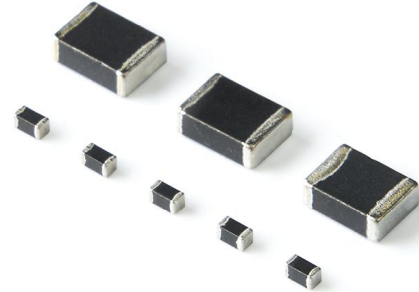


# SPECIFICATION OF FLM□ SERIES

## APPLICATIONS

- EMI suppression for various electric equipment by the addition of impedance to the circuit.  
Suitable for all computer related products.
- To compose different LC filter with capacitor to modify signal wave-form , such as TV out in a notebook computer or audio out in a CD-ROM circuit.



## ORDERING CODE

**FLM□ - 160808 - R47 K T**  
 (1) (2) (3) (4)(5)

### (1) PRODUCT TYPE CODE

FLM : Ferrite Chip Inductor Multilayer

□ : RoHS Code

### (2) SIZE CODE

### (3) INDUCTANCE CODE

Example : 47N=0.047μH

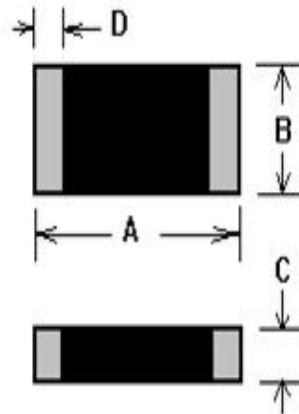
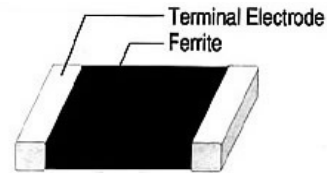
R47=0.47μH

4R7=4.7μH

### (4) INDUCTANCE TOLERANCE

( K : ±10%, M : ±20%)

### (5) TAPING



## SHAPE & DIMENSIONS

UNIT:mm (inch)

SIZE CODE	A	B	C	D
FLM□-160808 (0603)	1.60±0.20 (0.063±0.008)	0.80±0.20 (0.031±0.008)	0.80±0.20 (0.031±0.008)	0.30±0.20 (0.012±0.008)
FLM□-201209 (0805)	2.00±0.20 (0.079±0.008)	1.20±0.20 (0.047±0.008)	0.90±0.20 (0.035±0.008)	0.50±0.30 (0.020±0.012)
FLM□-201212 (0805)	2.00±0.20 (0.079±0.008)	1.20±0.20 (0.047±0.008)	1.20±0.20 (0.047±0.008)	0.50±0.30 (0.020±0.012)
FLM□-321611 (1206)	3.20±0.20 (0.126±0.008)	1.60±0.20 (0.063±0.008)	1.10±0.20 (0.043±0.008)	0.50±0.30 (0.020±0.012)

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# MULTILAYER CHIP INDUCTORS → FLM□-160808 SERIES

## ELECTRICAL CHARACTERISTICS

ORDERING CODE	L ( $\mu$ H)	Tolerance ( $\pm$ %)	Q (Min)	Test Frequency L/Q(MHz)	Self Resonant Frequency (MHz)TYP	DC Resistance ( $\Omega$ )max	IDC (mA)max
FLM□-160808-47N□T	0.047	10 / 20	10	50	260	0.30	50
FLM□-160808-68N□T	0.068	10 / 20	10	50	250	0.30	50
FLM□-160808-82N□T	0.082	10 / 20	10	50	245	0.30	50
FLM□-160808-R10□T	0.10	10 / 20	15	25	240	0.50	50
FLM□-160808-R12□T	0.12	10 / 20	15	25	205	0.50	50
FLM□-160808-R15□T	0.15	10 / 20	15	25	180	0.60	50
FLM□-160808-R18□T	0.18	10 / 20	15	25	165	0.60	50
FLM□-160808-R22□T	0.22	10 / 20	15	25	150	0.80	50
FLM□-160808-R27□T	0.27	10 / 20	15	25	136	0.80	50
FLM□-160808-R33□T	0.33	10 / 20	15	25	125	0.85	35
FLM□-160808-R39□T	0.39	10 / 20	15	25	110	1.00	35
FLM□-160808-R47□T	0.47	10 / 20	15	25	105	1.35	35
FLM□-160808-R56□T	0.56	10 / 20	15	25	95	1.55	35
FLM□-160808-R68□T	0.68	10 / 20	15	25	90	1.70	35
FLM□-160808-R82□T	0.82	10 / 20	15	25	85	2.10	35
FLM□-160808-1R0□T	1.0	10 / 20	35	10	75	0.60	25
FLM□-160808-1R2□T	1.2	10 / 20	35	10	65	0.80	25
FLM□-160808-1R5□T	1.5	10 / 20	35	10	60	0.80	25
FLM□-160808-1R8□T	1.8	10 / 20	35	10	55	0.95	25
FLM□-160808-2R2□T	2.2	10 / 20	35	10	50	1.15	15
FLM□-160808-2R7□T	2.7	10 / 20	35	10	45	1.35	15
FLM□-160808-3R3□T	3.3	10 / 20	35	10	40	1.55	15
FLM□-160808-3R9□T	3.9	10 / 20	35	10	35	1.70	15
FLM□-160808-4R7□T	4.7	10 / 20	35	10	33	2.10	15

