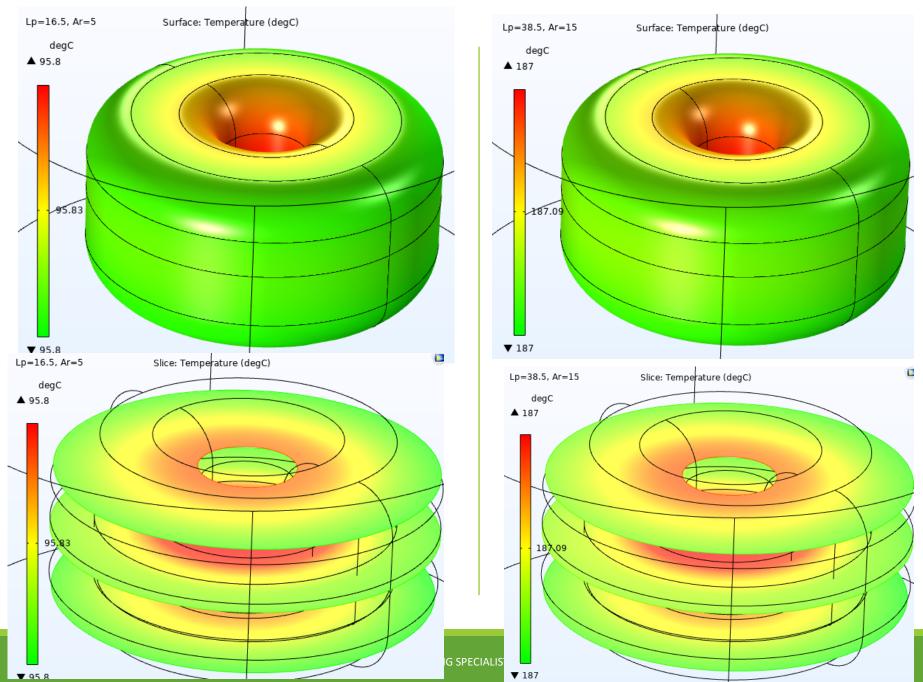
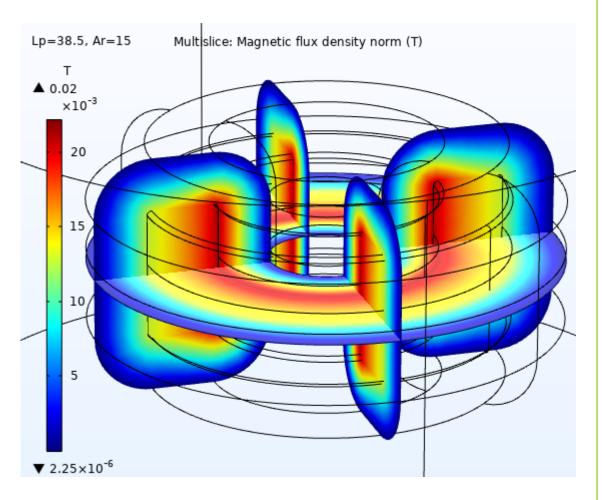
### <u>Thermal and Electromagnetics simulation – Part # HF400-900M-55AH – Current rated 55A @ 1kHz</u>

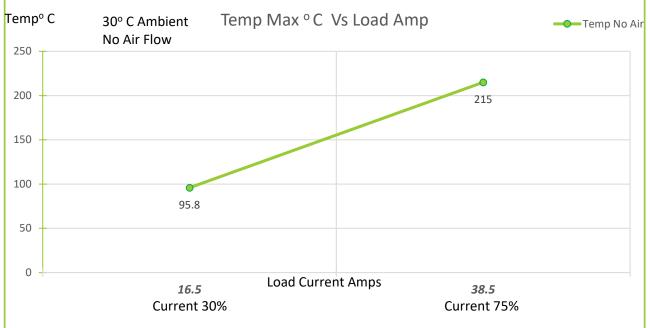
Current 30% (16.5) No Airflow Natural convection

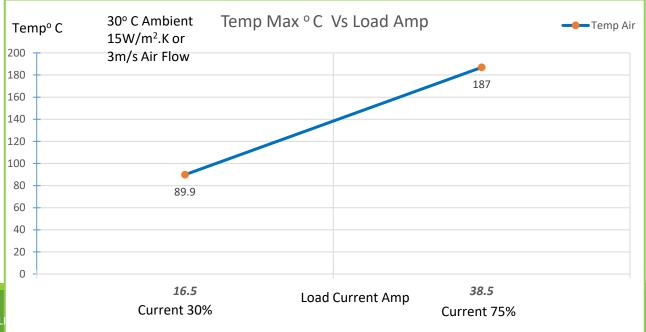


Current 70% (38.55A) 15 W/ (m²K) or 3 m/s air flow.

### <u>Thermal and Electromagnetics simulation – Part # HF400-900M-55AH – Current rated 55A @ 1kHz</u>



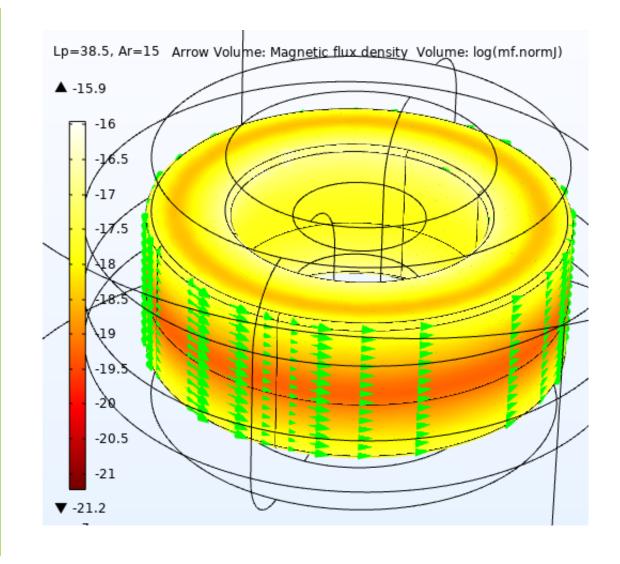




### Magnetics Flux in Coil

# Lp=38.5, Ar=15 Surface: Magnetic flux density norm (T) Arrow Volume: Current density Arrow Surface: Conductive heat flux ▲ 0.02 ×10<sup>-3</sup> 20 ▼ 2.07×10<sup>-6</sup>

### 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.