PRODUCT IDENTIFICATION

1. Scope

This specification applies to FXL series of wire wound molded SMD power Inductors

2. Product Description and Identification (Part Number)

Description

Wire Wound Molded SMD Type Power Inductor, FXL, XX μH± X% @XXX KHz/XXXV, XXXmΩ, XXXm A.

PRODUCT IDENTIFICATION

FXL XXXX - XXX - M
① ② ③ ④

①	Type
FXL	Wire wound molded SMD power Inductors

②	External Dimensions (mm)
252010~1360	

③	Nominal Inductance
Example	Nominal Value
1R0	1.0μH
100	10μH
101	100μH

④	Inductance Tolerance
M	±20%
N	±30%

ELECTRICAL CHARACTERISTICS

(1) Operating temperature range (Including self-heating): -55℃ ~+125℃.

(2) Storage temperature and humidity range (product with tapping): -10 ℃~+40℃ , RH 70% Max.

FEATURES

- Halogen Free
- 125°C maximum total temperature operation
- Powder iron core material
- Magnetically shielded, low EMI
- High current carrying capacity, Low core losses
- Frequency range up to 5MHz
- RoHS compliant

特征

- 無鹵素
- 125℃最高總温度運行
- 鐵合金材料
- 磁屏蔽，低電磁干擾
- 高載流能力，低鐵心損耗
- 頻率範圍高達5兆赫
- 符合RoHS標準的

APPLICATIONS

- Voltage Regulator Module (VRM)
- Multi-phase regulators
- Point-of-load modules
- Smart phone
- SSD
- Notebook
- Battery power systems
- Graphics cards
- Data networking and storage systems
- Automotive electronics

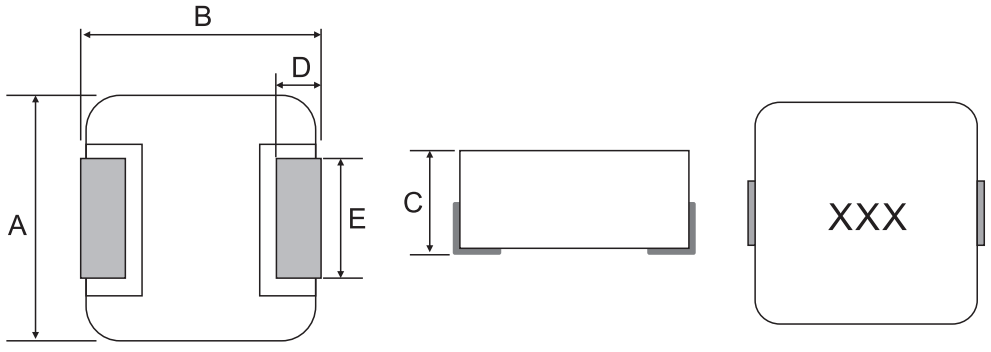
用途

- 電壓調節器模塊（VRM）
- 多相調節器
- 電源模塊
- 智能手機
- 固態硬盤
- 筆記本電腦
- 電池供電系統
- 顯卡
- 數據網絡和存儲系統
- 汽車電子

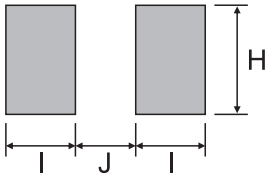
PRODUCT IDENTIFICATION

Shape and Dimensions

(1) Dimensions and recommended PCB pattern for reflow soldering: See Fig.4-1 and Table 4-1.



Recommended Land Pattern



Construction (Shield)

Unit: mm

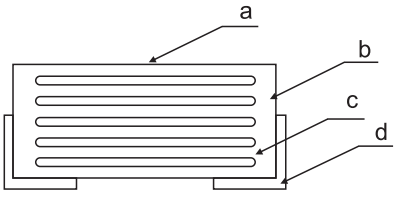
Series	A	B	C	D	E	I Typ.	J Typ.	H Typ.
FXL201610	1.6±0.2	2.0±0.2	1.0MAX	0.5±0.2	1.4±0.2	2.0	0.8	0.8
FXL252010	2.0±0.2	2.5±0.2	1.0MAX	0.6±0.2	1.8±0.2	2.2	1.0	0.9
FXL252012	2.0±0.2	2.5±0.2	1.2MAX	0.6±0.2	1.8±0.2	2.2	1.0	0.9
FXL0412	4.2±0.25	4.4±0.35	1.0±0.2	0.8±0.3	2.0±0.3	1.5	2.2	2.5
FXL0420	4.2±0.25	4.4±0.35	1.8±0.2	0.8±0.3	2.0±0.3	1.5	2.2	2.5
FXL0518	5.2±0.2	5.4±0.3	1.6±0.2	1.20±0.2	2.2±0.3	1.9	2.2	2.5
FXL0530	5.2±0.2	5.4±0.3	2.8±0.2	1.20±0.2	2.2±0.3	1.9	2.2	2.5
FXL0618	6.6±0.2	7.0±0.3	1.6±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
FXL0624	6.6±0.2	7.0±0.3	2.2±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
FXL0630	6.6±0.2	7.0±0.3	2.8±0.2	1.60±0.3	3.0±0.3	2.35	3.7	3.5
FXL1040	10.0±0.3	11.5Max	3.8±0.2	2.0±0.5	3.0±0.5	4.1	5.4	4.1
FXL1350	12.6±0.3	13.45±0.35	4.8±0.2	2.0±0.5	E	5	8	14.5
FXL1360	12.6±0.3	13.45±0.35	5.8±0.2	2.0±0.5	5.0±0.5	5	8	14.5