1. 47N means 47nH or 0.047uH.

2. 47N□, □ Means the inductance tolerance, K=±10%, M=±20%

1. 47N means 47nH or 0.047uH.

2. 47N□, □ Means the inductance tolerance, K=±10%, M=±20%

3.IDC:Based on Temperature increase 40°C

4.Operating temperature range : -55 to +125°C (including self-heating)

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# MULTILAYER CHIP INDUCTORS → FLM□-201209 SERIES

## ELECTRICAL CHARACTERISTICS

ORDERING CODE	L (μH)	Tolerance (±%)	Q (Min)	Test Frequency L/Q(MHz)	Self Resonant Frequency (MHz)TYP	DC Resistance (Ω)max	IDC (mA)max
FLM□-201209-47N□T	0.047	10 / 20	20	50	320	0.20	300
FLM□-201209-68N□T	0.068	10 / 20	20	50	280	0.20	300
FLM□-201209-82N□T	0.082	10 / 20	20	50	255	0.20	300
FLM□-201209-R10□T	0.10	10 / 20	30	25	235	0.30	250
FLM□-201209-R12□T	0.12	10 / 20	30	25	220	0.30	250
FLM□-201209-R15□T	0.15	10 / 20	30	25	200	0.40	250
FLM□-201209-R18□T	0.18	10 / 20	30	25	185	0.40	250
FLM□-201209-R22□T	0.22	10 / 20	30	25	170	0.50	250
FLM□-201209-R27□T	0.27	10 / 20	30	25	150	0.50	250
FLM□-201209-R33□T	0.33	10 / 20	30	25	145	0.55	250
FLM□-201209-R39□T	0.39	10 / 20	30	25	135	0.65	200
FLM□-201209-R47□T	0.47	10 / 20	30	25	125	0.65	200
FLM□-201209-R56□T	0.56	10 / 20	30	25	115	0.75	150
FLM□-201209-R68□T	0.68	10 / 20	30	25	105	0.80	150
FLM□-201209-R82□T	0.82	10 / 20	30	25	100	1.00	150
FLM□-201209-1R0□T	1.0	10 / 20	40	10	75	0.40	50
FLM□-201209-1R2□T	1.2	10 / 20	40	10	65	0.50	50
FLM□-201209-1R5□T	1.5	10 / 20	40	10	60	0.50	50
FLM□-201209-1R8□T	1.8	10 / 20	40	10	55	0.60	50
FLM□-201209-2R2□T	2.2	10 / 20	40	10	50	0.65	30
FLM□-201209-2R7□T	2.7	10 / 20	40	10	45	0.75	30
FLM□-201209-3R3□T	3.3	10 / 20	40	10	41	0.80	30
FLM□-201209-3R9□T	3.9	10 / 20	40	10	38	0.90	30
FLM□-201209-4R7□T	4.7	10 / 20	40	10	35	1.00	30

1. 47N means 47nH or 0.047uH.
2. 47N□, □ Means the inductance tolerance, K=±10%, M=±20%
- 3.IDC:Based on Temperature increase 40°C
- 4.Operating temperature range : -55 to +125°C (including self-heating)

