

LMax SMD Miniature Power Inductor

LMMN Series – Miniature Style M

FEATURES

- LMMN series miniature chip inductors are wound on a special ferrite core.
- 0302/ 03A2/ 0403 are high Q value at high frequency and low DC resistance.
- 0302/03A2/ 0403/ 0605 are low DC resistance, high current capacity, and high impedance characteristics. They are excellent for using as a choke coil in DC power supply circuits.
- Operating temperature range (0202, 02A2, 02B2, 0302): -40°C to 105°C
- Operating temperature range (03A2, 0403, 0605): -40°C to 85°C

INDUCTANCE AND RATED CURRENT RANGES

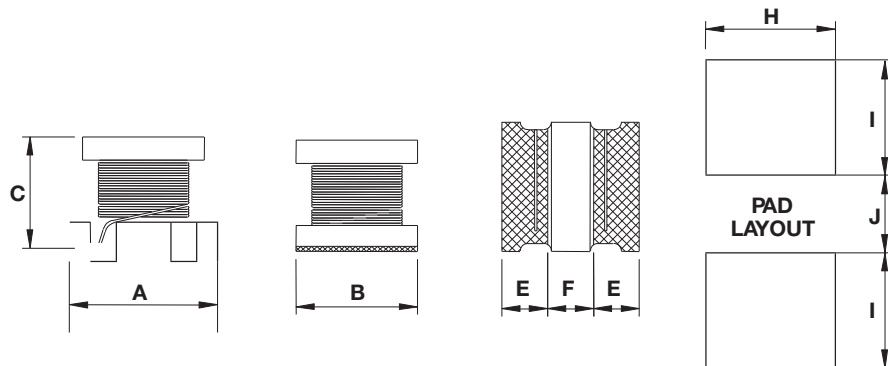
- 0202 1.00 ~ 10μH 2.80 ~ 0.65A
- 02A2 1.00 ~ 10μH 3.70 ~ 0.90A
- 02B2 1.00 ~ 22μH 2.30 ~ 0.51A
- 0302 1.00 ~ 100μH 1.00 ~ 0.1A
- 03A2 1.00 ~ 560μH 0.445 ~ 0.04A
- 0403 1.00 ~ 2200μH 0.50 ~ 0.03A
- 0302 (C) 0.47 ~ 120μH 3.40 ~ 0.17A
- 03A2 (C) 1.00 ~ 560μH 1.00 ~ 0.06A
- 0403 (C) 1.00 ~ 470μH 1.08 ~ 0.09A
- 0605 (C) 0.12 ~ 10000μH 6.00 ~ 0.05A
- Electrical specifications at 25°C



APPLICATIONS

- High Frequency Communication Products
- Personal Computers
- Disk Drives And Computer Peripherals
- DC Power Supply Circuits

DIMENSIONS



mm (inches)

Type	A	B	C	E	F	H	I	J
0202	2.50 ± 0.20 (0.098 ± 0.008)	2.00 ± 0.20 (0.079 ± 0.008)	1.00 max. (0.039)	0.40 ± 0.20 (0.016 ± 0.008)	1.00 min. (0.039)	2.10 (0.083)	0.90 (0.035)	0.80 (0.031)
02A2	2.50 ± 0.20 (0.098 ± 0.008)	2.00 ± 0.20 (0.079 ± 0.008)	1.25 max. (0.049)	0.40 ± 0.20 (0.016 ± 0.008)	1.00 min. (0.039)	2.10 (0.083)	0.90 (0.035)	0.80 (0.031)
02B2	2.50 ± 0.20 (0.098 ± 0.008)	2.50 ± 0.20 (0.098 ± 0.008)	1.05 max. (0.041)	0.85 ref (0.033)	0.85 ref (0.033)	2.50 (0.098)	1.20 (0.047)	0.80 (0.031)
0302 / 0302 (C)	3.20 ± 0.30 (0.126 ± 0.012)	2.50 ± 0.20 (0.098 ± 0.008)	1.55 ± 0.30 (0.061 ± 0.012)	1.05 ± 0.30 (0.041 ± 0.012)	1.05 ± 0.30 (0.041 ± 0.012)	2.00 (0.079)	1.50 (0.059)	1.00 (0.039)
03A2 / 03A2 (C)	3.20 ± 0.30 (0.126 ± 0.012)	2.50 ± 0.20 (0.098 ± 0.008)	2.00 ± 0.30 (0.079 ± 0.012)	1.05 ± 0.30 (0.041 ± 0.012)	1.05 ± 0.30 (0.041 ± 0.012)	2.00 (0.079)	1.50 (0.059)	1.00 (0.039)
0403 / 0403 (C)	4.50 ± 0.30 (0.177 ± 0.012)	3.20 ± 0.20 (0.126 ± 0.008)	2.60 ± 0.30 (0.102 ± 0.012)	1.00 min. (0.039)	1.00 min. (0.039)	3.00 (0.118)	2.00 (0.079)	1.20 (0.047)
0605 (C)	5.70 ± 0.30 (0.224 ± 0.012)	5.00 ± 0.30 (0.197 ± 0.012)	4.70 ± 0.50 (0.185 ± 0.020)	1.30 min. (0.051)	1.70 min. (0.067)	5.00 (0.197)	2.00 (0.079)	2.00 (0.079)

