



# SMD WIRE WOUND POWER INDUCTORS CSSXXXXF

Revision: A

**Frontier Electronics Corp.**<sup>®</sup>  
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# SMD WIRE WOUND POWER INDUCTORS CSSXXXXF

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## SMD Wire Wound Power Inductors CSSXXXXF (Shielded)

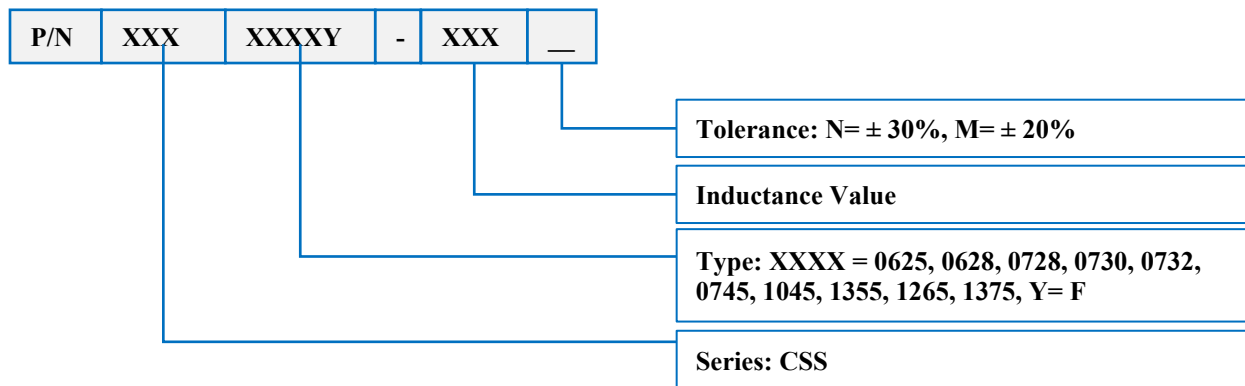
- |             |              |
|-------------|--------------|
| 1. CSS0625F | 6. CSS0745F  |
| 2. CSS0628F | 7. CSS1045F  |
| 3. CSS0728F | 8. CSS1355F  |
| 4. CSS0730F | 9. CSS1365F  |
| 5. CSS0732F | 10. CSS1375F |

### General Information:

1. Magnetically shielded
2. DCR measured with the 16502 milli-ohm meter
3. Inductance drops 30%(typical) at rated current
4. Inductance measured with the HP4285A, Power source 1320 & 3302
5. Operating temperature: -30°C to +100°C
6. Storage temperature: -25°C to +85°C
7. Temperature Rise (Typical): < 25°C (@ 20°C ambient & Rated Current)
8. MSL: Level 1
9. Inductance and Current range:
 

a. CSS0625F: From 4.7 $\mu$ H (1.50A) to 100.0 $\mu$ H (0.33A).	f. CSS0745F: From 3.3 $\mu$ H (2.30A) to 1000.0 $\mu$ H (0.14A).
b. CSS0628F: From 4.7 $\mu$ H (1.60A) to 100.0 $\mu$ H (0.42A).	g. CSS1045F: From 10.0 $\mu$ H (2.50A) to 1500.0 $\mu$ H (0.22A).
c. CSS0728F: From 3.3 $\mu$ H (1.60A) to 47.0 $\mu$ H (0.54A).	h. CSS1355F: From 6.0 $\mu$ H (3.60A) to 1500.0 $\mu$ H (0.29A).
d. CSS0730F: From 3.3 $\mu$ H (1.80A) to 100.0 $\mu$ H (0.35A).	i. CSS1365F: From 2.0 $\mu$ H (6.20A) to 220.0 $\mu$ H (1.00A).
e. CSS0732F: From 3.3 $\mu$ H (1.90A) to 1000.0 $\mu$ H (0.13A).	j. CSS1375F: From 1.2 $\mu$ H (8.20A) to 220.0 $\mu$ H (1.30A).

