

DATA SHEET

Multilayer inductors **Soft Ferrites**

Supersedes data of February 2002

2004 Sep 01

Soft Ferrites

Multilayer inductors

MULTILAYER INDUCTORS

Our range of multilayer inductors offers magnetic shielding, in five standard sizes (0402, 0603, 0805, 080505 and 1206), which are specially designed for miniaturized electronic products. It offers minimum flux leakage thus eliminating cross talk. They have inductances between 1 nH and 18 mH.

Main applications areas for multilayer inductors are:

- computer and peripheral equipment: mother board, notebook, CD-Rom, DVD-Rom, CD-RW, scanner, hard disc, VGA card, sound card, LCD monitor, printer, PC server thumb drive, PCMCIA card, graphic card, etc.
- network: LAN card, hub, switcher, router set top box, etc.
- telecom: cell phone, ADSL, wired modem, cable modem, ISDN, GPS satellite receiver, etc.
- consumer: walkman, walkdisc, digital still camera (DSC), sound system, HDTV, projector, DVD player, VCD player, tuner for TV, cable modem, etc.

Main high frequency application for multilayer inductor MLH are:

- cell phone, dect phone, wireless LAN card, wireless micro-phone, TV tuner, RF receiver, cable modem, RF amplifier, security remote control, wireless mouse, wireless keyboard pager, set top box.

To help designers in the trial and error process of finding the most suitable component, we offer a sample box with a selection of products.

Ordering code: SAMPLEBOX13

Features

- Monolithic structure for closed magnetic path and high reliability.
- Standard EIA and EIAJ sizes: 0402, 0603, 0805, 080505, 1206.
- This multilayer chip inductor results in magnetic shielding: the absence of leakage flux makes it most suitable for high density mounting.
- Suitable for wave and reflow soldering.
- Plating material lead-free
- Wide range of inductance values.
- Superior physical properties.
- Available in standard EIA and EIAJ tape-and-reel.
- Operating temperature -40°C to +125°C.
- 100% sorting out on inductance. Product construction

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TYPE NUMBER STRUCTURE

Type numbers for these products consist of the following:

- Product type
- Size
- Inductance
- Tolerance

Product type

MLI: Multilayer Inductor.

MLH: Multilayer inductor High frequency.

Size

0402: $1.0 \times 0.5 \times 0.5\text{mm}$

0603: $1.6 \times 0.8 \times 0.8\text{mm}$

0805: $2.0 \times 1.25 \times 0.9\text{mm}$

080505: $2.0 \times 1.25 \times 1.25\text{mm}$

1206: $3.2 \times 1.6 \times 1.1\text{mm}$

Inductance values

Expressed in nH or μH

Different ways to indicate the values are used.

EXAMPLES

4N7: 4.7 nH

82N: 82 nH

R10: 0.1 μH

1R8: 1.8 μH

820: 82 μH

151: 150 μH

Tolerance

The last 2 digits represent the tolerance:

05%, 10% or 20%

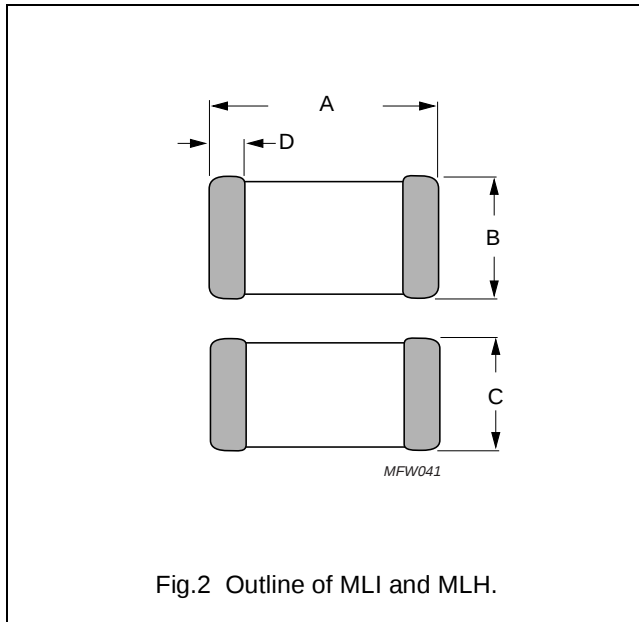
In MLH '03' the tolerance has the absolute value of $\pm 0.3\text{ nH}$.

Multilayer Inductor MLI 0805-R68-10

TYPE	SIZE	INDUCTANCE	TOLERANCE
MLI	0805	0.68 μH	$\pm 10\%$

Multilayer Inductor High frequency MLH 0402-4N7-03

TYPE	SIZE	INDUCTANCE	TOLERANCE
MLH	0402	4.7 nH	$\pm 0.3\text{ nH}$

MULTILAYER INDUCTORS**Product dimensions of Multilayer Inductors MLI**

SIZE	A	B	C	D	mass (mg)
0603	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.20	≈ 5
0805	2.0 ± 0.20	1.25 ± 0.20	0.9 ± 0.20	0.5 ± 0.30	≈ 11
080505	2.0 ± 0.20	1.25 ± 0.20	1.25 ± 0.20	0.5 ± 0.30	≈ 15
1206	3.2 ± 0.20	1.6 ± 0.20	1.1 ± 0.20	0.5 ± 0.30	≈ 28