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HOW TO ORDER

LM	MN	0202	N	R04	M	T	A	R
Family	Series	Size	Tolerance	Inductance	Style	Termination	Special	Packaging
LM = Power Inductor	MN = Miniature	0202 = 2x2xh (h = see catalog)	J = ±5% K = ±10% M = ±20% N = ±30%	R39 = 0.390µH 3R9 = 3.900µH 390 = 39.00µH 391 = 390.0µH 392 = 3900µH		T = Sn Plate	A = Standard C = Choke*	R = 7" Reel S = 13" Reel*
							*Available for 0302, 03A2, 0402 and 0605 sizes only	*0605 size only

ELECTRICAL CHARACTERISTICS

0202

Part Number	L (µH)	Tolerance	Test Condition	DCR (Ω) max.	I _{RMS} ¹ (A) Typical	I _{SAT} ² (A) Typical
LMMN0202M1R0MTAR	1.0	M	1MHz, 0.1V	0.085	1.7	2
LMMN0202M1R5MTAR	1.5	M	1MHz, 0.1V	0.128	1.4	1.7
LMMN0202M2R2MTAR	2.2	M	1MHz, 0.1V	0.19	1.1	1.4
LMMN0202M3R3MTAR	3.3	M	1MHz, 0.1V	0.304	0.94	1.2
LMMN0202M4R7MTAR	4.7	M	1MHz, 0.1V	0.44	0.78	0.98
LMMN0202M6R8MTAR	6.8	M	1MHz, 0.1V	0.541	0.7	0.82
LMMN0202M100MTAR	10	M	1MHz, 0.1V	0.854	0.52	0.65

¹ The temperature rise current value (I_{RMS}) is the DC current value that increases component temperature by up to 40°C. (Ta=25°C)

² The saturation current value (I_{SAT}) is the DC current value when the inductance decreases by 30% of its initial value. (Ta=25°C)

02A2

Part Number	L (µH)	Tolerance	Test Condition	DCR (Ω) max.	I _{RMS} ¹ (A) Typical	I _{SAT} ² (A) Typical
LMMN02A2M1R0MTAR	1.0	M	1MHz, 0.1V	0.088	1.8	2.7
LMMN02A2M1R5MTAR	1.5	M	1MHz, 0.1V	0.126	1.5	2.2
LMMN02A2M2R2MTAR	2.2	M	1MHz, 0.1V	0.155	1.3	2
LMMN02A2M3R3MTAR	3.3	M	1MHz, 0.1V	0.272	1	1.6
LMMN02A2M4R7MTAR	4.7	M	1MHz, 0.1V	0.45	0.81	1.2
LMMN02A2M5R6MTAR	5.6	M	1MHz, 0.1V	0.45	0.72	1.15
LMMN02A2M6R8MTAR	6.8	M	1MHz, 0.1V	0.612	0.66	1.1
LMMN02A2M100MTAR	10	M	1MHz, 0.1V	0.756	0.59	0.9

¹ The temperature rise current value (I_{RMS}) is the DC current value that increases component temperature by up to 40°C. (Ta=25°C)

² The saturation current value (I_{SAT}) is the DC current value when the inductance decreases by 30% of its initial value. (Ta=25°C)

02B2

Part Number	L (µH)	Tolerance	Test Condition	DCR (Ω) max.	I _{RMS} ¹ (A) Typical	I _{SAT} ² (A) Typical
LMMN02B2M1R0MTAR	1.0	M	1MHz, 0.1V	0.085	1.9	2.3
LMMN02B2M1R5MTAR	1.5	M	1MHz, 0.1V	0.115	1.5	1.9
LMMN02B2M2R2MTAR	2.2	M	1MHz, 0.1V	0.168	1.2	1.5
LMMN02B2M3R3MTAR	3.3	M	1MHz, 0.1V	0.239	1.1	1.3
LMMN02B2M4R7MTAR	4.7	M	1MHz, 0.1V	0.316	0.9	1.1
LMMN02B2M5R6MTAR	5.6	M	1MHz, 0.1V	0.42	0.83	0.98
LMMN02B2M6R8MTAR	6.8	M	1MHz, 0.1V	0.487	0.8	0.9
LMMN02B2M8R2MTAR	8.2	M	1MHz, 0.1V	0.548	0.71	0.84
LMMN02B2M100MTAR	10	M	1MHz, 0.1V	0.61	0.68	0.79
LMMN02B2M220MTAR	22	M	1MHz, 0.1V	1.552	0.4	0.51

