

## FAIS series (Rev. 2.3)



## Features

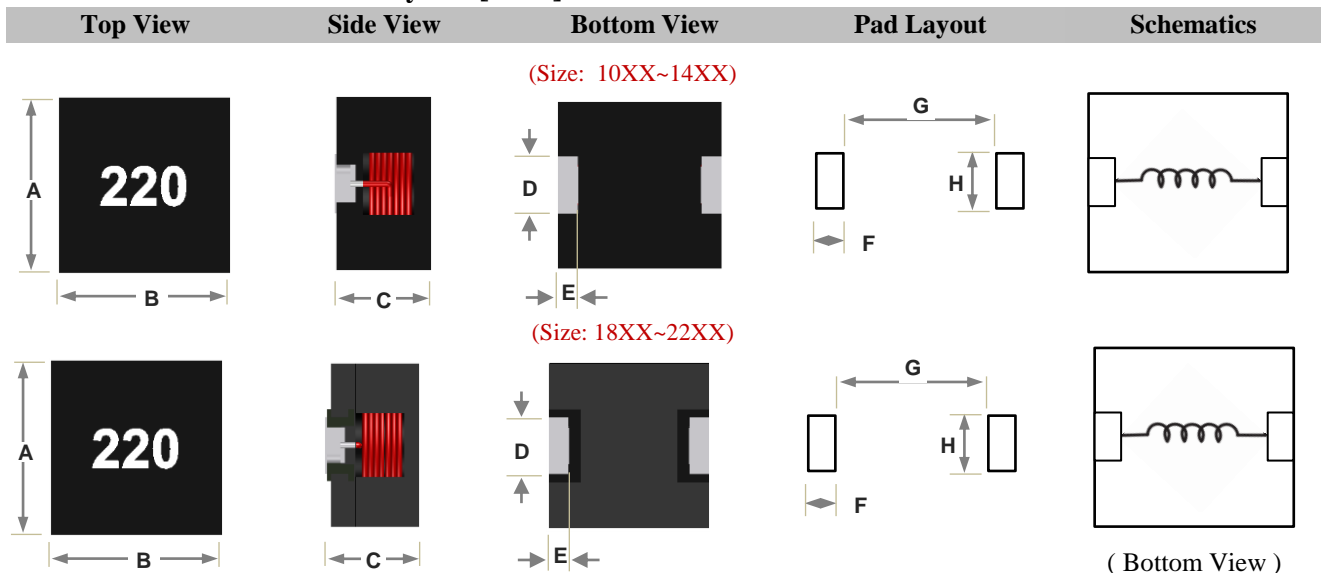
- \* Super Irms.& extremely low resistance property especially above 100KHz, and super Isat.
- \* Compact structure, lower profile, lower buzz noise;
- \* High reliability on high temperature condition.

## Product Identification

FAIS      1811      -      220      M      □  
 1                  2                                  3                  4                  5

1. Product Code
2. Size Code: 18.3 \* 18.3 \* 11.7mm
3. Inductance: 22 uH
4. Tolerance: M =  $\pm 20\%$
5. Special

## Dimension &amp; Recommended Pad Layout: [ mm ]



Size Code	A(max.)	B(max.)	C(max.)	D( $\pm 0.2$ )	E( $\pm 0.2$ )	F(ref.)	G(ref.)	H(ref.)
FAIS1060	10.9	11.2	6.0	3.3	3.1	3.5	3.5	4.3
FAIS1080	10.4	10.4	8.0	3.3	3.1	3.5	1.8	4.3
FAIS1013	10.4	10.4	13.3	3.3	3.1	3.5	1.8	4.3
FAIS1260	12.9	12.9	6.0	3.3	3.9	4.3	3.8	4.3
FAIS1212	12.9	12.9	12.0	3.3	3.9	4.3	3.8	4.3
FAIS1412	14.9	14.9	12.0	3.3	3.9	4.3	3.8	4.3
FAIS1811	18.5	18.5	11.5	6.3	2.2	2.8	12.7	7.0
FAIS1813	18.5	18.5	14.5	6.3	2.2	2.8	12.7	7.0
FAIS1814	18.5	18.5	14.5	6.3	2.2	2.8	12.7	7.0
FAIS2213	22.5	23.0	13.5	6.3	2.2	2.8	16.5	7.0
FAIS2214	22.5	23.0	14.5	6.3	2.2	2.8	16.5	7.0
FAIS2215	22.5	23.0	15.5	6.3	2.2	2.8	16.5	7.0
FAIS2216	22.5	23.0	16.5	6.3	2.2	2.8	16.5	7.0
FAIS2217	22.5	23.0	17.5	6.3	2.2	2.8	16.5	7.0
FAIS2221	22.5	23.0	21.5	6.3	2.2	2.8	16.5	7.0

## Applications

- \* For widely use in a variety of circuits, flyback, multi-output buck and SEPIC.
- \* Power supply for Automotive, PC, LED, digital amplifier featuring, etc.

