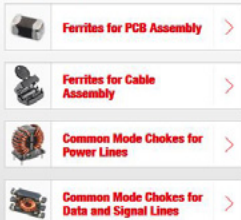


Available products

EMC Components



Power Products



Signal & Communications



Capacitors



Available Applications

DC/DC converters

WPT
resonance tank

Pulse designer

Attenuation
designer

Advantages for registered users

	Series	Spec	Order Code	P_{AC}	P_{DC}	P_{TOT}	ΔT	Height Max	$R_{DC,typ}$	I_{sat}
✓	WE-MAIA		78438356056	85.6 mW	272 mW	358 mW	28.8 K	2.10 mm	68.0 mΩ	4.60 A
✓	WE-PDA		78477068	17.4 mW	84.0 mW	101 mW	9.61 K	8.30 mm	21.0 mΩ	8.50 A
✓	WE-MAPI		74438357082	46.0 mW	324 mW	370 mW	25.6 K	3.10 mm	81.0 mΩ	5.20 A

- Compare up to 16 products
- Add up to 5 chart markers
- Compare losses in the article table and filter for lowest loss or temperature rise
- Use manual loss calculation independent of converter topology
- Full access to all charts



Calculate Losses

PARAMETERS

Frequency Setup

f 800 kHz

DC 0.4

Inductor

type Single

Show suitable

Winding 1

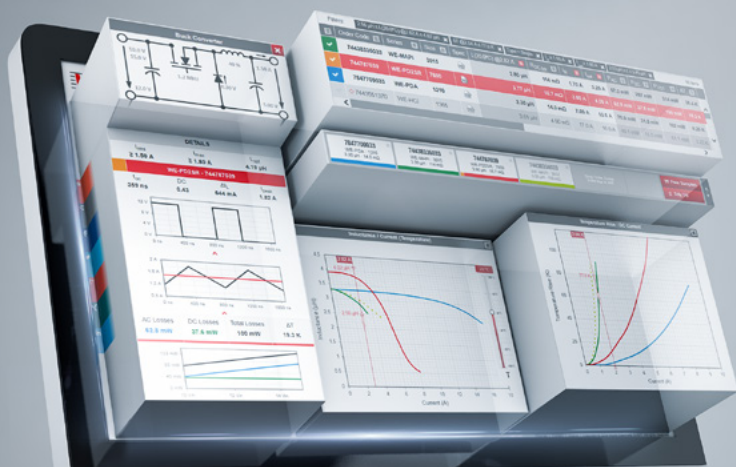
I_{rms} 2 A

ΔI_A

1 A

Watch the video for more details:
www.we-online.com/redexpert-video





THE WORLD'S MOST ACCURATE AC LOSS MODEL

REDEXPERT. Würth Elektronik's online platform for simple component selection and performance simulation.

- The world's most accurate AC loss model
- Inductor simulation and selection for DC/DC converters
- Ability to compare inductance/current and temperature rise/DC current using interactive measurement curves
- Filter settings for over 20 electrical and mechanical parameters
- Online platform based on measured values
- Available in seven languages
- No login required
- Order free samples directly
- Direct access to product datasheets

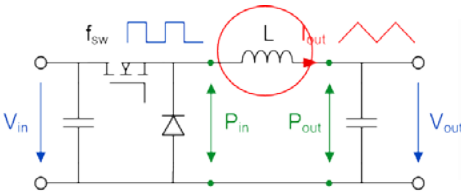
#REDEXPERT

*WE speed up
the future*

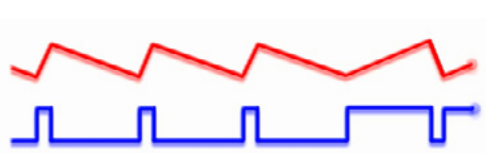
www.we-online.com/redexpert

World's Most Accurate AC Loss Model

Inductor losses are one of the critical factors in the design of an efficient power supply. In **REDEXPERT** you can determine accurately your total AC losses at any operating condition, with our **World's Most Accurate AC Loss Model for Power Inductors, which incorporate the AC core and AC wire losses.**



