M-3.5AH– Current rated 3.5A @ 1kHz

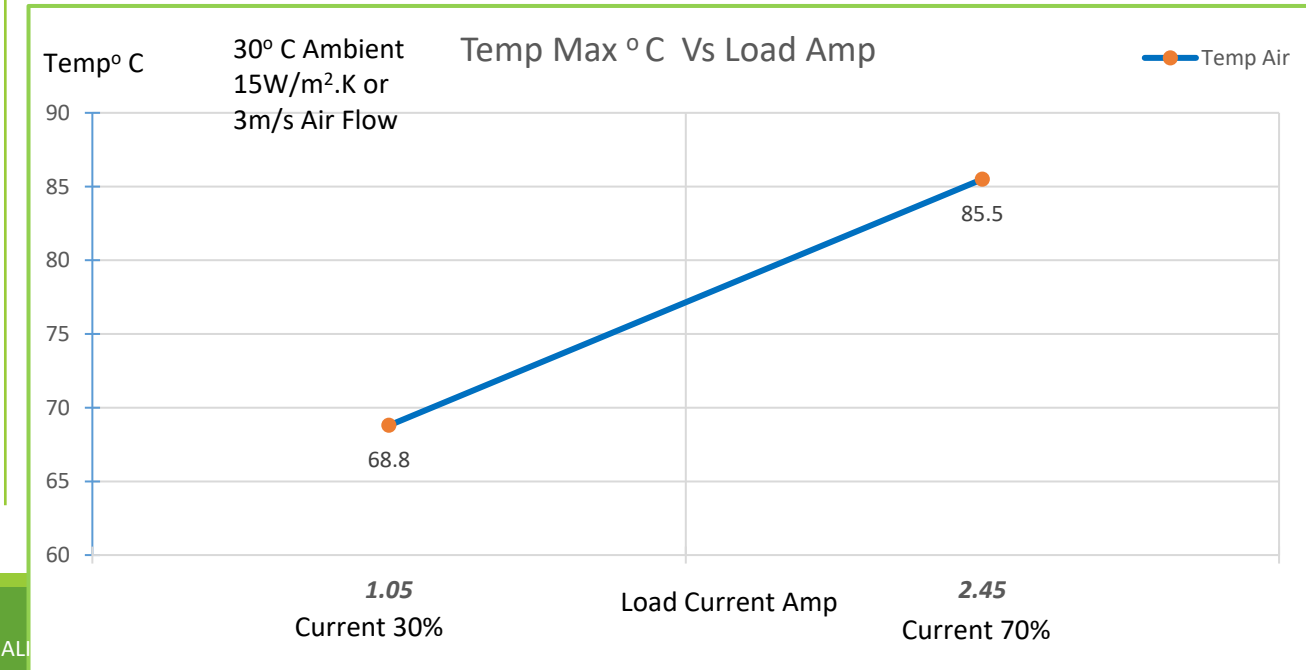
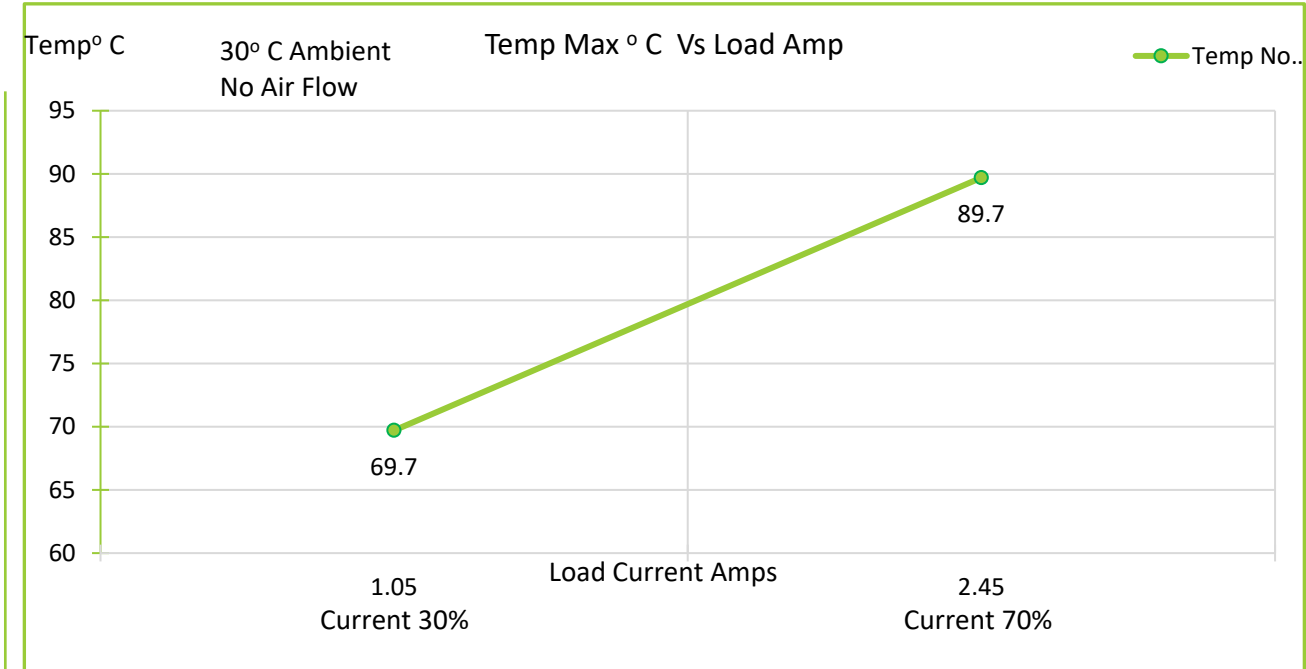