## Operating &amp; Storage Condition :

- \* Operating Temp :Stand Type:-40 to +125 °C
- \* Storage Life Time: 12 months @25 °C, RH 65%
- \* Storage Temp : Stand Type -40 to +85 °C

## Test Equipment :

- \* HP4284A,HP42841A-L,IDC,Q,RDC
- \* HP8753D NETWORK ANALYZER-SRF

## Standard Atmospheric Conditions :

- \* Ambient Temp : 20 $\pm$ 15 °C
- \* Relative Humidity : 65 $\pm$ 20%

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## Electrical Characteristics

Part No.	Inductance (uH)	DCR (mΩ) typ.	DCR (mΩ) max.	Irms. (A) max.	Isat. (A) max.
FAIS1060-100M	10.0	14.7	17.6	8.9	9.3
FAIS1060-150M	15.0	23.8	28.6	6.8	7.2
FAIS1060-220M	22.0	30.1	36.1	6.0	5.8
FAIS1060-330M	33.0	52.9	63.5	4.1	4.8
FAIS1060-470M	47.0	65.3	78.4	3.8	4.2
FAIS1060-680M	68.0	99.5	119.4	3.0	3.2
FAIS1060-101M	100.0	125.0	150.0	2.6	2.8
FAIS1080-221M	220.0	216.0	259.2	1.8	2.0
FAIS1013-150M	15.0	20.6	24.7	7.5	11.0
FAIS1260-4R7M	4.7	13.2	15.2	9.6	15.3
FAIS1260-330M	33.0	48.9	56.2	5.0	6.2
FAIS1212-220M	22.0	27.0	32.4	7.8	10.0
FAIS1212-330M	33.0	40.0	48.0	6.4	7.8
FAIS1412-220M	22.0	22.4	26.9	8.0	19.6
FAIS1412-330M	33.0	35.7	42.8	6.5	16.0
FAIS1412-470M	47.0	42.7	51.2	6.0	13.4

\* Test Condition: @100KHz/ 0.25V ; Ambient temperature: 25 ℃ ;

\* Temperature rise current (Irms.): The value of D.C. current when the temperature rise is  $\Delta T=50^{\circ}\text{C}$ .

\* Saturation current (Isat.): This indicates the value of D.C. current when inductance becomes 30% lower than its value without current.

\* Tolerance: K= $\pm 10\%$ , M= $\pm 20\%$ , N= $\pm 30\%$ .

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## Electrical Characteristics