### P/N Coding:



### Applications:

- |                     |                     |
|---------------------|---------------------|
| 1. DC-DC Converter  | 2. Audio Amplifiers |
| 3. Printers         | 4. Cable modem      |
| 5. Monitors         | 6. EMI              |
| 7. Video Cards      | 8. TV               |
| 9. Battery Chargers | 10. Game Consoles   |

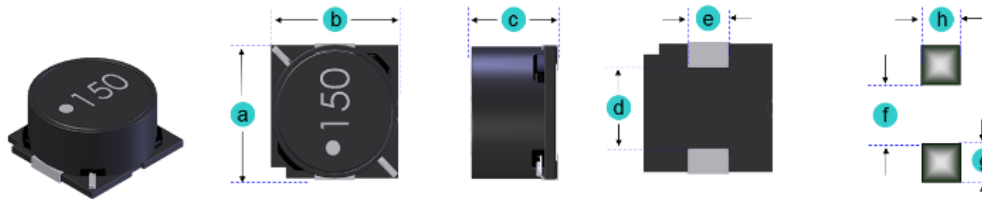
## SERIES: CSS0625F

### Electrical Specifications:

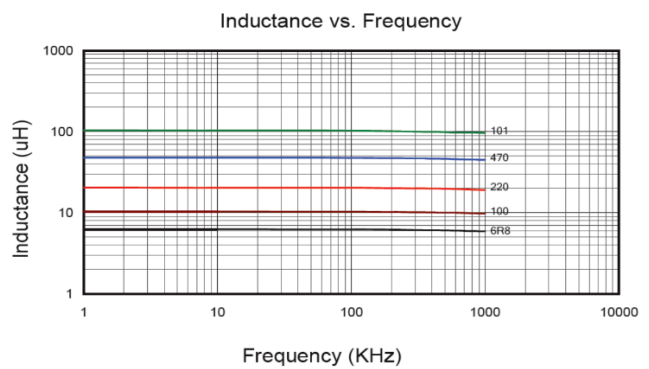
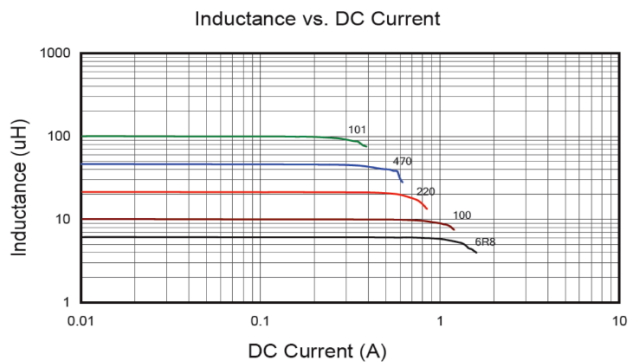
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	Rated Current (A)
CSS0625F-4R7	4R7	M	4.7	1	0.0367	1.50
CSS0625F-6R8	6R8	M	6.8	1	0.0530	1.30
CSS0625F-100	100	M	10	1	0.0688	1.00
CSS0625F-150	150	M	15	1	0.102	0.88
CSS0625F-220	220	M	22	1	0.146	0.73
CSS0625F-330	330	M	33	1	0.216	0.59
CSS0625F-470	470	M	47	1	0.288	0.48
CSS0625F-680	680	M	68	1	0.444	0.42
CSS0625F-101	101	M	100	1	0.600	0.33

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0625F	6.0 (0.236)	6.0 (0.236)	2.5 (0.098)	4.9 (0.193)	2.0 (0.079)	4.0 (0.157)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.2 (0.008)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



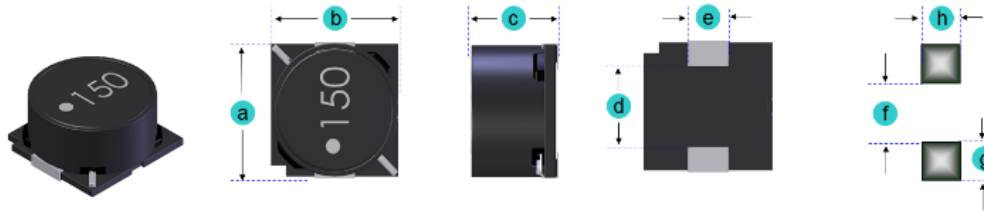
## SERIES: CSS0628F

### Electrical Specifications:

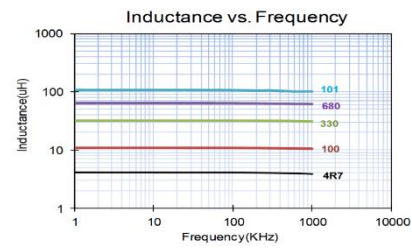
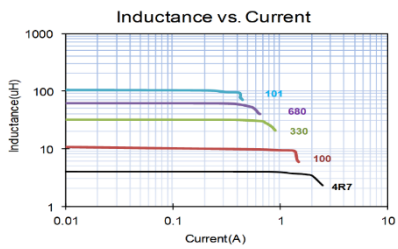
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	Rated Current (A)
CSS0628F-4R7	4R7	M	4.7	1	0.0340	1.60
CSS0628F-6R8	6R8	M	6.8	1	0.0424	1.50
CSS0628F-100	100	M	10	1	0.0638	1.30
CSS0628F-150	150	M	15	1	0.0894	1.00
CSS0628F-220	220	M	22	1	0.1240	0.77
CSS0628F-330	330	M	33	1	0.1770	0.69
CSS0628F-470	470	M	47	1	0.2520	0.59
CSS0628F-680	680	M	68	1	0.3480	0.50
CSS0628F-101	101	M	100	1	0.5160	0.42