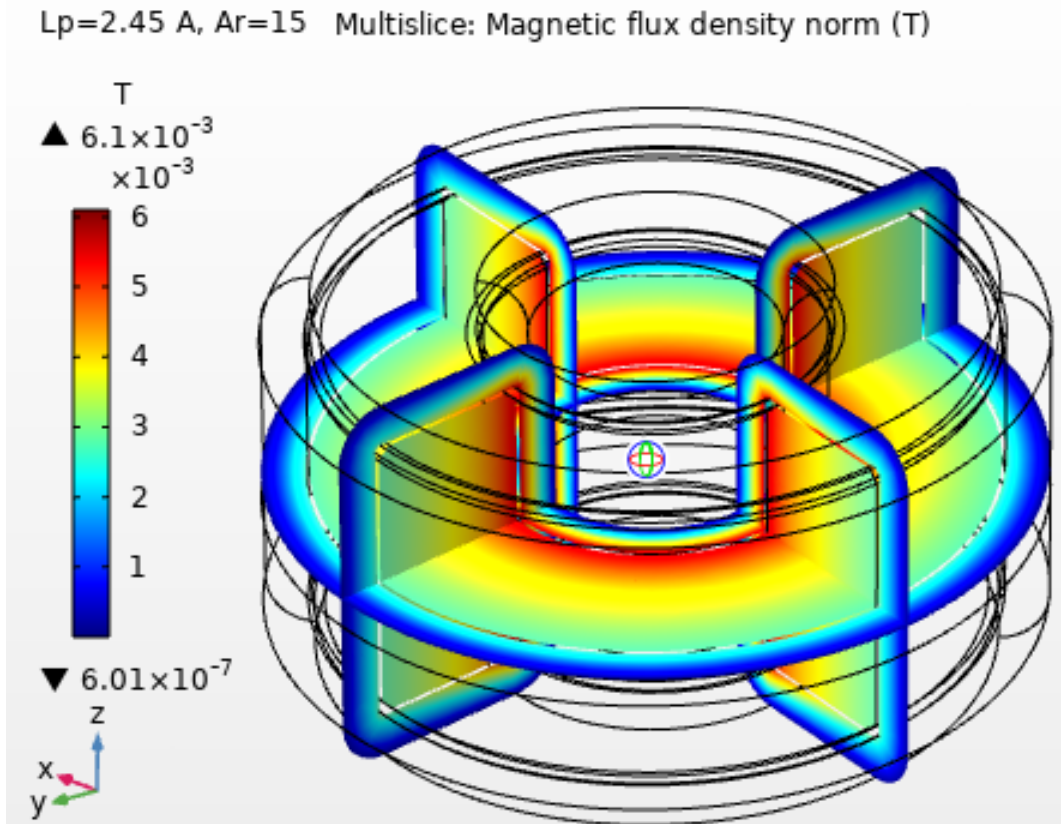
Current 30% (1.05A)  
No Airflow  
Natural convection



