

WURTH ELECTRONICS Product Line for High Current Inductors

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Introduction of the new High Current Inductor Series WE-HCC from Würth Electronics Midcom



WE-HCC [Ferrite]

- High Current & High Performance Power Chokes
- Low Core Losses

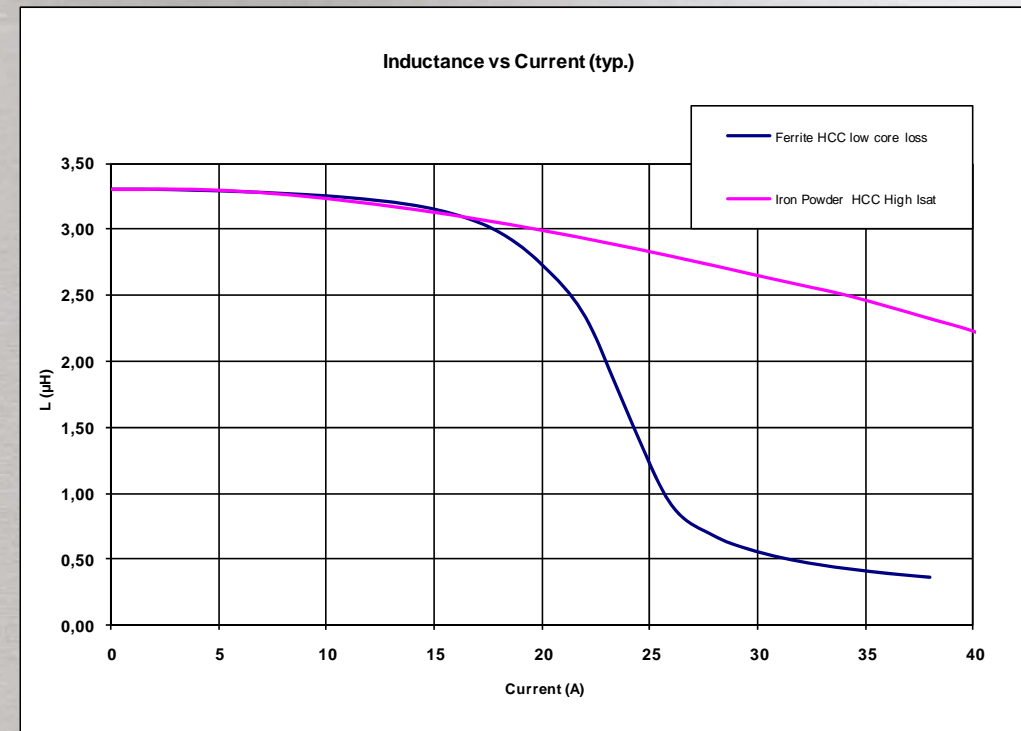
WE-HCC [Iron]

- High Current Filter Chokes
- Excellent Filter Characteristics



Electrical Characteristics WE-HCC [Ferrite]

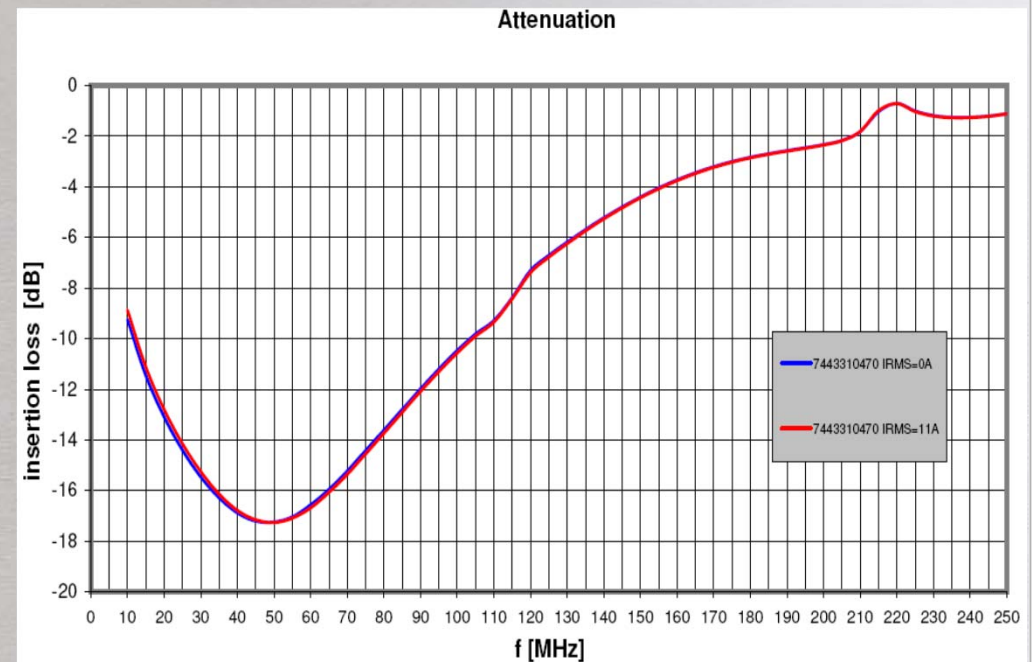
- **Frequency Range: up to 5MHz**
- **Current rating up to 27A without external cooling**
- **High saturation current up to 60A**
- **Excellent saturation Characteristic**
- **Low core loss due of ferrite material**
- **Tight RDC tolerance +/-10%**
- **Low RDC**