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0628F	6.0 (0.236)	6.0 (0.236)	2.8 (0.110)	4.0 (0.157)	2.0 (0.079)	4.0 (0.157)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.2 (0.008)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



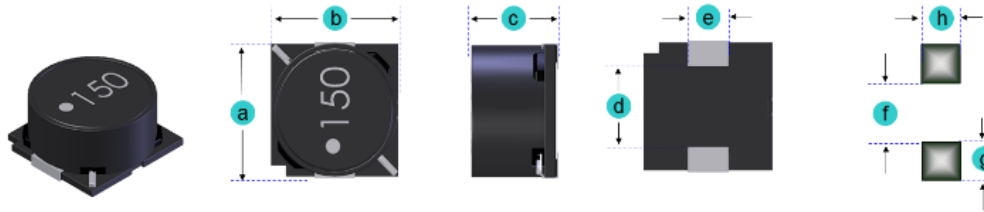
## SERIES: CSS0728F

### Electrical Specifications:

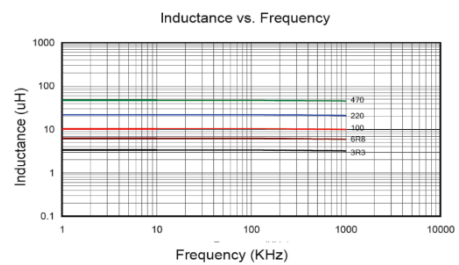
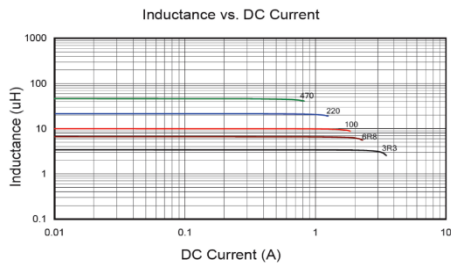
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	Rated Current (A)
CSS0728F-3R3	3R3	M	3.3	1	0.045	1.60
CSS0728F-4R7	4R7	M	4.7	1	0.054	1.50
CSS0728F-6R8	6R8	M	6.8	1	0.071	1.30
CSS0728F-100	100	M	10	1	0.100	1.10
CSS0728F-150	150	M	15	1	0.156	0.88
CSS0728F-220	220	M	22	1	0.216	0.75
CSS0728F-330	330	M	33	1	0.288	0.65
CSS0728F-470	470	M	47	1	0.408	0.54

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0728F	7.0 (0.276)	7.0 (0.276)	2.8 (0.110)	4.9 (0.193)	2.0 (0.079)	4.9 (0.193)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.2 (0.008)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