Current 70% (2.45A)  
15 W/ (m²K) or 3 m/s  
air flow.



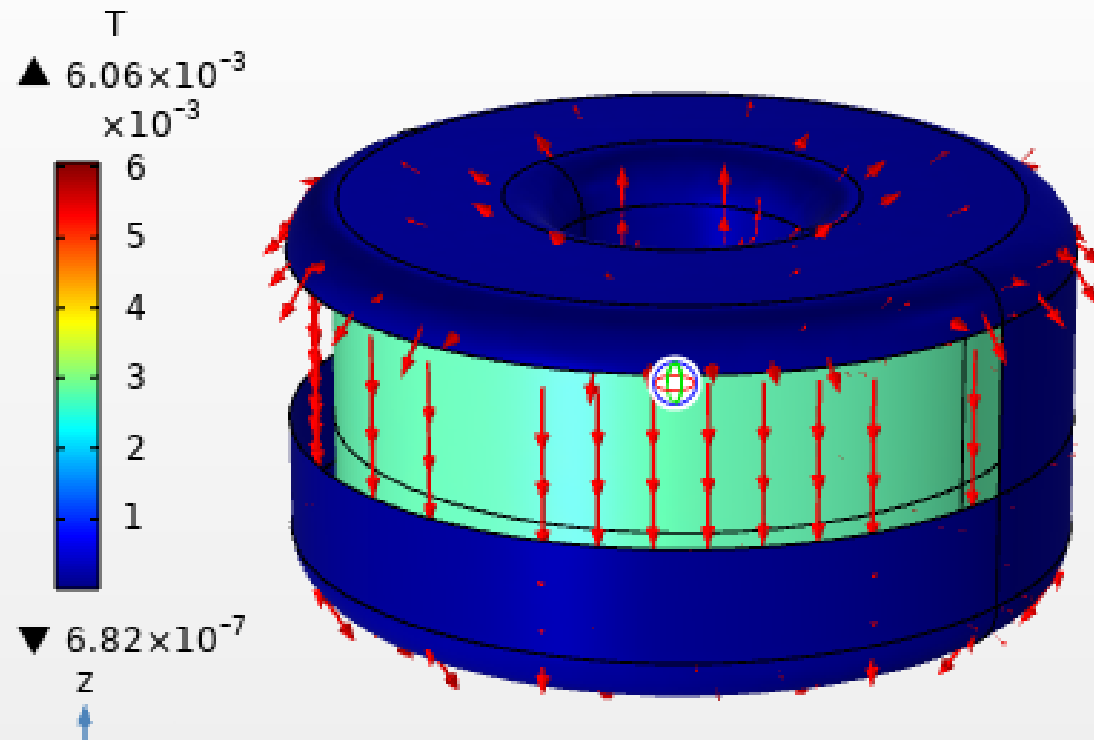
# Thermal and Electromagnetics simulation – Part #SN270-102M-3.5AH– Current rated 3.5A @ 1kHz





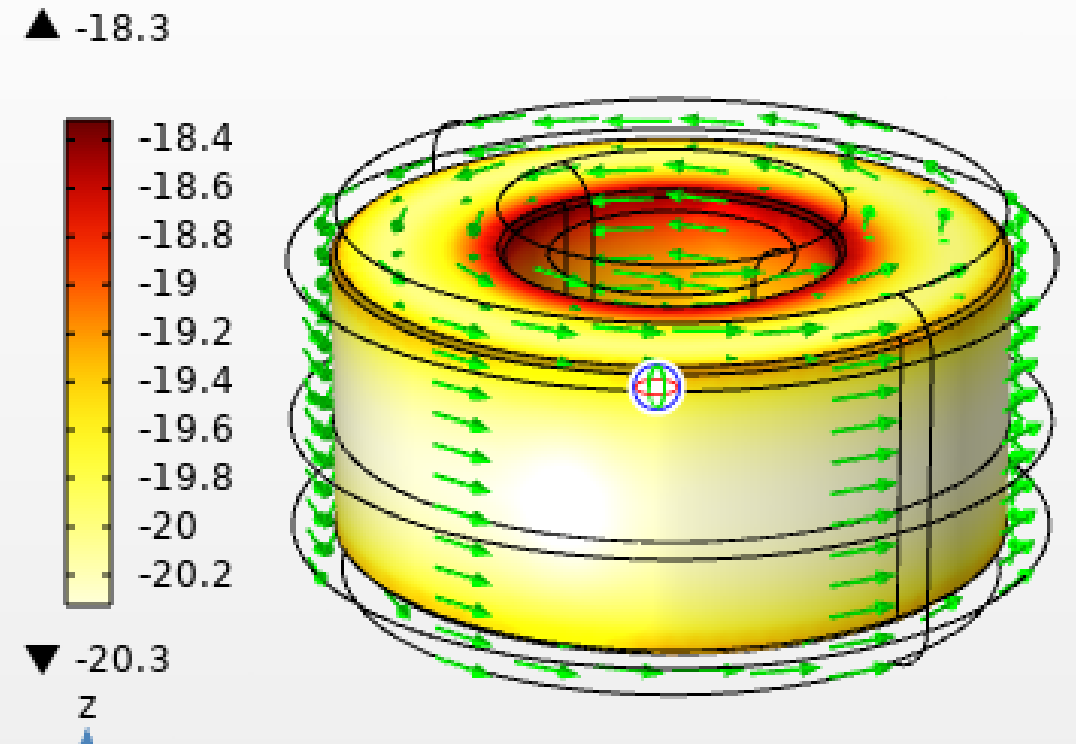
### Magnetics Flux in Coil

$L_p=2.45$  A,  $A_r=15$  Surface: Magnetic flux density norm (T)  
Arrow Volume: Current density  
Arrow Surface: Conductive heat flux



### Magnetic Flux in Core

$L_p=2.45$  A,  $A_r=15$  Arrow Volume: Magnetic flux density  
Volume:  $\log(\text{mf.normj})$





# Abbreviations

Ld	: Current rated Amps
Ar	: Airflow
W/m <sup>2</sup> .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.