¹ The temperature rise current value (I_{RMS}) is the DC current value that increases component temperature by up to 40°C. (Ta=25°C)

² The saturation current value (I_{SAT}) is the DC current value when the inductance decreases by 30% of its initial value. (Ta=25°C)

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0302

Part Number	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I _{bc} ¹ (A) Typical	SRF (MHz) min
LMMN0302N1R0MTAR	1.0	N	1MHz, 0.1V	0.078	1	100
LMMN0302N1R5MTAR	1.5	N	1MHz, 0.1V	0.068	1.2	100
LMMN0302M2R2MTAR	2.2	M	1MHz, 0.1V	0.126	0.79	64
LMMN0302M3R3MTAR	3.3	M	1MHz, 0.1V	0.18	0.7	50
LMMN0302M4R7MTAR	4.7	M	1MHz, 0.1V	0.195	0.65	43
LMMN0302K100MTAR	10	K	1MHz, 0.1V	0.42	0.45	26
LMMN0302K150MTAR	15	K	1MHz, 0.1V	0.75	0.3	22
LMMN0302K220MTAR	22	K	1MHz, 0.1V	1	0.25	19
LMMN0302K330MTAR	33	K	1MHz, 0.1V	1.4	0.2	17
LMMN0302K470MTAR	47	K	1MHz, 0.1V	2.2	0.17	13
LMMN0302K680MTAR	68	K	1MHz, 0.1V	3.2	0.13	9
LMMN0302K101MTAR	100	K	1MHz, 0.1V	4.5	0.1	8

¹I_{bc}: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C.
The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

0403

Part Number	L (μH)	Tolerance	Test Condition	Quality Factor		DCR (Ω) max.	I _{bc} ¹ (A) Typical	SRF (MHz) min
				Q	Test Condition			
LMMN03A2M1R0MTAR	1.0	M	1MHz, 0.1V	20	1MHz, 0.1V	0.5	0.445	100
LMMN03A2M1R2MTAR	1.2	M	1MHz, 0.1V	20	1MHz, 0.1V	0.6	0.425	100
LMMN03A2*1R5MTAR	1.5	K, M	1MHz, 0.1V	20	1MHz, 0.1V	0.6	0.4	75
LMMN03A2*1R8MTAR	1.8	K, M	1MHz, 0.1V	20	1MHz, 0.1V	0.7	0.39	60
LMMN03A2*2R2MTAR	2.2	K, M	1MHz, 0.1V	20	1MHz, 0.1V	0.8	0.37	50
LMMN03A2*2R7MTAR	2.7	K, M	1MHz, 0.1V	20	1MHz, 0.1V	0.9	0.32	43
LMMN03A2*3R3MTAR	3.3	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1	0.3	38
LMMN03A2*3R9MTAR	3.9	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1.1	0.29	35
LMMN03A2*4R7MTAR	4.7	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1.2	0.27	31
LMMN03A2*5R6MTAR	5.6	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1.3	0.25	28
LMMN03A2*6R8MTAR	6.8	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1.5	0.24	25
LMMN03A2*8R2MTAR	8.2	K, M	1MHz, 0.1V	20	1MHz, 0.1V	1.6	0.225	23
LMMN03A2*100MTAR	10	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.8	0.19	20
LMMN03A2*120MTAR	12	J, K	1MHz, 0.1V	35	1MHz, 0.1V	2	0.18	18
LMMN03A2*150MTAR	15	J, K	1MHz, 0.1V	35	1MHz, 0.1V	2.2	0.17	16
LMMN03A2*180MTAR	18	J, K	1MHz, 0.1V	35	1MHz, 0.1V	2.5	0.165	15
LMMN03A2*220MTAR	22	J, K	1MHz, 0.1V	35	1MHz, 0.1V	2.8	0.15	14
LMMN03A2*270MTAR	27	J, K	1MHz, 0.1V	35	1MHz, 0.1V	3.1	0.125	13
LMMN03A2*330MTAR	33	J, K	1MHz, 0.1V	40	1MHz, 0.1V	3.5	0.115	12
LMMN03A2*390MTAR	39	J, K	1MHz, 0.1V	40	1MHz, 0.1V	3.9	0.11	11
LMMN03A2*470MTAR	47	J, K	1MHz, 0.1V	40	1MHz, 0.1V	4.3	0.1	11
LMMN03A2*560MTAR	56	J, K	1MHz, 0.1V	40	1MHz, 0.1V	4.9	0.085	10
LMMN03A2*680MTAR	68	J, K	1MHz, 0.1V	40	1MHz, 0.1V	5.5	0.08	9
LMMN03A2*820MTAR	82	J, K	1MHz, 0.1V	40	1MHz, 0.1V	6.2	0.07	8.5
LMMN03A2*101MTAR	100	J, K	1MHz, 0.1V	40	796KHz, 0.1V	7	0.08	8
LMMN03A2*121MTAR	120	J, K	1MHz, 0.1V	40	796KHz, 0.1V	8	0.075	7.5
LMMN03A2*151MTAR	150	J, K	1MHz, 0.1V	40	796KHz, 0.1V	9.3	0.07	7
LMMN03A2*181MTAR	180	J, K	1MHz, 0.1V	40	796KHz, 0.1V	10.2	0.065	6
LMMN03A2*221MTAR	220	J, K	1MHz, 0.1V	40	796KHz, 0.1V	11.8	0.065	5.5
LMMN03A2*271MTAR	270	J, K	1MHz, 0.1V	40	796KHz, 0.1V	12.5	0.065	5
LMMN03A2*331MTAR	330	J, K	1MHz, 0.1V	40	796KHz, 0.1V	15	0.065	5
LMMN03A2*391MTAR	390	J, K	1MHz, 0.1V	50	796KHz, 0.1V	22	0.05	5
LMMN03A2*471MTAR	470	J, K	1KHz, 0.1V	50	796KHz, 0.1V	25	0.045	5
LMMN03A2*561MTAR	560	J, K	1KHz, 0.1V	50	796KHz, 0.1V	28	0.04	5 ref

