

SFM

SHIELDED SMD POWER INDUCTOR



1.Features

- Low Profile
- Magnetically shielded and low DC resistance.
- Suitable for reflow Soldering.
- Ideal for a variety of DC-DC converter inductor applications.

2.Application

- OA Equipment.
- Notebook PCs
- Portable Communication Equipment
- DC/DC Converters, etc

3.Inductance and rated current ranges

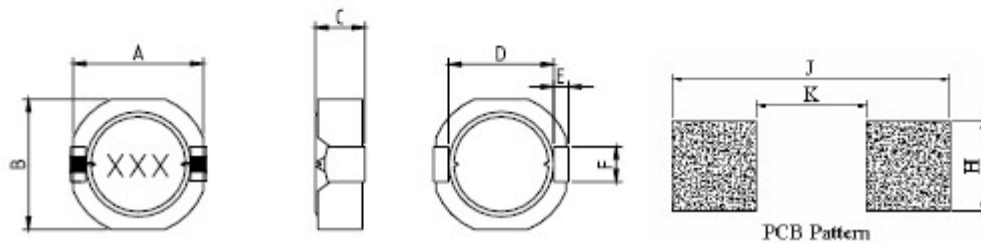
- SFM0610 1.0~390 μ H 2.30~0.11A
- SFM0615 1.0~1000 μ H 2.54~0.09A
- SFM0620 1.0~10000 μ H 3.25~0.022A
- SFM0625 1.0~1500 μ H 3.48~0.12A
- SFM0630 1.0~20000 μ H 3.59~0.035A
- SFM0635 1.0~470 μ H 4.50~0.22A

5. Product Identification

SFM 0610 M T 100
 (1) (2) (3) (4) (5)

- (1) Type: SMD Power Inductors
- (2) Dimensions (mm): 06 is 6.3mm square and 10 is about 1.3mm height.
- (3) Tolerance: N=30%, M=20%
- (4) Packaging style: T (Tape and Reel)
- (5) Inductance: 1R0=1.0μH, 470=47μH, 101 =100μH

6. Dimensions



Codes	A	B	C(Max)	D(Ref.)	E(Ref.)	F(Ref.)	H(Ref.)	J(Ref.)	K(Ref.)
SFM0610	6.3±0.3	6.0±0.3	1.3	4.8	2.2	0.6	2.5	7.0	4.5
SFM0615	6.3±0.3	6.0±0.3	1.8	4.8	2.2	0.6	2.5	7.0	4.5
SFM0620	6.3±0.3	6.0±0.3	2.0	4.8	2.2	0.6	2.5	7.0	4.5
SFM0625	6.3±0.3	6.0±0.3	2.5	4.8	2.2	0.6	2.5	7.0	4.5
SFM0630	6.3±0.3	6.0±0.3	3.0	4.8	2.2	0.6	2.5	7.0	4.5
SFM0635	6.3±0.3	6.0±0.3	3.5	4.8	2.2	0.6	2.5	7.0	4.5