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# MULTILAYER CHIP INDUCTORS → FLM□-201212 SERIES

## ELECTRICAL CHARACTERISTICS

ORDERING CODE	L ( $\mu$ H)	Tolerance ( $\pm$ %)	Q (Min)	Test Frequency L/Q(MHz)	Self Resonant Frequency (MHz)TYP	DC Resistance ( $\Omega$ )max	IDC (mA)max
FLM□-201212-5R6□T	5.6	10 / 20	30	4	32	0.90	15
FLM□-201212-6R8□T	6.8	10 / 20	30	4	29	1.00	15
FLM□-201212-8R2□T	8.2	10 / 20	30	4	26	1.10	15
FLM□-201212-100□T	10	10 / 20	30	2	24	1.15	15

1. 47N means 47nH or 0.047 $\mu$ H.
2. 47N□, □ Means the inductance tolerance, K= $\pm$ 10%, M= $\pm$ 20%
- 3.IDC:Based on Temperature increase 40°C
- 4.Operating temperature range : -55 to +125°C (including self-heating)

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# MULTILAYER CHIP INDUCTORS → FLM□-321611 SERIES

## ELECTRICAL CHARACTERISTICS

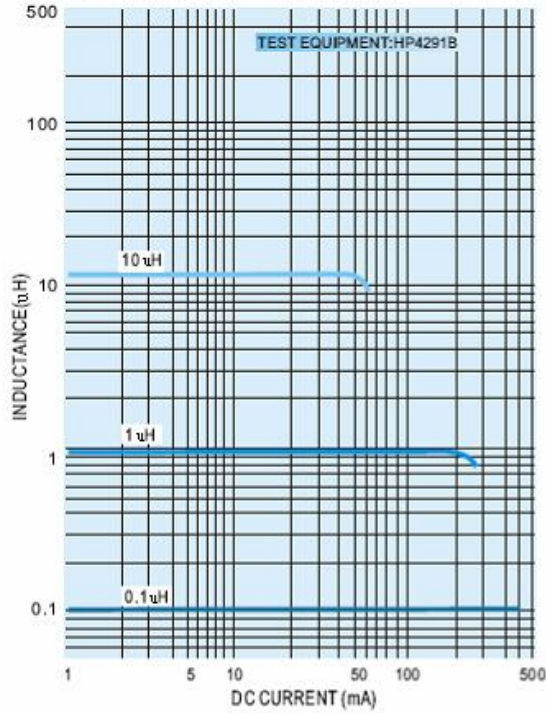
ORDERING CODE	L ( $\mu$ H)	Tolerance ( $\pm$ %)	Q (Min)	Test Frequency L/Q(MHz)	Self Resonant Frequency (MHz)TYP	DC Resistance ( $\Omega$ )max	IDC (mA)max
FLM□-321611-47N□T	0.047	10 / 20	20	50	320	0.15	300
FLM□-321611-68N□T	0.068	10 / 20	20	50	280	0.25	300
FLM□-321611-R10□T	0.10	10 / 20	30	25	235	0.25	250
FLM□-321611-R12□T	0.12	10 / 20	30	25	220	0.30	250
FLM□-321611-R15□T	0.15	10 / 20	30	25	200	0.30	250
FLM□-321611-R18□T	0.18	10 / 20	30	25	185	0.40	250
FLM□-321611-R22□T	0.22	10 / 20	30	25	170	0.40	250
FLM□-321611-R27□T	0.27	10 / 20	30	25	150	0.50	250
FLM□-321611-R33□T	0.33	10 / 20	30	25	145	0.60	250
FLM□-321611-R39□T	0.39	10 / 20	30	25	135	0.50	200
FLM□-321611-R47□T	0.47	10 / 20	30	25	125	0.60	200
FLM□-321611-R56□T	0.56	10 / 20	30	25	115	0.70	150
FLM□-321611-R68□T	0.68	10 / 20	30	25	105	0.80	150
FLM□-321611-R82□T	0.82	10 / 20	30	25	90	0.90	150
FLM□-321611-1R0□T	1.0	10 / 20	45	10	75	0.40	100
FLM□-321611-1R2□T	1.2	10 / 20	45	10	65	0.50	100
FLM□-321611-1R5□T	1.5	10 / 20	45	10	60	0.50	50
FLM□-321611-1R8□T	1.8	10 / 20	45	10	55	0.50	50
FLM□-321611-2R2□T	2.2	10 / 20	45	10	50	0.60	50
FLM□-321611-2R7□T	2.7	10 / 20	45	10	45	0.60	50
FLM□-321611-3R3□T	3.3	10 / 20	45	10	41	0.70	50
FLM□-321611-3R9□T	3.9	10 / 20	45	10	38	0.80	50
FLM□-321611-4R7□T	4.7	10 / 20	45	10	35	0.90	50
FLM□-321611-5R6□T	5.6	10 / 20	35	4	32	0.70	25
FLM□-321611-6R8□T	6.8	10 / 20	35	4	29	0.80	25
FLM□-321611-8R2□T	8.2	10 / 20	35	4	26	0.90	25
FLM□-321611-100□T	10	10 / 20	35	2	24	1.00	25