¹I_{bc}: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C.
The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

LMax SMD Power Inductor

LMMN Series – Miniature Style M



0403

Part Number	L (μ H)	Tolerance	Test Condition	Quality Factor		DCR (Ω) max.	I_{dc}^1 (A) Typical	SRF (MHz) min
				SPEC	Test Contition			
LMMN0403M1R0MTAR	1.0	M	1MHz, 0.1V	20	1MHz, 0.1V	0.2	0.5	120
LMMN0403M1R2MTAR	1.2	M	1MHz, 0.1V	20	1MHz, 0.1V	0.2	0.5	100
LMMN0403M1R5MTAR	1.5	M	1MHz, 0.1V	20	1MHz, 0.1V	0.3	0.5	85
LMMN0403M1R8MTAR	1.8	M	1MHz, 0.1V	20	1MHz, 0.1V	0.3	0.5	75
LMMN0403M2R2MTAR	2.2	M	1MHz, 0.1V	20	1MHz, 0.1V	0.3	0.5	62
LMMN0403M2R7MTAR	2.7	M	1MHz, 0.1V	20	1MHz, 0.1V	0.32	0.5	53
LMMN0403M3R3MTAR	3.3	M	1MHz, 0.1V	20	1MHz, 0.1V	0.35	0.5	47
LMMN0403M3R9MTAR	3.9	M	1MHz, 0.1V	20	1MHz, 0.1V	0.38	0.5	41
LMMN0403*4R7MTAR	4.7	K, M	1MHz, 0.1V	30	1MHz, 0.1V	0.4	0.5	38
LMMN0403*5R6MTAR	5.6	K, M	1MHz, 0.1V	30	1MHz, 0.1V	0.47	0.5	33
LMMN0403*6R8MTAR	6.8	K, M	1MHz, 0.1V	30	1MHz, 0.1V	0.5	0.45	31
LMMN0403*8R2MTAR	8.2	K, M	1MHz, 0.1V	30	1MHz, 0.1V	0.56	0.45	27
LMMN0403*100MTAR	10	J, K	1MHz, 0.1V	35	1MHz, 0.1V	0.56	0.4	23
LMMN0403*120MTAR	12	J, K	1MHz, 0.1V	35	1MHz, 0.1V	0.62	0.38	21
LMMN0403*150MTAR	15	J, K	1MHz, 0.1V	35	1MHz, 0.1V	0.73	0.36	19
LMMN0403*180MTAR	18	J, K	1MHz, 0.1V	35	1MHz, 0.1V	0.82	0.34	17
LMMN0403*220MTAR	22	J, K	1MHz, 0.1V	35	1MHz, 0.1V	0.94	0.32	15
LMMN0403*270MTAR	27	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.1	0.3	14
LMMN0403*330MTAR	33	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.2	0.27	12
LMMN0403*390MTAR	39	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.4	0.24	11
LMMN0403*470MTAR	47	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.5	0.22	10
LMMN0403*560MTAR	56	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.7	0.2	9.3
LMMN0403*680MTAR	68	J, K	1MHz, 0.1V	35	1MHz, 0.1V	1.9	0.18	8.4
LMMN0403*820MTAR	82	J, K	1MHz, 0.1V	35	1MHz, 0.1V	2.2	0.17	7.5
LMMN0403*101MTAR	100	J, K	1MHz, 0.1V	40	796KHz, 0.1V	2.5	0.16	6.8
LMMN0403*121MTAR	120	J, K	1MHz, 0.1V	40	796KHz, 0.1V	3	0.15	6.2