7. Electrical Characteristics

● 0610 / 0615 / 0620 Type

Part No.	Tol.	L (uH)	DC Resistance (Ω) Max			Rated DC current (Amp) Max		
			0610	0615	0620	0610	0615	0620
1R0	N,M	1.0	0.051	0.037	0.016	2.30	2.54	3.25
1R2	N,M	1.2	0.063	-	-	2.10	-	-
1R5	N,M	1.5	0.067	0.050	0.021	1.92	2.41	2.65
1R8	N,M	1.8	0.081	-	-	1.83	-	-
2R0	N,M	2.0	0.090	0.065	0.040	1.75	2.17	2.32
2R2	N,M	2.2	0.102	0.071	0.042	1.68	1.98	2.10
2R5	N,M	2.5	0.107	-	-	1.65	-	-
2R7	N,M	2.7	-	0.086	-	-	1.85	-
3R0	N,M	3.0	0.136	0.090	-	1.58	1.77	-
3R3	N,M	3.3	0.153	0.105	0.056	1.47	1.68	1.96
3R5	N,M	3.5	-	0.112	-	-	1.61	-
3R9	N,M	3.9	0.173	0.124	-	1.42	1.47	-
4R0	N,M	4.0	0.186	-	-	1.32	-	-
4R7	N,M	4.7	0.190	0.144	0.068	1.28	1.39	1.45
5R6	N,M	5.6	0.245	0.162	-	1.15	1.20	-
6R2	N,M	6.2	-	-	0.088	-	-	1.40
6R8	N,M	6.8	0.270	0.182	0.098	1.00	1.16	1.37
8R2	N,M	8.2	0.340	0.210	0.107	0.96	1.00	1.19
100	N,M	10	0.400	0.280	0.137	0.88	0.92	1.05
120	N,M	12	0.490	0.296	0.153	0.80	0.87	0.97
150	N,M	15	0.600	0.411	0.180	0.73	0.76	0.94
180	N,M	18	0.700	0.532	0.238	0.65	0.70	0.67
220	N,M	22	0.800	0.593	0.280	0.55	0.65	0.59
270	N,M	27	1.000	0.770	0.378	0.53	0.58	0.55
330	N,M	33	1.300	0.960	0.500	0.48	0.51	0.52
390	N,M	39	1.560	1.036	0.588	0.40	0.48	0.50
470	N,M	47	1.970	1.290	0.710	0.37	0.44	0.47
560	N,M	56	2.260	1.510	-	0.32	0.40	-
680	N,M	68	2.960	1.940	-	0.29	0.37	-
820	N,M	82	3.650	2.320	-	0.27	0.33	-
101	N,M	100	4.090	2.690	1.450	0.26	0.31	0.36
121	N,M	120	5.000	3.280	1.640	0.22	0.28	0.30
151	N,M	150	7.240	4.300	-	0.20	0.25	-
181	N,M	180	7.960	5.410	-	0.19	0.22	-
221	N,M	220	9.930	6.270	-	0.18	0.20	-
271	N,M	270	11.50	7.960	-	0.14	0.18	-
331	N,M	330	13.86	8.890	-	0.13	0.16	-
391	N,M	390	15.58	11.86	-	0.11	0.15	-
471	N,M	470	-	13.35	7.600	-	0.14	0.18
561	N,M	560	-	16.09	-	-	0.12	-
681	N,M	680	-	18.48	-	-	0.11	-
821	N,M	820	-	24.88	12.40	-	0.10	0.15
102	N,M	1000	-	28.09	-	-	0.09	-
392	N,M	3900	-	-	43.64	-	-	0.055
472	N,M	4700	-	-	49.75	-	-	0.038
562	N,M	5600	-	-	62.35	-	-	0.035
682	N,M	6800	-	-	59.45	-	-	0.033
103	N,M	10000	-	-	160.17	-	-	0.022

● Measuring Freq:

1.0~8.2uH @100KHz 0.25V ;10~10000uH @1KHz 0.25V



● 0625 / 0630 / 0635 Type

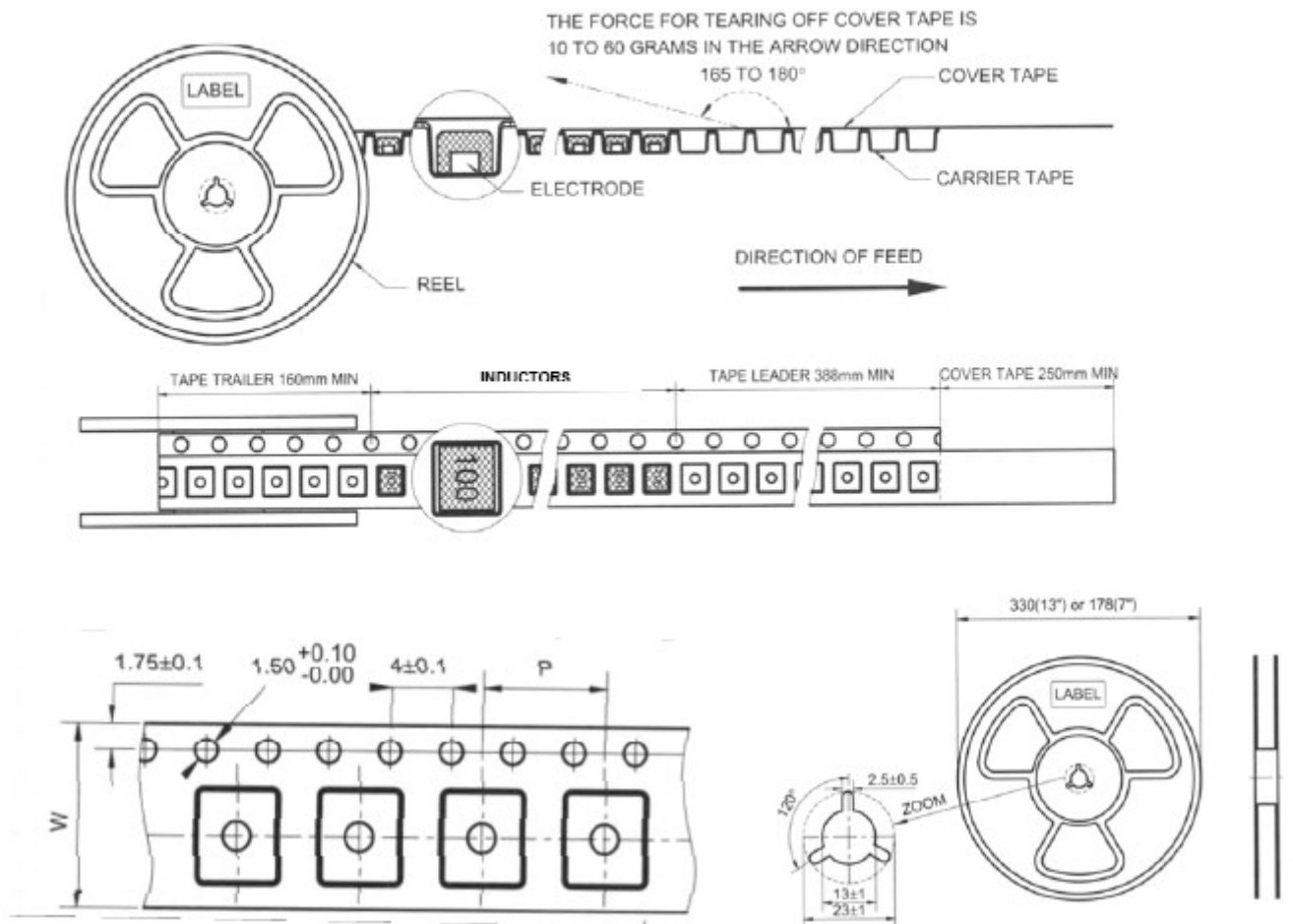
Part No.	Tol.	L (uH)	DC Resistance (Ω) Max			Rated DC current (Amp) Max		
			0625	0630	0635	0625	0630	0635
1R0	N.M	1.0	0.015	0.015	0.009	3.48	3.59	4.50
1R2	N.M	1.2	-	0.016	0.010	-	3.30	3.85
1R5	N.M	1.5	0.020	0.018	-	2.83	2.93	-
2R0	N.M	2.0	0.024	0.022	0.011	2.44	2.42	2.73
2R2	N.M	2.2	0.033	0.025	0.015	2.20	2.15	2.65
2R7	N.M	2.7	-	-	0.016	-	-	2.45
3R3	N.M	3.3	0.034	0.029	0.018	1.89	1.89	2.20
3R6	N.M	3.6	-	0.035	-	-	1.72	-
3R9	N.M	3.9	-	-	0.021	-	-	2.00
4R2	N.M	4.2	-	0.036	-	-	1.70	-
4R3	N.M	4.3	0.044	0.038	-	1.65	1.66	-
4R7	N.M	4.7	0.059	0.044	0.028	1.50	1.60	1.95
6R2	N.M	6.2	0.060	0.045	0.034	1.37	1.45	1.87
6R8	N.M	6.8	-	-	0.041	-	-	1.84
7R7	N.M	7.7	-	0.067	-	-	1.30	-
8R2	N.M	8.2	-	-	0.045	-	-	1.73
100	N.M	10	0.090	0.069	0.049	1.07	1.14	1.64
120	N.M	12	0.105	0.073	0.058	0.97	1.04	1.47
150	N.M	15	0.122	0.087	0.082	0.87	0.93	1.27
180	N.M	18	0.154	0.104	0.085	0.79	0.85	1.19
220	N.M	22	0.182	0.133	0.095	0.71	0.77	1.02
270	N.M	27	0.238	0.168	0.112	0.64	0.70	0.98
330	N.M	33	0.273	0.196	0.133	0.58	0.63	0.80
390	N.M	39	0.343	0.210	0.160	0.53	0.58	0.77
470	N.M	47	0.406	0.259	0.186	0.48	0.53	0.70
560	N.M	56	0.483	0.308	0.248	0.44	0.48	0.63
680	N.M	68	0.560	0.378	0.290	0.40	0.44	0.52
820	N.M	82	0.651	0.462	0.360	0.36	0.40	0.47
101	N.M	100	0.910	0.581	0.420	0.33	0.36	0.42
121	N.M	120	0.994	0.527	0.490	0.30	0.32	0.39
151	N.M	150	1.251	0.700	0.590	0.28	0.31	0.35
181	N.M	180	1.652	0.781	0.700	0.26	0.29	0.32
221	N.M	220	2.126	1.043	0.900	0.24	0.27	0.29
271	N.M	270	2.391	1.321	1.110	0.22	0.25	0.27
331	N.M	330	3.183	1.789	1.380	0.20	0.23	0.24
391	N.M	390	3.510	1.995	1.640	0.19	0.21	0.23
471	N.M	470	3.950	2.286	2.090	0.19	0.21	0.22
561	N.M	560	5.258	2.940	-	0.18	0.19	-
681	N.M	680	5.866	3.295	-	0.18	0.19	-
102	N.M	1000	11.65	-	-	0.14	-	-
152	N.M	1500	12.65	-	-	0.12	-	-
203	N.M	20000	-	247.5	-	-	0.035	-