Electrical Characteristics WE-HCC [Iron Powder]

- Filter range from 5MHz-100MHz
- Current rating up to 27A without external cooling
- High saturation current up to 85A
- Excellent saturation characteristic over temperature
- Excellent filter behavior over DC current
- Low RDC





Typical Applications for WE- HCC Series

WE-HCC [*Ferrite*]

- **Multiphase Converters**
- **High Frequency Converters**
- **High Current Converters**
- **Motherboards**
- **Industrial Computers**
- **Set Top Boxes**
- **FPGA Power Supplies**
- **Point of Load Converters**

WE-HCC [*Iron Powder*]

- **Filter Choke for DC/DC Converters**
- **Filter Choke for Motor Electronics**
- **Low Frequency DC/DC Converters**
- **High Current Filter Applications**

Overview of package sizes and technical parameters

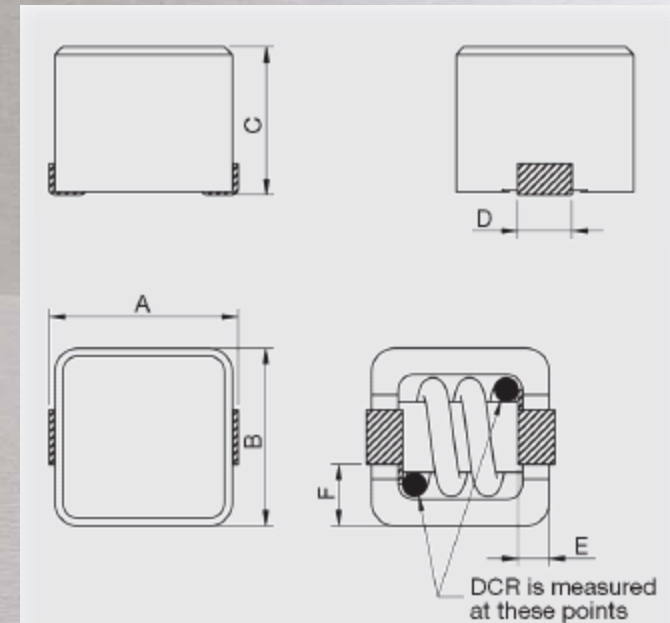
WE HCC [Ferrite]



Order Code	Size (mm)	Inductance ±20% (μH)	DCR ±10% ($\text{m}\Omega$)	I_{SAT} (A)	I_{rms} (A)	SRF (MHz)
7443340030	8 x 8 x 7	0.30	1.40	36.0	20.5	272
7443340047	8 x 8 x 7	0.47	1.70	32.0	19.0	232
7443340068	8 x 8 x 7	0.68	1.70	23.5	19.0	181
7443340100	8 x 8 x 7	1.00	2.95	24.0	17.0	147
7443340150	8 x 8 x 7	1.50	4.35	18.5	16.5	120
7443340220	8 x 8 x 7	2.20	4.35	16.5	16.5	97
7443340330	8 x 8 x 7	3.30	6.65	11.0	14.0	81