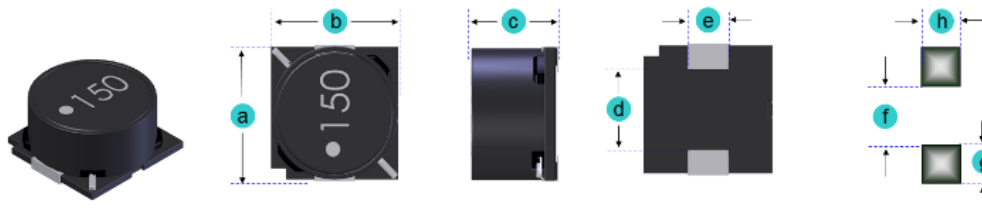
## SERIES: CSS0730F

### Electrical Specifications:

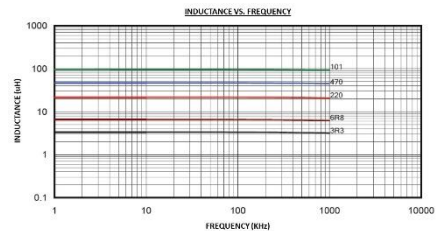
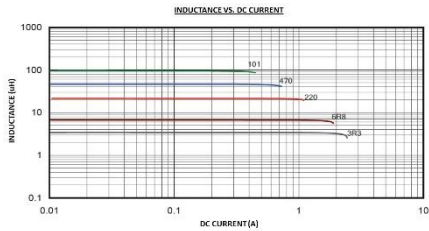
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	Rated Current (A)
CSS0730F-3R3	3R3	M	3.3	1	0.028	1.80
CSS0730F-4R7	4R7	M	4.7	1	0.044	1.60
CSS0730F-6R8	6R8	M	6.8	1	0.050	1.50
CSS0730F-100	100	M	10	1	0.064	1.30
CSS0730F-150	150	M	15	1	0.104	1.00
CSS0730F-220	220	M	22	1	0.132	0.86
CSS0730F-330	330	M	33	1	0.192	0.65
CSS0730F-470	470	M	47	1	0.288	0.57
CSS0730F-680	680	M	68	1	0.372	0.49
CSS0730F-101	101	M	100	1	0.540	0.35

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0730F	7.0 (0.276)	7.0 (0.276)	3.0 (0.118)	4.9 (0.193)	2.0 (0.079)	4.9 (0.193)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.22 (0.009)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



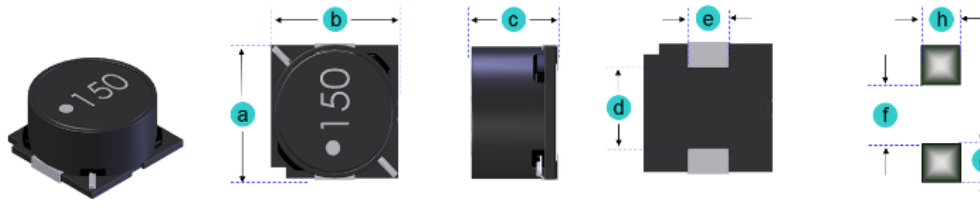
## SERIES: CSS0732F

### Electrical Specifications:

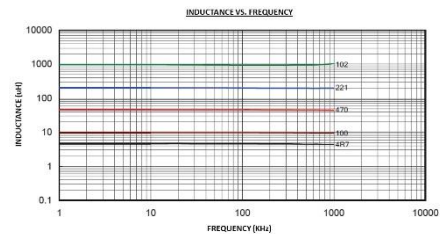
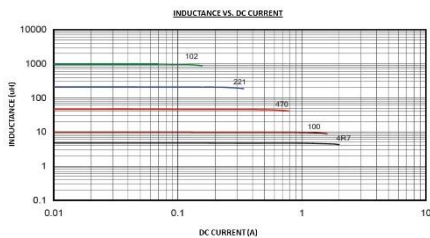
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	Rated Current (A)
CSS0732F-3R3	3R3	M	3.3	1	0.028	1.90
CSS0732F-4R7	4R7	M	4.7	1	0.044	1.70
CSS0732F-6R8	6R8	M	6.8	1	0.050	1.60
CSS0732F-100	100	M	10	1	0.064	1.40
CSS0732F-150	150	M	15	1	0.090	1.10
CSS0732F-220	220	M	22	1	0.132	0.96
CSS0732F-330	330	M	33	1	0.192	0.75
CSS0732F-470	470	M	47	1	0.288	0.67
CSS0732F-680	680	M	68	1	0.372	0.59
CSS0732F-101	101	M	100	1	0.540	0.45
CSS0732F-151	151	M	150	1	0.780	0.37
CSS0732F-221	221	M	220	1	1.260	0.29
CSS0732F-331	331	M	330	1	2.000	0.22
CSS0732F-471	471	M	470	1	2.460	0.20
CSS0732F-681	681	M	680	1	3.780	0.16
CSS0732F-102	102	M	1000	1	5.740	0.13

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0732F	7.0 (0.276)	7.0 (0.276)	3.2 (0.126)	4.9 (0.193)	2.0 (0.079)	4.9 (0.193)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.2 (0.008)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