● Measuring Freq:

1.0~8.2uH @100KHz 0.25V ; 10~10000uH @1KHz 0.25V ; 20000uH @100KHz 0.25V

8. Tape and Reel Specifications

Dimensions are in mm



Series	Tape size		Parts Per Reel
	W	P	13"
SFM0610	16	12	3500
SFM0615	16	12	3000
SFM0620	16	12	3000
SFM0625	16	12	2500
SFM0630	16	12	2500
SFM0635	16	12	2000

9. SMT Power Inductor Environmental Specifications

General

Items	Specifications
1. Shelf Storage conditions	Temperature range: 25±3°C; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.
2. Storage temperature range	Temperature range: -40°C to +125°C.
3. Operating temperature range	Temperature range: -25°C to +105°C.

Environmental test

Test Items	Specifications	Test Conditions / Test Methods
1. High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$ $\Delta L/L \leq 30\%$	Temperature 85±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.
2. Low temperature Storage test		Temperature -25±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.
3. Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours, apply rated current, Tested after 1hour at room temperature.
4. Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
1. Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead plating: Dip pads in flux then dip in solder pot (63Sn/37Pb solder) at 230±5°C for 5 seconds. Product with Lead-free terminal: Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3±0.5 seconds.
2. Heat endurance of Reflow soldering	No case deformation or change in appearance. $\Delta L/L \leq 10\%$ $\Delta L/L \leq 30\%$	Refer to the reflow soldering condition. Go through 3 times.
3. Vibration test		Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
4. Shock resistance		Drop down with 981m/s ² (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

The condition of reflow (recommendation):

Lead-free