Order Code	Size (mm)	Inductance ±20% (μH)	DCR ±10% ($\text{m}\Omega$)	I_{SAT} (A)	I_{rms} (A)	SRF (MHz)
7443330022	10 x 10 x 9	0.22	0.60	60.0	21.5	300
7443330033	10 x 10 x 9	0.33	0.60	55.0	21.5	250
7443330047	10 x 10 x 9	0.47	0.80	47.0	20.5	160
7443330068	10 x 10 x 9	0.68	0.80	38.0	20.5	140
7443330082	10 x 10 x 9	0.82	1.35	36.0	20.0	120
7443330100	10 x 10 x 9	1.00	1.35	27.5	20.0	100
7443330150	10 x 10 x 9	1.50	2.50	27.0	18.0	78
7443330220	10 x 10 x 9	2.20	3.70	22.0	16.5	80
7443330330	10 x 10 x 9	3.30	5.40	15.5	14.0	51
7443330470	10 x 10 x 9	4.70	8.20	15.0	13.0	49
7443330680	10 x 10 x 9	6.80	13.20	11.0	11.5	40
7443330820	10 x 10 x 9	8.20	13.20	8.0	11.5	36
7443331000	10 x 10 x 9	10.00	20.70	8.0	9.0	35

Order Code	Size (mm)	Inductance ±20% (μH)	DCR ±10% ($\text{m}\Omega$)	I_{SAT} (A)	I_{rms} (A)	SRF (MHz)
7443320022	12 x 12 x 10	0.22	0.53	60.0	27.0	280
7443320033	12 x 12 x 10	0.33	0.53	55.0	27.0	214
7443320047	12 x 12 x 10	0.47	0.72	48.0	26.0	138
7443320068	12 x 12 x 10	0.68	0.72	38.0	26.0	108
7443320082	12 x 12 x 10	0.82	1.17	36.0	24.0	99
7443320100	12 x 12 x 10	1.00	1.17	32.0	24.0	98
7443320150	12 x 12 x 10	1.50	2.10	27.0	19.5	92
7443320220	12 x 12 x 10	2.20	3.05	23.0	18.0	64
7443320330	12 x 12 x 10	3.30	4.40	17.0	17.0	44
7443320470	12 x 12 x 10	4.70	6.35	17.0	15.5	43
7443320680	12 x 12 x 10	6.80	8.98	13.0	13.0	42
7443320820	12 x 12 x 10	8.20	9.90	12.0	13.0	34
7443321000	12 x 12 x 10	10.00	14.40	10.0	9.0	29



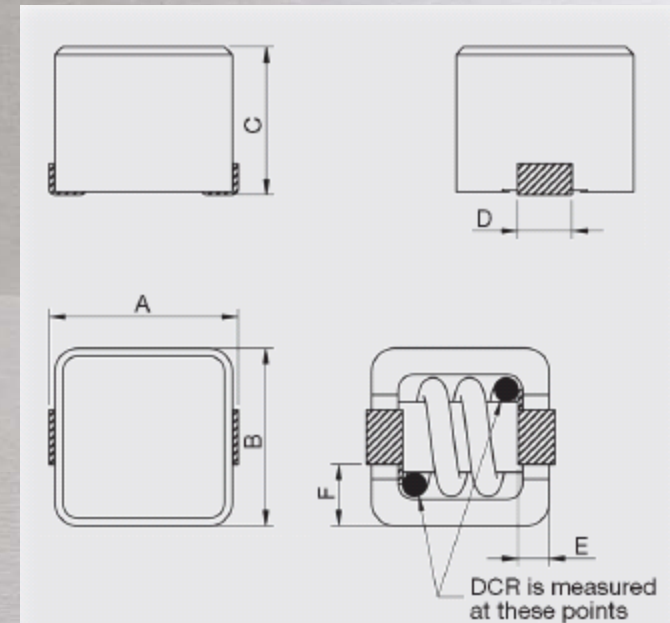
Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
744 334 x	8.4±0.4	7.9±0.3	7.2±0.3	2.3±0.2	1.5±0.2	2.75±0.5
744 333 x	10.9±0.4	10.0±0.4	9.3±0.4	3.0±0.2	1.6±0.2	3.5±0.5
744 332 x	12.1±0.3	11.4±0.3	9.5±0.5	3.5±0.2	2.0±0.2	3.9±1.0

Overview of package sizes and technical parameters

WE HCC [Iron Powder]