LMMN0403*151MTAR	150	J, K	1MHz, 0.1V	40	796KHz, 0.1V	3.7	0.13	5.5
LMMN0403*181MTAR	180	J, K	1MHz, 0.1V	40	796KHz, 0.1V	4.5	0.12	5
LMMN0403*221MTAR	220	J, K	1MHz, 0.1V	40	796KHz, 0.1V	5.4	0.11	4.5
LMMN0403*271MTAR	270	J, K	1MHz, 0.1V	40	796KHz, 0.1V	6.8	0.1	4
LMMN0403*331MTAR	330	J, K	1MHz, 0.1V	40	796KHz, 0.1V	8.2	0.095	3.6
LMMN0403*391MTAR	390	J, K	1MHz, 0.1V	40	796KHz, 0.1V	9.7	0.09	3.3
LMMN0403*471MTAR	470	J, K	1KHz, 0.1V	40	796KHz, 0.1V	11.8	0.08	3
LMMN0403*561MTAR	560	J, K	1KHz, 0.1V	40	796KHz, 0.1V	14.5	0.07	2.7
LMMN0403*681MTAR	680	J, K	1KHz, 0.1V	40	796KHz, 0.1V	17	0.065	2.5
LMMN0403*821MTAR	820	J, K	1KHz, 0.1V	40	796KHz, 0.1V	20.5	0.06	2.2
LMMN0403*102MTAR	1000	J, K	1KHz, 0.1V	40	252KHz, 0.1V	25	0.05	2
LMMN0403*122MTAR	1200	J, K	1KHz, 0.1V	40	252KHz, 0.1V	30	0.045	1.8
LMMN0403*152MTAR	1500	J, K	1KHz, 0.1V	40	252KHz, 0.1V	37	0.04	1.6
LMMN0403*182MTAR	1800	J, K	1KHz, 0.1V	40	252KHz, 0.1V	45	0.035	1.5
LMMN0403*222MTAR	2200	J, K	1KHz, 0.1V	40	252KHz, 0.1V	50	0.03	1.3

¹ I_{dc} : The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C.
The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

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0302 (C)

Part Number	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I _{RMS} ¹ (A) Typ.	I _{SAT} ² (A) Typ.	SRF (MHz) min
LMMN0302NR47MTCR	0.47	N	1MHz, 0.1V	0.03	2.55	3.4	100
LMMN0302N1R0MTCR	1.0	N	1MHz, 0.1V	0.045	2.05	2.3	100
LMMN0302N1R5MTCR	1.5	N	1MHz, 0.1V	0.057	1.75	1.75	70
LMMN0302N2R2MTCR	2.2	N	1MHz, 0.1V	0.076	1.6	1.55	70
LMMN0302N3R3MTCR	3.3	N	1MHz, 0.1V	0.12	1.2	1.25	50
LMMN0302N4R7MTCR	4.7	N	1MHz, 0.1V	0.18	1	1	40
LMMN0302N6R8MTCR	6.8	N	1MHz, 0.1V	0.24	0.85	0.85	40
LMMN0302M100MTCR	10	M	1MHz, 0.1V	0.38	0.7	0.75	30
LMMN0302M150MTCR	15	M	1MHz, 0.1V	0.57	0.52	0.6	20
LMMN0302M220MTCR	22	M	1MHz, 0.1V	0.81	0.45	0.5	20
LMMN0302M330MTCR	33	M	1MHz, 0.1V	1.15	0.39	0.38	13
LMMN0302M470MTCR	47	M	1MHz, 0.1V	1.78	0.31	0.33	11
LMMN0302M680MTCR	68	M	1MHz, 0.1V	2.28	0.275	0.28	11
LMMN0302M101MTCR	100	M	1MHz, 0.1V	2.7	0.25	0.18	8
LMMN0302M121MTCR	120	M	1MHz, 0.1V	4.38	0.2	0.17	8