PRODUCT IDENTIFICATION

Remarks:

Code	Dimensions	
	R36/R50/R68	3R3/100/150
	1R0/1R5/2R2	220/330/470
E	3.85±0.5	5.0±0.5

Structure and Components: See Table 4-2



[Table 4-2]

Symbol	Components	Material
a	MARKING	Ink(black)
b	CORE	Alloy Sponge Powder
c	WIRE	Polyurethane copper wire
d	Terminal	Copper plated with Sn

SPECIFICATIONS

FXL201610 Series

Part No.	OCL(μH) ±20%	FLL min.2 (μH)	DCR (mΩ) @ 20°C		Irms3 Typ.(Amps)	Isat4 @ 25°C Typ
			TYP.	MAX.		
FXL201610-R24-M	0.24	0.120	19.00	25.0	4.7	4.5
FXL201610-R47-M	0.47	0.235	32.00	38.0	3.5	3.1
FXL201610-1R0-M	1.00	0.500	75.00	83.0	2.3	2.1
FXL201610-2R2-M	2.20	1.100	170.0	181.0	1.5	1.3

FXL252010 Series

Part No.	OCL(μH) ±20%	FLL min.2 (μH)	DCR (mΩ) @ 20°C		Irms3 Typ.(Amps)	Isat4 @ 25°C Typ
			TYP.	MAX.		
FXL252010-R33-M	0.33	0.231	17.0	23.0	6.1	4.8
FXL252010-R47-M	0.47	0.329	27.0	34.0	5.1	4.2
FXL252010-1R0-M	1.0	0.70	47.0	54.0	3.9	2.8
FXL252010-2R2-M	2.2	1.54	90.0	110.0	2.7	2.1

FXL252012 Series

Part No.	OCL(μH) ±20%	FLL min.2 (μH)	DCR (mΩ) @ 20°C		Irms3 Typ.(Amps)	Isat4 @ 25°C Typ
			TYP.	MAX.		
FXL252012-R33-M	0.33	0.165	14	17	7.0	4.3
FXL252012-R47-M	0.47	0.235	20	25	6.3	3.8
FXL252012-1R0-M	1.0	0.500	43	53	4.1	3.0
FXL252012-2R2-M	2.2	1.100	84	98	3.0	1.8

SPECIFICATIONS

FXL0412 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0(μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20%,100 Khz,1V	TYP.	MAX.	TYP.	TYP.
FXL0412-R15-M	0.15	8.00	9.00	7.50	15.0
FXL0412-R22-M	0.22	9.50	11.0	7.00	11.0
FXL0412-R33-M	0.33	17.0	19.0	6.50	8.4
FXL0412-R47-M	0.47	19.0	21.0	6.00	6.8
FXL0412-R68-M	0.68	32.0	36.0	4.70	6.0
FXL0412-1R0-M	1.00	43.0	47.0	4.50	5.5
FXL0412-1R5-M	1.50	68.0	75.0	3.25	4.0
FXL0412-2R2-M	2.20	79.4	83.5	2.75	3.5
FXL0412-4R7-M	4.70	175.0	195.0	1.80	2.8

FXL0420 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 Khz, 1V	TYP.	MAX.	TYP.	TYP.
FXL0420-R10-M	0.10	3.50	4.00	13.0	22.0
FXL0420-R22-M	0.22	6.00	6.60	9.50	12.5
FXL0420-R33-M	0.33	9.00	11.0	10.0	12.0
FXL0420-R47-M	0.47	12.5	14.0	7.50	9.50
FXL0420-R56-M	0.56	14.0	16.0	7.00	10.0
FXL0420-R68-M	0.68	16.0	18.0	7.00	9.00
FXL0420-1R0-M	1.00	24.0	27.0	6.00	7.00
FXL0420-1R2-M	1.20	24.0	27.0	6.00	7.00
FXL0420-1R5-M	1.50	38.0	46.0	5.00	6.00
FXL0420-2R2-M	2.20	52.0	58.0	4.50	5.00
FXL0420-3R3-M	3.30	74.0	87.0	3.30	4.00
FXL0420-4R7-M	4.70	92.0	105.0	2.80	3.00
FXL0420-6R8-M	6.80	160.0	175.0	2.40	2.50
FXL0420-100-M	10.0	256.0	282.0	1.60	2.20