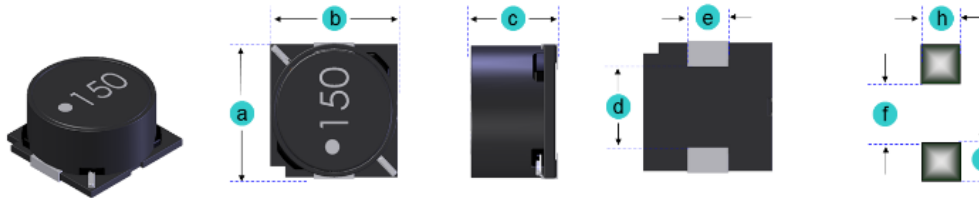
## SERIES: CSS0745F

### Electrical Specifications:

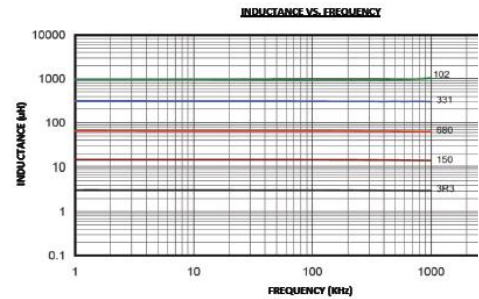
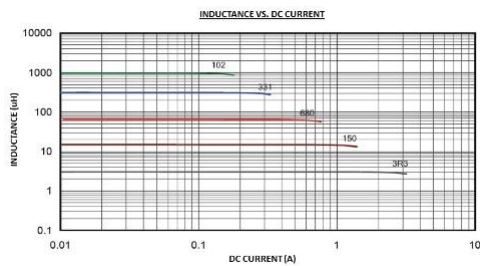
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	I sat. Typ. (A)	I rated Typ. (A)
CSS0745F-3R3	3R3	M	3.3	1	0.024	2.5	2.3
CSS0745F-4R7	4R7	M	4.7	1	0.036	2.1	2
CSS0745F-6R8	6R8	M	6.8	1	0.047	1.74	1.7
CSS0745F-100	100	M	10	1	0.044	1.76	1.3
CSS0745F-150	150	M	15	1	0.063	1.53	1.1
CSS0745F-220	220	M	22	1	0.074	1.34	0.9
CSS0745F-330	330	M	33	1	0.116	1.09	0.82
CSS0745F-470	470	M	47	1	0.150	0.92	0.75
CSS0745F-680	680	M	68	1	0.210	0.77	0.6
CSS0745F-101	101	M	100	1	0.300	0.65	0.5
CSS0745F-151	151	M	150	1	0.408	0.55	0.4
CSS0745F-221	221	M	220	1	0.624	0.45	0.33
CSS0745F-331	331	M	330	1	0.888	0.37	0.25
CSS0745F-471	471	M	470	1	1.260	0.31	0.22
CSS0745F-681	681	M	680	1	1.776	0.27	0.2
CSS0745F-102	102	M	1000	1	2.736	0.25	0.14

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS0745F	7.0 (0.276)	7.0 (0.276)	4.5 (0.177)	4.9 (0.193)	2.0 (0.079)	4.9 (0.193)	1.5 (0.059)	2.2 (0.087)
Tol.	±0.2 (0.008)	±0.2 (0.008)	±0.3 (0.012)	Typ.	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