Order Code	Size (mm)	Inductance $\pm 20\%$ (μH)	DCR $\pm 10\%$ (m Ω)	I _{SAT} (A)	Rated Current (A)	SRF (MHz)
7443310022	12 x12 x 10	0.22	0.51	85	27.0	210
7443310033	12 x12 x 10	0.33	0.51	80	27.0	190
7443310047	12 x12 x 10	0.47	0.72	76	23.0	140
7443310068	12 x12 x 10	0.68	0.72	74	23.0	120
7443310082	12 x12 x 10	0.82	1.15	66	21.0	100
7443310100	12 x12 x 10	1.0	1.15	52	21.0	100
7443310150	12 x12 x 10	1.5	2.0	50	18.5	120
7443310220	12 x12 x 10	2.2	3.0	48	16.0	70
7443310330	12 x12 x 10	3.3	6.0	39	13.0	50
7443310390	12 x12 x 10	3.9	8.9	34	11.5	50
7443310470	12 x12 x 10	4.7	8.9	33	11.5	32



Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
744 332 x	12.1 \pm 0.3	11.4 \pm 0.3	9.5 \pm 0.5	3.5 \pm 0.2	2.0 \pm 0.2	3.9 \pm 1.0

WE-HCC [Ferrite] Sample Kit now available



more than you expect



SIZE: (a x b x c in mm)
 8.0 x 8.0 x 7.0
 10.0 x 10.0 x 9.0
 12.0 x 11.0 x 10.0

TECHNICAL DATA:
 L: 0.22 - 10.00 µH
 I_{sat}: 9.00 - 27.0 A
 I_{max}: 8.00 - 60.0 A
 DCR_{max}: 0.53 - 20.70 mΩ