SPECIFICATIONS

FXL0518 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20%,100 KHz,1V	TYP.	MAX.	TYP.	TYP.
FXL0518-R47-M	0.47	7.7	9.0	10.5	15.5
FXL0518-R56-M	0.56	8.0	10.0	9.5	15.0
FXL0518-1R0-M	1.0	15.0	17.0	8.0	9.0
FXL0518-1R5-M	1.5	21.0	26.0	7.5	9.0
FXL0518-2R2-M	2.2	30.0	35.0	5.0	6.5
FXL0518-3R3-M	3.3	52.0	58.0	4.5	5.0
FXL0518-4R7-M	4.7	78.0	85.0	3.5	4.0
FXL0518-6R8-M	6.8	107.0	120.0	2.8	3.4
FXL0518-100-M	10.0	140.0	155.0	2.5	3.0

FXL0530 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL0530-R10-M	0.10	2.40	3.0	25.0	33.0
FXL0530-R20-M	0.20	3.50	3.9	14.0	14.5
FXL0530-R47-M	0.47	7.40	8.5	11.0	12.0
FXL0530-R68-M	0.68	11.0	12.0	9.00	11.5
FXL0530-1R0-M	1.00	13.0	14.0	8.50	11.0
FXL0530-1R2-M	1.20	15.0	16.0	8.50	11.0
FXL0530-1R5-M	1.50	20.0	25.0	8.20	8.50
FXL0530-2R2-M	2.20	25.0	29.0	7.00	7.50
FXL0530-3R3-M	3.30	32.0	38.0	5.50	6.00
FXL0530-4R7-M	4.70	50.0	60.0	4.50	5.00
FXL0530-6R8-M	6.80	75.0	90.0	3.50	4.00
FXL0530-100-M	10.0	110.0	125.0	3.20	3.50

SPECIFICATIONS

FXL0618 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL0618-R47-M	0.47	8.00	8.40	11.5	18.0
FXL0618-R68-M	0.68	10.0	12.0	9.5	17.0
FXL0618-1R0-M	1.00	13.0	16.0	8.5	14.0
FXL0618-1R5-M	1.50	20.0	26.0	8.0	12.0
FXL0618-2R2-M	2.20	28.0	35.0	7.0	8.00
FXL0618-3R3-M	3.30	43.0	50.0	4.5	6.50
FXL0618-4R7-M	4.70	56.0	62.0	4.0	5.00
FXL0618-6R8-M	6.80	101.0	110.0	3.0	4.50

FXL0624 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL0624-R22-M	0.22	2. 50	3. 00	21. 0	34.0
FXL0624-R33-M	0.33	3. 50	4. 10	18. 0	24.5
FXL0624-R47-M	0.47	4. 50	5. 10	15. 0	22.0
FXL0624-R56-M	0.56	5. 50	6. 50	13. 0	17.0
FXL0624-R68-M	0.68	6. 20	7. 00	12. 0	16.0
FXL0624-1R0-M	1.00	11. 0	13. 5	9. 00	16.0
FXL0624-1R5-M	1.50	17. 0	20. 0	9. 00	15.0
FXL0624-2R2-M	2.20	23. 0	28. 0	7. 00	14.0
FXL0624-3R3-M	3.30	31. 0	39. 0	5. 50	10.0
FXL0624-4R7-M	4.70	41. 0	50. 0	5. 00	7.50
FXL0624-6R8-M	6.80	57. 0	70. 0	4. 00	6.00
FXL0624-100-M	10.0	92. 0	101. 0	3. 10	4.00
FXL0624-150-M	15.0	145. 0	160. 0	2. 50	3.30

SPECIFICATIONS

FXL0630 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL0630-R22-M	0.22	2.50	3.00	24.0	34.0
FXL0630-R24-M	0.24	2.60	3.10	23.0	26.0
FXL0630-R33-M	0.33	3.00	3.50	21.0	25.0
FXL0630-R47-M	0.47	3.50	4.10	18.0	20.0
FXL0630-R56-M	0.56	3.90	4.50	16.5	18.0
FXL0630-R68-M	0.68	4.80	5.30	16.0	17.0
FXL0630-R82-M	0.82	5.40	6.00	14.0	16.0
FXL0630-1R0-M	1.00	6.70	7.40	12.0	15.0
FXL0630-1R5-M	1.50	10.6	12.1	12.0	14.0
FXL0630-2R2-M	2.20	13.5	15.0	9.50	10.0
FXL0630-3R3-M	3.30	18.0	22.0	8.50	9.50
FXL0630-4R7-M	4.70	28.0	33.0	6.00	6.50
FXL0630-6R8-M	6.80	42.5	48.0	5.00	6.00
FXL0630-8R2-M	8.20	54.0	60.0	5.00	6.00
FXL0630-100-M	10.0	62.0	67.0	4.50	5.50
FXL0630-150-M	15.0	104.0	115.0	3.00	4.50
FXL0630-220-M	22.0	180.0	200.0	2.30	3.00
FXL0630-330-M	33.0	280.0	310.0	2.00	2.50