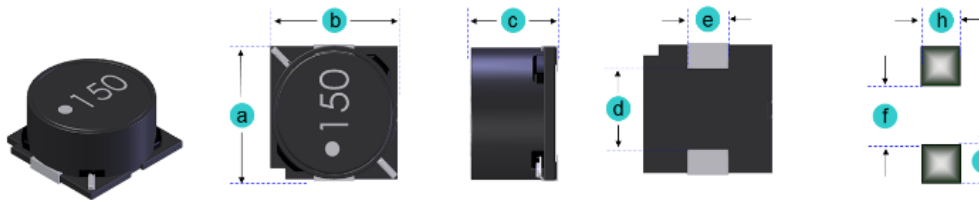
## SERIES: CSS1045F

### Electrical Specifications:

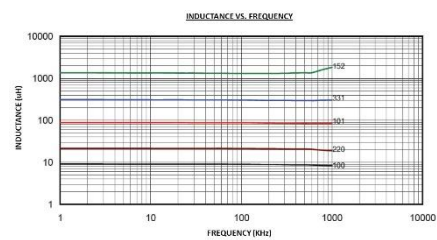
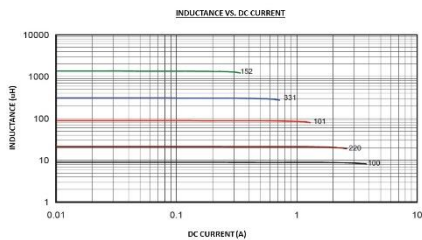
P/N	Marking	Tol.	Inductance ( $\mu\text{H}$ )	Test Freq. (KHz)	DCR Max. ( $\Omega$ )	I sat. Typ. (A)	I rated Typ. (A)
CSS1045F-100_	100	M	10	1	0.0437	3	2.5
CSS1045F-150_	150	M	15	1	0.0567	2.4	2.2
CSS1045F-220_	220	M	22	1	0.0709	2.1	1.9
CSS1045F-330_	330	M	33	1	0.0978	1.7	1.6
CSS1045F-470_	470	M	47	1	0.1400	1.5	1.4
CSS1045F-680_	680	M	68	1	0.2030	1.3	1.2
CSS1045F-101_	101	M	100	1	0.2820	1.1	1
CSS1045F-151_	151	M	150	1	0.4200	0.81	0.79
CSS1045F-221_	221	M	220	1	0.7050	0.7	0.65
CSS1045F-331_	331	M	330	1	0.9140	0.58	0.54
CSS1045F-471_	471	M	470	1	1.5340	0.47	0.47
CSS1045F-681_	681	M	680	1	2.0450	0.38	0.38
CSS1045F-102_	102	M	1000	1	3.3600	0.32	0.29
CSS1045F-152_	152	M	1500	1	4.0800	0.26	0.22

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS1045F	10.1 (0.398)	10.1 (0.398)	4.5 (0.177)	6.0 (0.236)	3.0 (0.118)	5.6 (0.220)	2.5 (0.098)	3.2 (0.126)
Tol.	$\pm 0.3$ (0.012)	$\pm 0.3$ (0.012)	$\pm 0.3$ (0.012)	$\pm 0.2$ (0.008)	$\pm 0.1$ (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



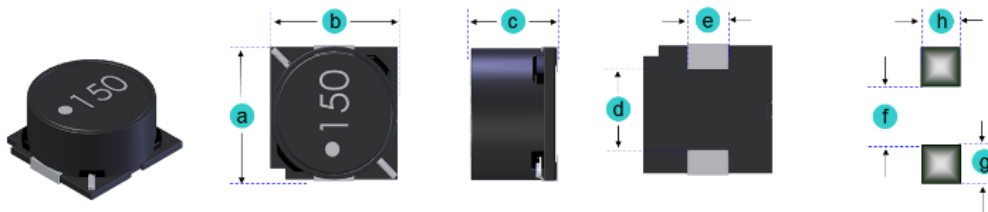
## SERIES: CSS1355F

### Electrical Specifications:

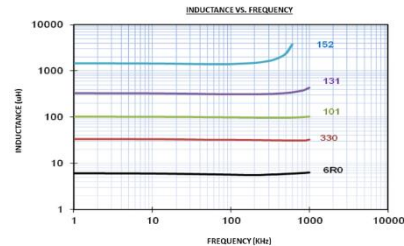
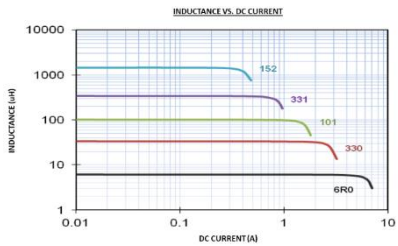
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	I sat. Typ. (A)	I rated Typ. (A)
CSS1355F-6R0	6R0	N	6.0	1	0.020	4.9	3.6
CSS1355F-100	100	M	10	1	0.028	4.3	3.4
CSS1355F-150	150	M	15	1	0.033	3.9	2.8
CSS1355F-220	220	M	22	1	0.043	3.4	2.3
CSS1355F-330	330	M	33	1	0.055	3.1	1.9
CSS1355F-470	470	M	47	1	0.079	2.5	1.6
CSS1355F-680	680	M	68	1	0.115	2.2	1.3
CSS1355F-101	101	M	100	1	0.153	1.8	1.1
CSS1355F-151	151	M	150	1	0.242	1.4	0.88
CSS1355F-221	221	M	220	1	0.330	1.2	0.72
CSS1355F-331	331	M	330	1	0.500	1	0.59
CSS1355F-471	471	M	470	1	0.640	0.88	0.49
CSS1355F-681	681	M	680	1	0.940	0.73	0.43
CSS1355F-102	102	M	1000	1	1.400	0.6	0.34
CSS1355F-152	152	M	1500	1	2.200	0.48	0.29

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS1355F	12.5 (0.492)	12.5 (0.492)	5.5 (0.217)	8.6 (0.339)	3.0 (0.118)	8.6 (0.339)	2.5 (0.098)	3.2 (0.126)
Tol.	±0.3 (0.012)	±0.3 (0.012)	±0.35 (0.014)	±0.3 (0.012)	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