¹ The temperature rise current value (IRMS) is the DC current value that increases component temperature by up to 40°C. (Ta=25°C)

² The saturation current value (ISAT) is the DC current value when the inductance decreases by 30% of its initial value. (Ta=25°C)

03A2 (C)

Part Number	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I _{DC} ¹ (A) Typical	SRF (MHz) min
LMMN03A2M1R0MTCR	1.0	M	1MHz, 0.1V	0.078	1	100
LMMN03A2M2R2MTCR	2.2	M	1MHz, 0.1V	0.126	0.79	64
LMMN03A2M3R3MTCR	3.3	M	1MHz, 0.1V	0.165	0.5	50
LMMN03A2M4R7MTCR	4.7	M	1MHz, 0.1V	0.195	0.45	43
LMMN03A2M6R8MTCR	6.8	M	1MHz, 0.1V	0.33	0.45	38
LMMN03A2M100MTCR	10	M	1MHz, 0.1V	0.572	0.3	26
LMMN03A2*220MTCR	22	K, M	1MHz, 0.1V	0.923	0.25	19
LMMN03A2*470MTCR	47	K, M	1MHz, 0.1V	1.69	0.17	12
LMMN03A2*101MTCR	100	J, K	1MHz, 0.1V	4.55	0.1	8
LMMN03A2*151MTCR	150	J, K	1MHz, 0.1V	9.1	0.08	7
LMMN03A2*221MTCR	220	J, K	1MHz, 0.1V	10.92	0.07	5.5
LMMN03A2*331MTCR	330	J, K	1MHz, 0.1V	13	0.06	4.5
LMMN03A2*391MTCR	390	J, K	1MHz, 0.1V	22.1	0.06	4
LMMN03A2*471MTCR	470	J, K	1MHz, 0.1V	24.7	0.06	3.7
LMMN03A2*561MTCR	560	J, K	1MHz, 0.1V	28.6	0.06	3.4

¹I_{DC}: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C.

The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

LMax SMD Power Inductor

LMMN Series – Miniature Style M

0403 (C)

Part Number	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I _{dc} ¹ (A) Typical	SRF (MHz) min
LMMN0403M1R0MTCR	1.0	M	1MHz, 0.1V	0.08	1.08	100
LMMN0403M1R5MTCR	1.5	M	1MHz, 0.1V	0.09	1	85
LMMN0403M2R2MTCR	2.2	M	1MHz, 0.1V	0.11	0.9	60
LMMN0403M3R3MTCR	3.3	M	1MHz, 0.1V	0.13	0.8	47
LMMN0403*4R7MTCR	4.7	K, M	1MHz, 0.1V	0.15	0.75	35
LMMN0403*6R8MTCR	6.8	K, M	1MHz, 0.1V	0.2	0.72	30
LMMN0403*100MTCR	10	J, K	1MHz, 0.1V	0.24	0.65	23
LMMN0403*150MTCR	15	J, K	1MHz, 0.1V	0.32	0.57	20
LMMN0403*220MTCR	22	J, K	1MHz, 0.1V	0.6	0.42	15
LMMN0403*330MTCR	33	J, K	1MHz, 0.1V	1	0.31	12
LMMN0403*470MTCR	47	J, K	1MHz, 0.1V	1.1	0.28	10
LMMN0403*680MTCR	68	J, K	1MHz, 0.1V	1.7	0.22	8.4
LMMN0403*101MTCR	100	J, K	1MHz, 0.1V	2.2	0.19	6.8
LMMN0403*151MTCR	150	J, K	1MHz, 0.1V	3.5	0.13	5.5
LMMN0403*221MTCR	220	J, K	1MHz, 0.1V	4	0.11	4.5
LMMN0403*331MTCR	330	J, K	1MHz, 0.1V	6.8	0.1	3.6
LMMN0403*471MTCR	470	J, K	1MHz, 0.1V	8.5	0.09	3

¹I_{dc}: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C. The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

0605 (C)