Design Kit SMD-High Current Inductor WE-HCC

Order Code 744 332
Version 1.0

more than you expect

Design Kit SMD-High Current Inductor WE-HCC



SIZE	744 332 0022	744 332 0033	744 332 0047	744 332 0068	744 332 0082	744 332 0100	744 332 0150
120x 110x 10.0	L: 0.22 µH I _{sat} : 27.00 A DCR _{max} : 0.53 mΩ	L: 0.33 µH I _{sat} : 27.00 A DCR _{max} : 0.53 mΩ	L: 0.47 µH I _{sat} : 26.00 A DCR _{max} : 0.72 mΩ	L: 0.68 µH I _{sat} : 26.00 A DCR _{max} : 0.72 mΩ	L: 0.82 µH I _{sat} : 24.00 A DCR _{max} : 1.17 mΩ	L: 1.00 µH I _{sat} : 24.00 A DCR _{max} : 1.17 mΩ	L: 1.50 µH I _{sat} : 19.50 A DCR _{max} : 1.50 mΩ
	L: 2.20 µH I _{sat} : 18.00 A DCR _{max} : 3.05 mΩ	L: 3.30 µH I _{sat} : 17.00 A DCR _{max} : 4.40 mΩ	L: 4.70 µH I _{sat} : 15.50 A DCR _{max} : 6.35 mΩ	L: 6.80 µH I _{sat} : 13.00 A DCR _{max} : 8.98 mΩ	L: 8.20 µH I _{sat} : 13.00 A DCR _{max} : 9.90 mΩ	L: 10.00 µH I _{sat} : 9.00 A DCR _{max} : 10.00 A	L: 14.40 µH I _{sat} : 10.00 A DCR _{max} : 14.40 mΩ
	L: 0.22 µH I _{sat} : 21.50 A DCR _{max} : 0.60 mΩ	L: 0.33 µH I _{sat} : 21.50 A DCR _{max} : 0.60 mΩ	L: 0.47 µH I _{sat} : 20.50 A DCR _{max} : 0.80 mΩ	L: 0.68 µH I _{sat} : 20.00 A DCR _{max} : 0.80 mΩ	L: 0.82 µH I _{sat} : 20.00 A DCR _{max} : 1.35 mΩ	L: 1.00 µH I _{sat} : 20.00 A DCR _{max} : 1.35 mΩ	L: 1.50 µH I _{sat} : 16.50 A DCR _{max} : 2.50 mΩ
100x 10.0x 8.0	L: 0.22 µH I _{sat} : 16.50 A DCR _{max} : 2.20 A	L: 0.33 µH I _{sat} : 14.00 A DCR _{max} : 3.70 mΩ	L: 0.47 µH I _{sat} : 13.00 A DCR _{max} : 5.40 mΩ	L: 0.68 µH I _{sat} : 13.00 A DCR _{max} : 8.20 mΩ	L: 0.82 µH I _{sat} : 11.50 A DCR _{max} : 13.20 mΩ	L: 1.00 µH I _{sat} : 11.00 A DCR _{max} : 13.20 mΩ	L: 1.50 µH I _{sat} : 8.00 A DCR _{max} : 20.70 mΩ
	L: 2.20 µH I _{sat} : 16.50 A DCR _{max} : 3.70 mΩ	L: 3.30 µH I _{sat} : 14.00 A DCR _{max} : 5.40 mΩ	L: 4.70 µH I _{sat} : 15.00 A DCR _{max} : 8.20 mΩ	L: 6.80 µH I _{sat} : 11.00 A DCR _{max} : 13.20 mΩ	L: 8.20 µH I _{sat} : 11.00 A DCR _{max} : 13.20 mΩ	L: 10.00 µH I _{sat} : 9.00 A DCR _{max} : 8.00 A	L: 14.40 µH I _{sat} : 8.50 A DCR _{max} : 20.70 mΩ
	L: 0.22 µH I _{sat} : 21.50 A DCR _{max} : 0.60 mΩ	L: 0.33 µH I _{sat} : 21.50 A DCR _{max} : 0.60 mΩ	L: 0.47 µH I _{sat} : 20.50 A DCR _{max} : 0.80 mΩ	L: 0.68 µH I _{sat} : 20.00 A DCR _{max} : 0.80 mΩ	L: 0.82 µH I _{sat} : 20.00 A DCR _{max} : 1.35 mΩ	L: 1.00 µH I _{sat} : 20.00 A DCR _{max} : 1.35 mΩ	L: 1.50 µH I _{sat} : 16.50 A DCR _{max} : 2.50 mΩ
80x 8.0x 7.0	L: 0.30 µH I _{sat} : 20.50 A DCR _{max} : 1.40 mΩ	L: 0.47 µH I _{sat} : 19.00 A DCR _{max} : 1.72 mΩ	L: 0.68 µH I _{sat} : 19.00 A DCR _{max} : 1.72 mΩ	L: 1.00 µH I _{sat} : 17.00 A DCR _{max} : 2.95 mΩ	L: 1.50 µH I _{sat} : 16.50 A DCR _{max} : 4.40 mΩ	L: 2.20 µH I _{sat} : 16.50 A DCR _{max} : 4.40 mΩ	L: 3.30 µH I _{sat} : 14.00 A DCR _{max} : 6.50 mΩ

EMC & Inductive Solutions

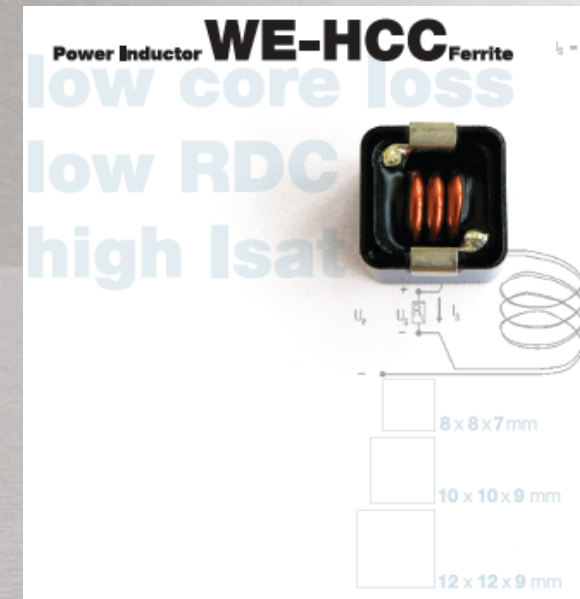
- EMC COMPONENTS
- INDUCTORS
- TRANSFORMERS
- RF COMPONENTS
- CONNECTORS
- CIRCUIT PROTECTION



Please check datasheets on www.we-online.com for specifications.
 Würth Elektronik eSOS GmbH & Co. KG
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WE-HCC Summary

- Increase the efficiency of your application with a cost effective part
- 3 different sizes with a broad inductance range
- Sample Kit available (Order Code 744332/710-744332)
- Fits on many standard footprints of common manufacturers





This ends the product presentation

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