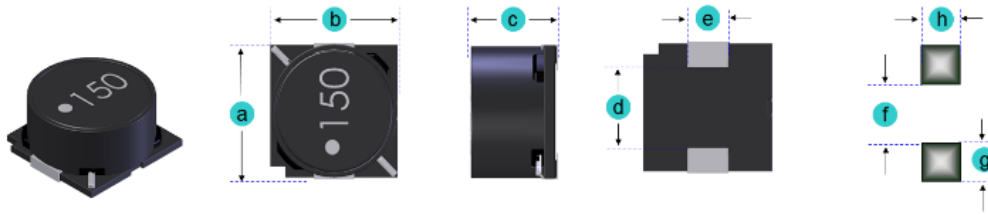
## SERIES: CSS1365F

### Electrical Specifications:

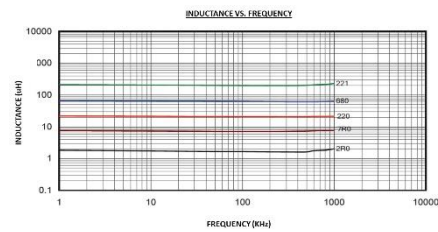
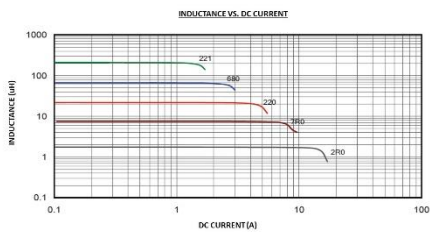
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	I sat. Typ. (A)	I rated Typ. (A)
CSS1365F-2R0_	2R0	N	2.0	1	0.015	10	6.2
CSS1365F-4R2_	4R2	N	4.2	1	0.019	7.3	5.5
CSS1365F-7R0_	7R0	N	7.0	1	0.023	5.7	5
CSS1365F-100_	100	M	10	1	0.026	5	4.8
CSS1365F-150_	150	M	15	1	0.031	4.4	4.2
CSS1365F-220_	220	M	22	1	0.040	3.8	3.5
CSS1365F-330_	330	M	33	1	0.058	3.4	2.8
CSS1365F-470_	470	M	47	1	0.076	2.8	2.4
CSS1365F-680_	680	M	68	1	0.104	2.4	2
CSS1365F-101_	101	M	100	1	0.163	1.9	1.6
CSS1365F-221_	221	M	220	1	0.328	1.2	1

### Dimensions: mm (Inch)

Series	a	b	c	d	e	f	g	h
CSS1365F	12.5 (0.492)	12.5 (0.492)	6.5 (0.256)	8.6 (0.339)	3.0 (0.118)	8.6 (0.339)	2.5 (0.098)	3.2 (0.126)
Tol.	±0.3 (0.012)	±0.3 (0.012)	±0.35 (0.014)	±0.3 (0.012)	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



