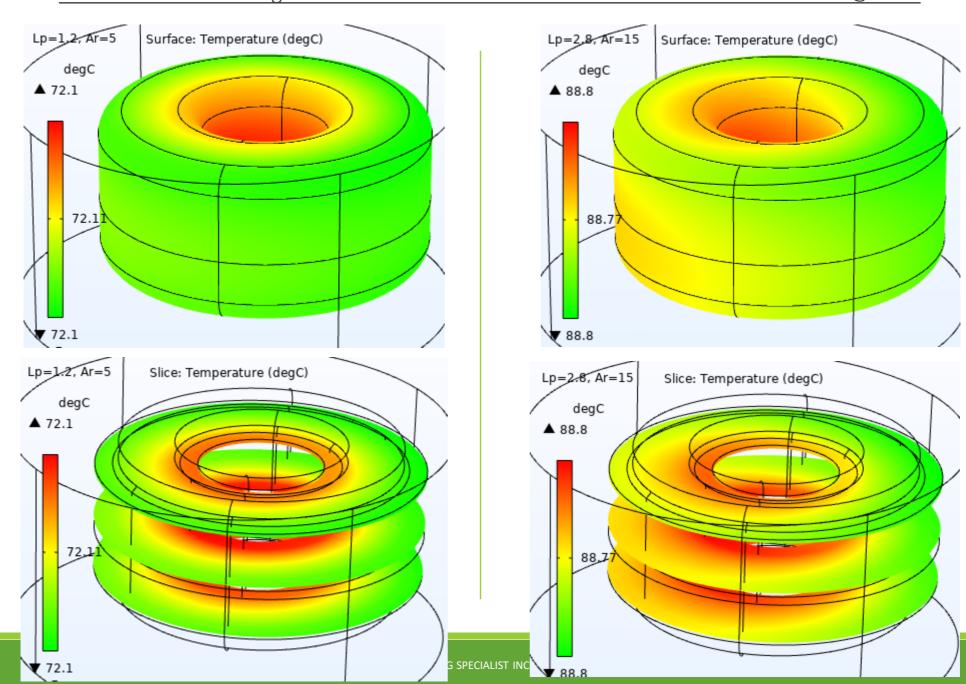
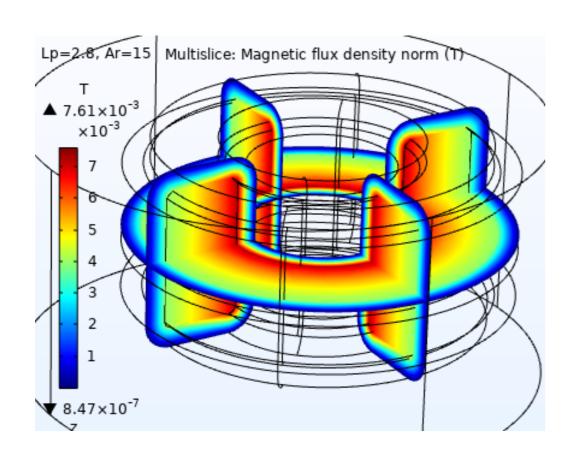
# <u>Thermal and Electromagnetics simulation – Part # HF270-681M-4AV – Current rated 4A @ 1kHz</u>

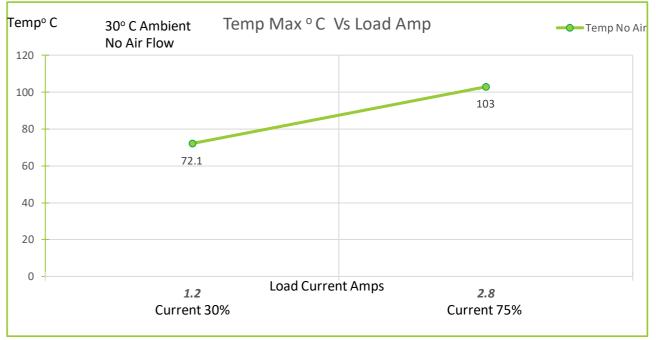
Current 30% (1.2A) No Airflow Natural convection

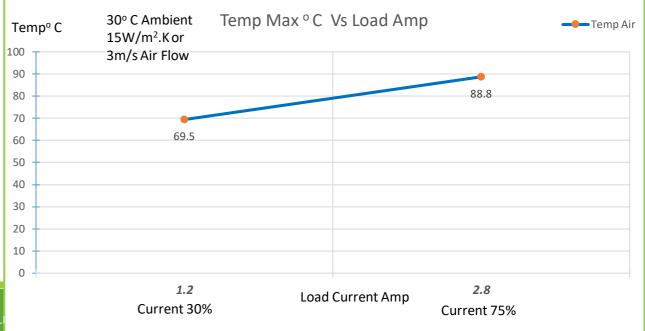


Current 70% (2.8A)  $15 \text{ W/ (m}^2\text{K) or } 3 \text{ m/s}$  air flow.

# Thermal and Electromagnetics simulation - Part # HF270-681M-4AV - Current rated 4A @ 1kHz

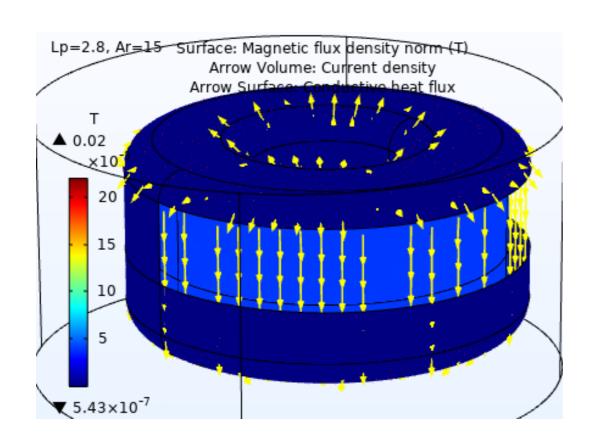


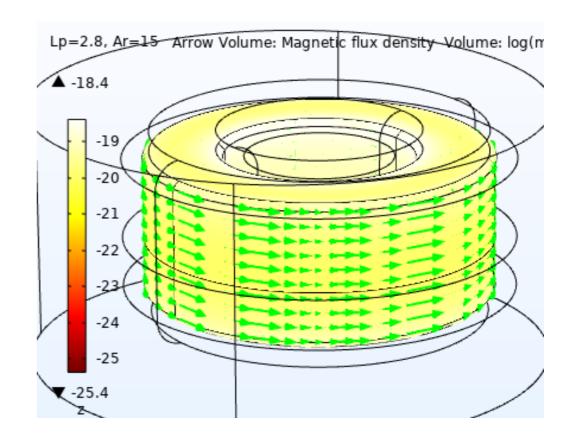




Magnetics Flux in Coil

### Magnetic Flux in Core





# 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:

<sup>-</sup>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.

<sup>-</sup> Simulation results are for reference purposes only; CUSTOMER shall perform thorough testing using the actual device.