1. 47N means 47nH or 0.047uH.
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- 3.IDC:Based on Temperature increase 40°C
- 4.Operating temperature range : -55 to +125°C (including self-heating)

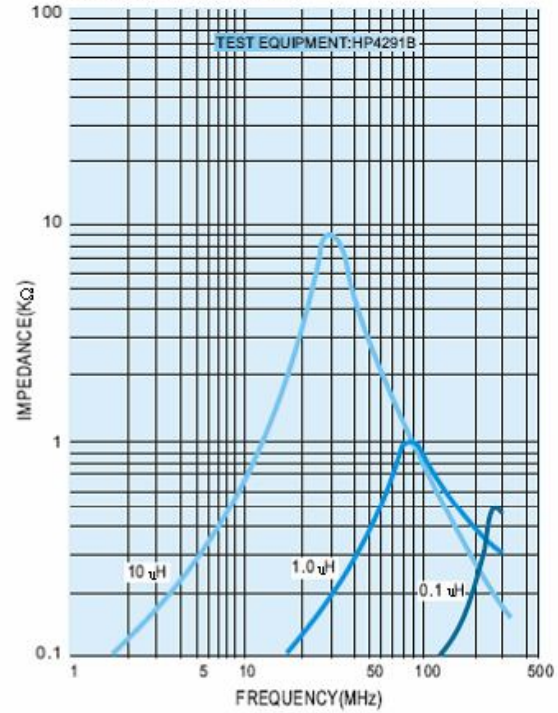
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# MULTILAYER CHIP INDUCTORS → FLM □ SERIES

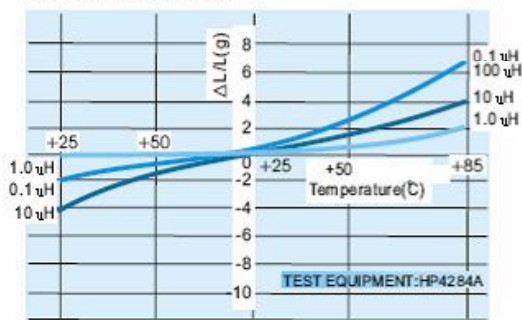
## INDUCTANCE vs. DC SUPERPOSITION CHARACTERISTICS



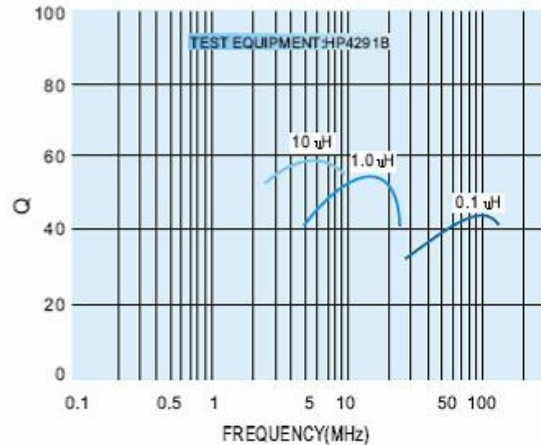
## IMPEDANCE vs. FREQUENCY CHARACTERISTICS



## INDUCTANCE vs. TEMPERATURE CHARACTERISTICS



## Q vs. FREQUENCY CHARACTERISTICS



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3. IDC: Based on Temperature increase 40°C
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