Part Number	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I _{dc} ¹ (A) Typical	SRF (MHz) min
LMMN0605MR12MTCS	0.12	M	1MHz, 0.1V	0.0098	6	450
LMMN0605MR27MTCS	0.27	M	1MHz, 0.1V	0.014	5.3	300
LMMN0605MR47MTCS	0.47	M	1MHz, 0.1V	0.0182	4.8	200
LMMN0605M1R0MTCS	1.0	M	1MHz, 0.1V	0.027	4	150
LMMN0605M1R5MTCS	1.5	M	1MHz, 0.1V	0.031	3.7	110
LMMN0605M2R2MTCS	2.2	M	1MHz, 0.1V	0.041	3.2	80
LMMN0605M3R3MTCS	3.3	M	1MHz, 0.1V	0.05	2.9	40
LMMN0605M4R7MTCS	4.7	M	1MHz, 0.1V	0.0574	2.7	30
LMMN0605M6R8MTCS	6.8	M	1MHz, 0.1V	0.104	2	25
LMMN0605*100MTCS	10	K, M	1MHz, 0.1V	0.13	1.7	20
LMMN0605*150MTCS	15	K, M	1MHz, 0.1V	0.21	1.4	17
LMMN0605*220MTCS	22	K, M	1MHz, 0.1V	0.266	1.2	15
LMMN0605*330MTCS	33	K, M	1MHz, 0.1V	0.448	0.9	12
LMMN0605*470MTCS	47	K, M	1MHz, 0.1V	0.56	0.8	10 ref
LMMN0605*680MTCS	68	K, M	1MHz, 0.1V	0.938	0.64	7.6
LMMN0605*101MTCS	100	K, M	100KHz, 0.1V	1.204	0.56	6.5
LMMN0605*151MTCS	150	K, M	100KHz, 0.1V	2.66	0.42	5
LMMN0605*221MTCS	220	K, M	100KHz, 0.1V	3.36	0.32	4
LMMN0605*331MTCS	330	K, M	100KHz, 0.1V	6.16	0.27	3.1
LMMN0605*471MTCS	470	K, M	100KHz, 0.1V	7.56	0.24	2.4
LMMN0605*681MTCS	680	K, M	100KHz, 0.1V	11.34	0.19	1.9
LMMN0605*102MTCS	1000	K, M	10KHz, 0.1V	14.42	0.15	1.7
LMMN0605*222MTCS	2200	K, M	10KHz, 0.1V	30.1	0.1	1.2
LMMN0605*472MTCS	4700	K, M	10KHz, 0.1V	61.04	0.07	0.8
LMMN0605*103MTCS	10000	K, M	10KHz, 0.1V	140	0.05	0.5

¹I_{dc}: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of the coil increases by 20°C. The smaller one is defined as the rated DC current. (Ta=25°C)

* Inductance Tolerance: J=±5%, K=±10%, M=±20%

LMax SMD Power Inductor

LMMN Series – Miniature Style M



SHELF STORAGE SPECIFICATIONS

Items	Specifications
Shelf Storage Conditions	Temperature range: 25±3°C • Humidity: <80% relative humidity. Recommendation: Product should be used within six months from the time of delivery.

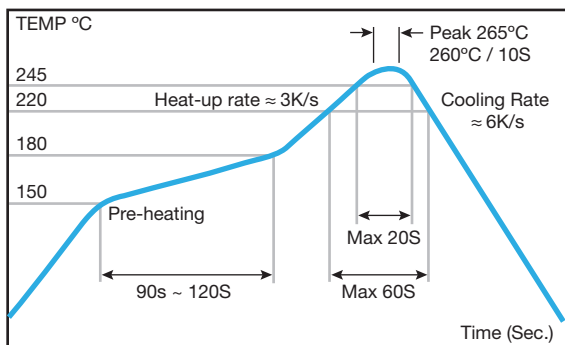
ENVIRONMENTAL SPECIFICATIONS

Items	Specification	Test Method/Conditions
High Temperature Storage Test	No case deformation or change in appearance $\Delta L/L \leq 10\%$ $\Delta Q/Q \leq 30\%$	Temperature: 85±2°C Time: 48±2 hours Tested after 1 hour at room temperature.
Low Temperature Storage Test		Temperature: -25±2°C Time: 48±2 hours Tested after 1 hour at room temperature.
Humidity Test		Temperature: 40±2°C, 90~95% relative humidity Time: 96±2 hours Tested after 1 hour at room temperature.
Thermal Shock Test		1 Cycle: -25°C for 30 minutes +25°C for 10 minutes 85°C for 30 minutes Go through 5 cycles. Tested after 1 hour at room temperature.

MECHANICAL SPECIFICATIONS

Items	Specification	Test Method/Conditions
Solderability Test	Terminal area must have 90% minimum solder coverage	Lead-free termination: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
Resistance to solder heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature 130 – 150°C. Immersing to 260±5°C for 10 seconds.
Vibration Test	No case deformation or change in appearance $\Delta L/L \leq 10\%$ $\Delta Q/Q \leq 30\%$	Apply frequency at 10 – 55 Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock Resistance		Drop down with 981m/s ² (100G) shock attitude upon a rubber block method shock testing machine – 1 time. In each three orientations.