Part No.	Inductance ( $\mu$ H)	DCR (m $\Omega$ ) typ.	DCR (m $\Omega$ ) max.	I <sub>rms</sub> . (A) max.	I <sub>sat</sub> . (A) max.
FAIS1811-1R0M	1.0	1.05	1.21	43.0	83.0
FAIS1811-2R2M	2.2	1.65	1.90	34.0	53.0
FAIS1811-3R3M	3.3	3.14	3.61	26.0	45.0
FAIS1811-4R0M	4.0	3.84	4.42	22.0	45.0
FAIS1811-4R7M	4.7	4.00	4.60	22.0	38.0
FAIS1811-6R8M	6.8	5.90	6.79	17.5	31.0
FAIS1811-100M	10.0	6.81	7.83	16.5	25.0
FAIS1811-220M	22.0	16.8	19.3	10.2	20.5
FAIS1811-330M	33.0	31.5	36.2	8.1	16.2
FAIS1811-470M	47.0	37.0	42.6	7.2	12.5
FAIS1811-560M	56.0	52.0	59.8	6.0	11.0
FAIS1811-680M	68.0	55.0	63.3	6.0	10.0
FAIS1811-820M	82.0	63.2	72.7	5.5	9.1
FAIS1811-101M	100.0	81.0	93.2	5.0	8.1
FAIS1811-151M	150.0	128.6	147.9	3.8	6.7
FAIS1811-201M	200.0	150.0	172.5	3.6	5.9
FAIS1812-100M	10.0	8.0	9.1	15.5	30.0
FAIS1813-150M	15.0	9.8	11.3	14.0	26.0
FAIS1813-101M	100.0	72.5	83.4	5.2	9.5
FAIS1814-1R0ME	1.0	0.40	0.46	72.0	87.0
FAIS1814-2R2M	2.2	1.18	1.36	42.0	55.0
FAIS1814-3R3M	3.3	1.52	1.75	37.0	47.0
FAIS1814-4R0M	4.0	2.60	2.99	28.5	47.0
FAIS1814-4R7M	4.7	2.60	2.99	28.5	41.0
FAIS1811-6R8M	6.8	4.64	5.34	21.5	33.5
FAIS1814-100M	10.0	4.64	5.34	21.5	26.0
FAIS1814-220M	22.0	10.9	12.5	14.0	18.0
FAIS1814-330M	33.0	27.4	31.5	8.8	15.2
FAIS1814-470M	47.0	31.2	35.9	8.3	12.2

\* Test Condition: @100KHz/ 0.25V ; Ambient temperature: 25℃ ;

\* Temperature rise current (I<sub>rms</sub>.): The value of D.C. current when the temperature rise is  $\Delta T=50^{\circ}\text{C}$ .\* Saturation current (I<sub>sat</sub>.): This indicates the value of D.C. current when inductance becomes 30% lower than its value without current.

\* Tolerance: K=±10%, M=±20%, N=±30%.

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## Electrical Characteristics

Part No.	Inductance ( $\mu$ H)	DCR (m $\Omega$ ) typ.	DCR (m $\Omega$ ) max.	I <sub>rms</sub> . (A) max.	I <sub>sat</sub> . (A) max.
FAIS1814-560M	56	35.0	40.3	8.0	11.5
FAIS1814-680M	68	38.8	44.6	7.5	10.5
FAIS1814-820M	82	42.6	49.0	7.0	9.5
FAIS1814-101M	100	73.6	84.6	5.5	8.5
FAIS1814-151M	150	93.1	107.1	4.7	7.0
FAIS1814-201M	200	121.0	139.2	4.2	6.0
FAIS2213-1R0M	1.0	0.91	1.05	54.0	132.0
FAIS2213-2R2MD	2.2	1.28	1.47	45.5	84.0
FAIS2213-2R2M	2.2	2.26	2.60	34.5	84.0
FAIS2213-3R3MD	3.3	2.50	2.88	32.5	72.0
FAIS2213-3R3M	3.3	3.30	3.80	28.5	72.0
FAIS2213-4R0M	4.0	4.03	4.63	25.5	72.0
FAIS2213-4R7M	4.7	4.03	4.63	25.5	62.0
FAIS2213-6R8M	6.8	4.77	5.49	23.5	50.0
FAIS2213-100M	10	5.50	6.33	22.0	40.0
FAIS2213-220M	22	18.1	20.8	12.1	27.5
FAIS2213-330M	33	26.6	30.6	10.0	23.0
FAIS2213-470M	47	30.3	34.8	9.4	18.5
FAIS2213-560M	56	40.7	46.8	8.0	17.5
FAIS2213-680M	68	42.9	49.3	7.8	15.1
FAIS2213-820M	82	47.3	54.4	7.5	14.0
FAIS2213-101M	100	67.4	77.5	6.3	13.0
FAIS2213-151M	150	108.2	124.4	5.0	10.5
FAIS2213-201M	200	122.9	141.3	4.6	8.8
FAIS2214-1R0ME	1.0	0.41	0.47	80.0	120.0
FAIS2215-1R0M	1	0.64	0.74	65.0	133.0
FAIS2216-800M	80	36.00	41.40	8.0	15.0
FAIS2217-4R7M	4.7	2.02	2.32	35.2	65.0
FAIS2217-800M	80	26.10	30.02	9.0	16.0
FAIS2221-380M	38	15.10	17.37	13.0	26.0

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\* Saturation current (I<sub>sat</sub>.): This indicates the value of D.C. current when inductance becomes 30% lower than its value without current.

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