Measured in real DC/DC application

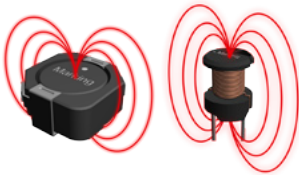


Switching Frequency: 10 kHz ... 10 MHz

Duty Cycle: 0.1 ... 0.9

Advantages of Würth Elektronik AC Loss Model

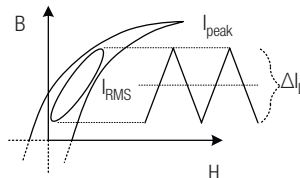
Components



Model based on actual components

- All types of core materials
- All core shapes (not only ring cores)
- Air gap and fringing effects
- Effects and changes in winding structure

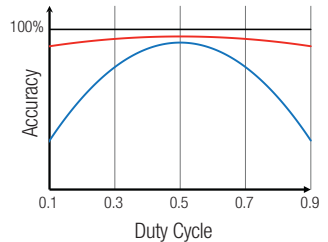
Method



Point of operation

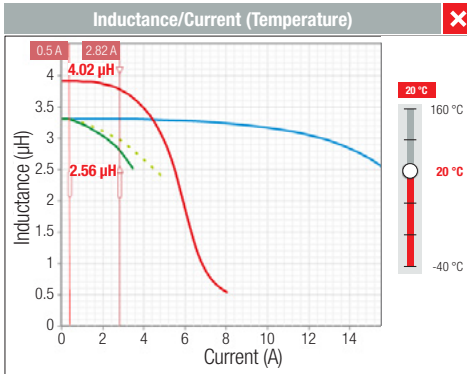
The Model was measured with a pulsating square wave voltage, which is applied across the inductor and results in a triangular current with DC offset.

Accuracy

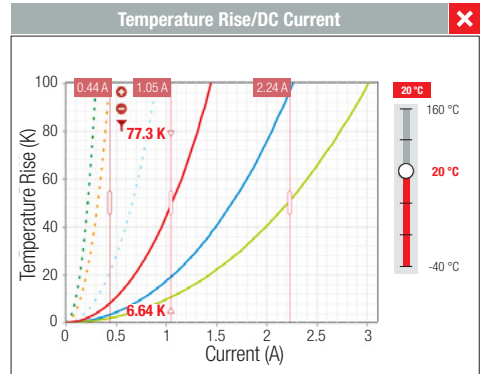


Compared to **Steinmetz** the **Würth Elektronik** model has a higher accuracy over a wider range of duty cycles.

Changeable ambient temperature and measurement conditions

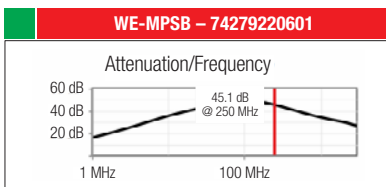
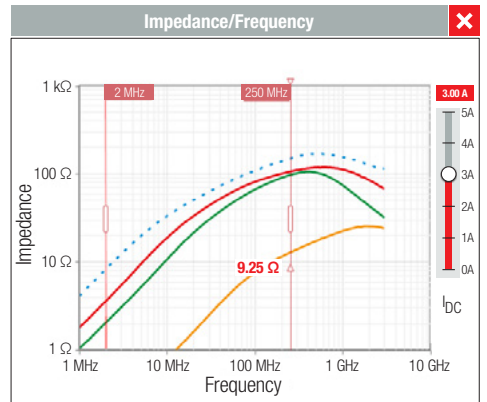
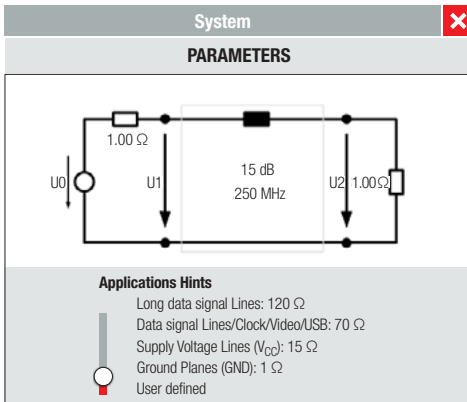


Display inductance value dependent on ambient temperature



Temperature Rise vs. DC current chart considering ambient temperature

Impedance determination considering DC-Bias



Order-Code	Att @250 MHz
74279224551	50.4 dB
74279220601	45.1 dB
782963820	34.6 dB

Enter your desired attenuation and frequency and **REDEXPERT** will propose suitable ferrites and common mode chokes based on system model calculations.