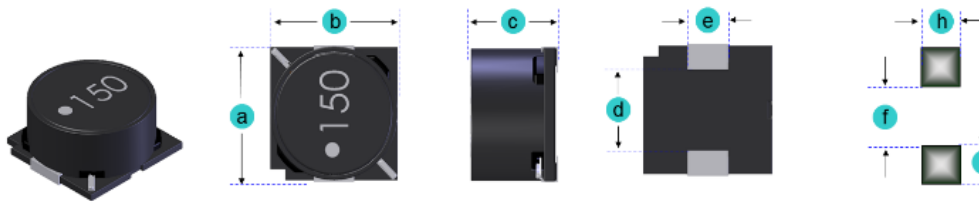
## SERIES: CSS1375F

### Electrical Specifications:

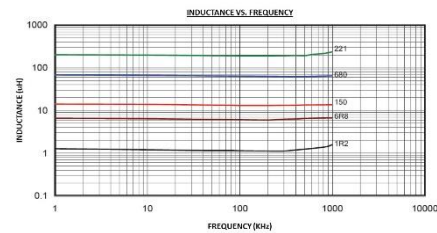
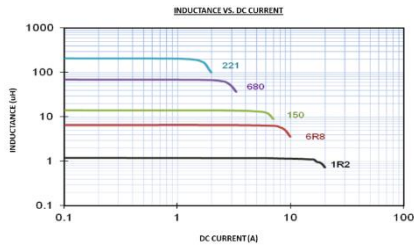
P/N	Marking	Tol.	Inductance (μH)	Test Freq. (KHz)	DCR Max. (Ω)	I sat. Typ. (A)	I rated Typ. (A)
CSS1375F-1R2_	1R2	N	1.2	1	0.010	13	8.2
CSS1375F-2R7_	2R7	N	2.7	1	0.013	10	7
CSS1375F-3R9_	3R9	N	3.9	1	0.014	9	6.7
CSS1375F-5R6_	5R6	N	5.6	1	0.015	7.8	6.3
CSS1375F-6R8_	6R8	N	6.8	1	0.017	7.2	5.9
CSS1375F-100_	100	M	10	1	0.020	5.5	5.4
CSS1375F-150_	150	M	15	1	0.030	5	4.7
CSS1375F-220_	220	M	22	1	0.038	4	4
CSS1375F-330_	330	M	33	1	0.057	3.4	3.2
CSS1375F-470_	470	M	47	1	0.068	3	2.7
CSS1375F-680_	680	M	68	1	0.099	2.4	2
CSS1375F-101_	101	M	100	1	0.158	1.9	1.9
CSS1375F-151_	151	M	150	1	0.220	1.6	1.5
CSS1375F-221_	221	M	220	1	0.310	1.3	1.3

### Dimensions: mm (Inch)

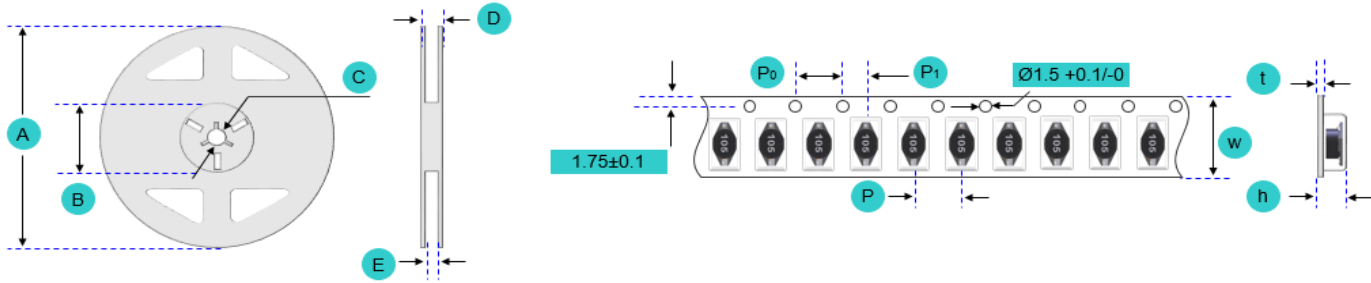
Series	a	b	c	d	e	f	g	h
CSS1375F	12.5 (0.492)	12.5 (0.492)	7.5 (0.295)	8.6 (0.339)	3.0 (0.118)	8.6 (0.339)	2.5 (0.098)	3.2 (0.126)
Tol.	±0.3 (0.012)	±0.3 (0.012)	±0.35 (0.014)	±0.3 (0.012)	±0.1 (0.004)	Typ.	Typ.	Typ.



### Characteristics Curve:



## Tape & Reel Specifications



Series P/N	Reel dimensions (mm)					Tape dimensions (mm)							Parts per reel		Quantity per	
	A	B	C	D	E	W	P	P0	P1	h	t	7"	13"	Box	Carton	
CSS0625F	340	100	13	22.5	16.5	16	12	4	2	3.00	0.35	---	1,000	2,000	6,000	
CSS0628F	340	100	13	22.5	16.5	16	12	4	2	3.10	0.35	---	1,000	2,000	6,000	
CSS0728F	340	100	13	22.5	16.5	16	12	4	2	3.10	0.35	---	1,000	2,000	6,000	
CSS0730F	340	100	13	22.5	16.5	16	12	4	2	3.30	0.35	---	1,000	2,000	6,000	
CSS0732F	340	100	13	22.5	16.5	16	12	4	2	3.50	0.35	---	1,000	2,000	6,000	
CSS0745F	340	100	13	22.5	16.5	16	12	4	2	4.80	0.35	---	1,000	2,000	6,000	
CSS1045F	340	100	13	30.5	24.5	24	16	4	2	4.80	0.40	---	500	500	4,000	
CSS1355F	340	100	13	30.4	24.5	24	16	4	2	6.10	0.40	---	650	650	5,200	
CSS1365F	340	100	13	30.4	24.5	24	20	4	2	7.10	0.40	---	450	450	3,600	
CSS1375F	340	100	13	30.4	24.5	24	20	4	2	8.10	0.40	---	400	400	3,200	

## SMD Solder Profile