SPECIFICATIONS

FXL1040 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL1040-R15-M	0.15	0.50	0.65	45.0	75.0
FXL1040-R22-M	0.22	0.90	1.00	35.0	60.0
FXL1040-R30-M	0.30	0.95	1.10	35.0	50.0
FXL1040-R36-M	0.36	1.05	1.20	30.0	50.0
FXL1040-R47-M	0.47	1.50	1.70	30.0	40.0
FXL1040-R56-M	0.56	1.60	1.80	25.0	33.0
FXL1040-R68-M	0.68	2.10	2.40	23.0	30.0
FXL1040-R80-M	0.80	2.60	2.70	23.0	29.0
FXL1040-1R0-M	1.00	3.00	3.30	19.0	28.0
FXL1040-1R5-M	1.50	3.80	4.20	16.0	26.0
FXL1040-2R2-M	2.20	6.00	7.00	12.0	18.0
FXL1040-3R3-M	3.30	10.0	11.8	11.0	16.0
FXL1040-4R7-M	4.70	17.0	20.0	9.00	15.0
FXL1040-6R8-M	6.80	22.0	25.0	8.50	12.0
FXL1040-8R2-M	8.20	25.0	27.0	8.00	9.00
FXL1040-100-M	10.0	27.0	30.0	7.80	8.50
FXL1040-150-M	15.0	40.0	45.0	6.50	7.00
FXL1040-220-M	22.0	58.0	66.0	5.00	5.50
FXL1040-330-M	33.0	85.0	92.0	4.40	5.00
FXL1040-470-M	47.0	130.0	145.0	3.30	3.50
FXL1040-680-M	68.0	178.0	195.0	2.50	3.00

SPECIFICATIONS

FXL1350 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL1350-R22-M	0.22	0.50	0.70	50.0	75.0
FXL1350-R36-M	0.36	0.74	0.85	42.0	50.0
FXL1330-R50-M	0.50	1.10	1.15	38.0	48.0
FXL1350-R68-M	0.68	1.35	1.55	33.0	46.0
FXL1350-R82-M	0.82	1.45	1.67	30.0	39.0
FXL1350-1R0-M	1.00	1.90	2.20	26.0	35.0
FXL1350-1R5-M	1.50	2.80	3.20	23.0	33.0
FXL1350-2R2-M	2.20	4.00	5.00	15.0	24.0
FXL1350-3R3-M	3.30	5.90	7.00	14.0	22.0
FXL1350-4R7-M	4.70	8.20	9.00	13.0	21.0
FXL1350-6R8-M	6.80	14.5	18.0	12.0	16.0
FXL1350-100-M	10.0	19.0	22.0	9.00	12.0
FXL1350-220-M	22.0	51.0	58.0	4.50	6.50
FXL1350-330-M	33.0	75.0	84.0	3.50	6.00
FXL1350-470-M	47.0	116.0	130.0	3.00	5.00

SPECIFICATIONS

FXL1360 Series

Part No.	Inductance	DC Resistance		Heating Rating Current	Saturation Current
	L0 (μH)	DCR (mΩ)		Idc (A)	Isat (A)
	±20 %, 100 KHz, 1V	TYP.	MAX.	TYP.	TYP.
FXL1360-4R7-M	4.70	8.50	9.00	20.0	24.0
FXL1360-5R6-M	5.60	9.50	11.0	18.0	22.5
FXL1360-8R2-M	8.20	13.6	16.0	11.0	13.5
FXL1360-100-M	10.0	18.0	20.7	10.0	12.5
FXL1360-120-M	12.0	20.0	23.0	7.00	10.0
FXL1360-150-M	15.0	25.0	29.0	6.00	9.00
FXL1360-180-M	18.0	30.0	35.0	5.00	8.00
FXL1360-220-M	22.0	34.0	39.5	5.00	7.50
FXL1360-270-M	27.0	49.0	56.0	4.00	6.50
FXL1360-330-M	33.0	65.0	75.0	4.00	6.00
FXL1360-470-M	47.0	80.0	90.0	3.50	5.50
FXL1360-680-M	68.0	120	140	3.00	4.50
FXL1360-101-M	100.0	180	200	2.50	3.50
FXL1360-121-M	120.0	210	235	2.30	3.20
FXL1360-151-M	150.0	300	350	2.00	2.70