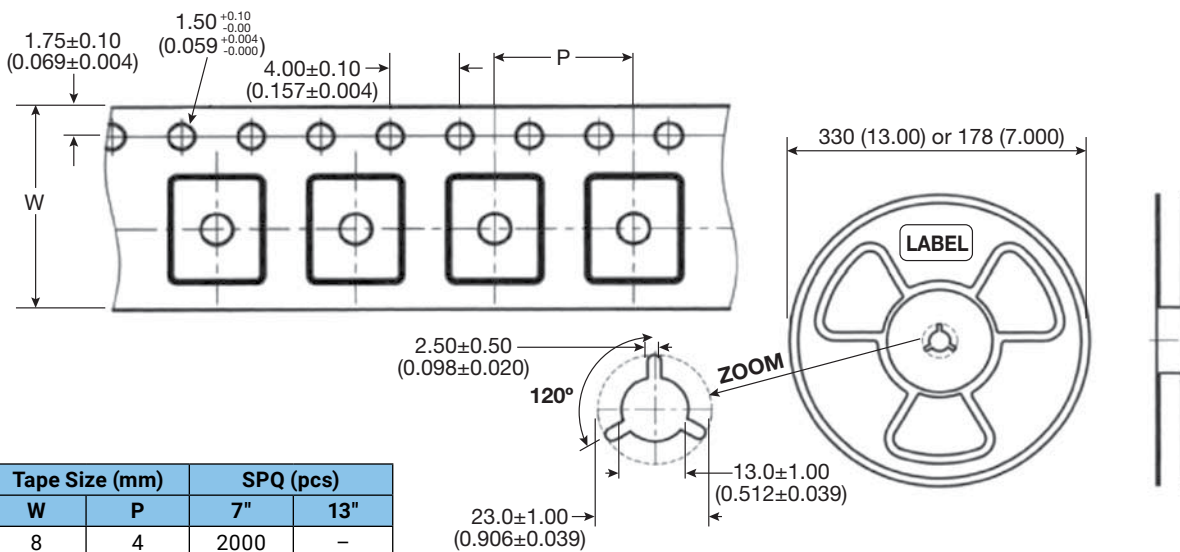
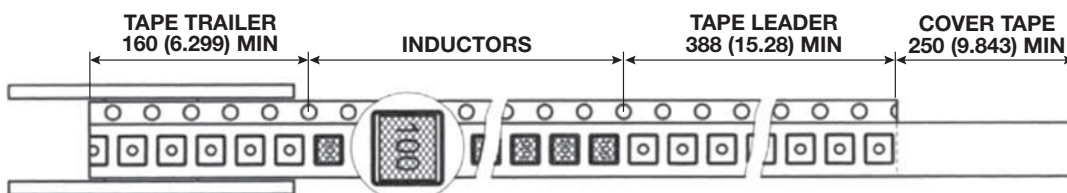
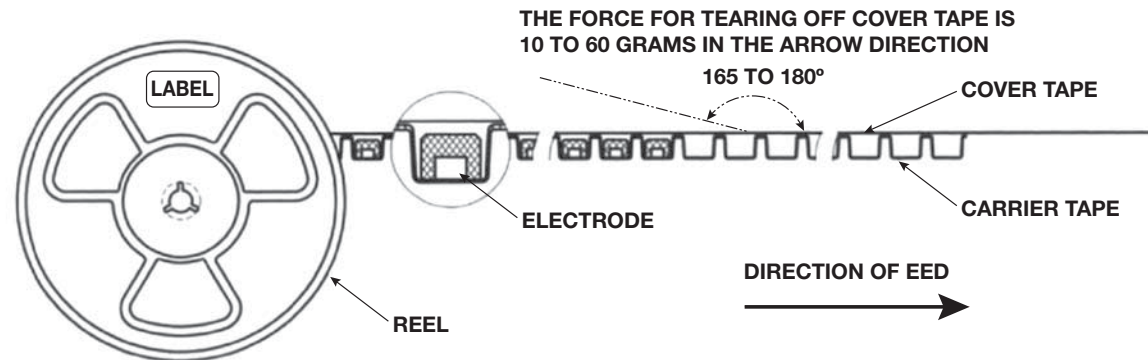
RELOW SOLDERING RECOMMENDATION



LMax SMD Power Inductor

LMMN Series – Miniature Style M

PACKAGING SPECIFICATIONS



Size Code	Tape Size (mm)		SPQ (pcs)	
	W	P	7"	13"
0202	8	4	2000	-
02A2	8	4	2000	-
02B2	8	4	2000	-
0302	8	4	2000	-
03A2	8	4	2000	-
0403	12	8	500	-
0605	16	12	-	1000