Product dimensions of Multilayer High frequency Inductors MLH

SIZE	A	B	C	D	mass (mg)
0402	1.0 ± 0.15	0.5 ± 0.15	0.5 ± 0.15	0.25 ± 0.15	≈ 1
0603	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.20	≈ 5
0805	2.0 ± 0.20	1.25 ± 0.20	$0.9 \pm 0.20^{(1)}$	0.5 ± 0.30	≈ 11

Note: ⁽¹⁾ 1.2 ± 0.3 for types with $L \geq 180$ nH

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Product specifications Multilayer Inductors MLI

SIZE	L (μH)	L tol.	Q min.	L, Q test f (MHz).	SRF min. (MHz).	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER
0603	0.047	± 20%	20	50	260	0.3	50	MLI0603-47N-20 des
	0.068	± 20%	20	50	250	0.3	50	MLI0603-68N-20 des
	0.082	± 20%	20	50	245	0.3	50	MLI0603-82N-20 des
	0.1	± 10%	30	25	240	0.3	50	MLI0603-R10-10 des
	0.12	± 10%	30	25	205	0.5	50	MLI0603-R12-10 des
	0.15	± 10%	30	25	180	0.6	50	MLI0603-R15-10 des
	0.18	± 10%	30	25	165	0.6	50	MLI0603-R18-10 des
	0.22	± 10%	30	25	150	0.8	50	MLI0603-R22-10 des
	0.27	± 10%	30	25	136	0.8	50	MLI0603-R27-10 des
	0.33	± 10%	30	25	125	0.85	35	MLI0603-R33-10 des
	0.39	± 10%	30	25	110	1	35	MLI0603-R39-10 des
	0.47	± 10%	30	25	105	1.35	35	MLI0603-R47-10 des
	0.56	± 10%	30	25	95	1.55	35	MLI0603-R56-10 des
	0.68	± 10%	30	25	85	1.7	35	MLI0603-R68-10 des
	0.82	± 10%	30	25	75	2.1	35	MLI0603-R82-10 des
	1.0	± 10%	35	10	65	0.6	25	MLI0603-1R0-10 des
	1.2	± 10%	35	10	60	0.8	25	MLI0603-1R2-10 des
	1.5	± 10%	35	10	55	0.8	25	MLI0603-1R5-10 des
	1.8	± 10%	35	10	50	0.95	25	MLI0603-1R8-10 des
	2.2	± 10%	35	10	50	1.15	15	MLI0603-2R2-10 des
	2.7	± 10%	35	10	40	1.35	15	MLI0603-2R7-10 des
	3.3	± 10%	35	10	38	1.55	15	MLI0603-3R3-10 des
	3.9	± 10%	35	10	35	1.7	15	MLI0603-3R9-10 des
	4.7	± 10%	35	10	33	2.1	15	MLI0603-4R7-10 des
	5.6	± 10%	35	4	22	1.55	5	MLI0603-5R6-10 des
	6.8	± 10%	35	4	20	1.7	5	MLI0603-6R8-10 des
	8.2	± 10%	30	4	18	2.1	15	MLI0603-8R2-10 des
	10	± 10%	20	2	17	2.55	15	MLI0603-100-10 des
0805	0.047	± 20%	25	50	320	0.2	300	MLI0805-47N-20 des
	0.068	± 20%	25	50	280	0.2	300	MLI0805-68N-20 des
	0.082	± 20%	25	50	255	0.2	300	MLI0805-82N-20 des
	0.1	± 10%	30	25	235	0.3	250	MLI0805-R10-10 des
	0.12	± 10%	30	25	220	0.3	250	MLI0805-R12-10 des
	0.15	± 10%	30	25	200	0.4	250	MLI0805-R15-10 des
	0.18	± 10%	30	25	185	0.4	250	MLI0805-R18-10 des
	0.22	± 10%	30	25	170	0.5	250	MLI0805-R22-10 des
	0.27	± 10%	30	25	150	0.5	250	MLI0805-R27-10 des
	0.33	± 10%	30	25	145	0.55	250	MLI0805-R33-10 des
	0.39	± 10%	30	25	135	0.65	250	MLI0805-R39-10 des

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SIZE	L (μH)	L tol.	Q min.	L, Q test f (MHz).	SRF min. (MHz).	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER
0805	0.47	± 10%	30	25	125	0.65	250	MLI0805-R47-10 des
	0.56	± 10%	30	25	115	0.75	150	MLI0805-R56-10 des
	0.68	± 10%	30	25	105	0.8	150	MLI0805-R68-10 des
	0.82	± 10%	30	25	100	1	150	MLI0805-R82-10 des
	1.0	± 10%	45	10	75	0.45	50	MLI0805-1R0-10 des
	1.2	± 10%	45	10	65	0.5	50	MLI0805-1R2-10 des
	1.5	± 10%	45	10	60	0.5	50	MLI0805-1R5-10 des
	1.8	± 10%	45	10	55	0.6	50	MLI0805-1R8-10 des
	2.2	± 10%	45	10	50	0.65	30	MLI0805-2R2-10 des
080505	2.7	± 10%	45	10	45	0.75	30	MLI080505-2R7-10 des
	3.3	± 10%	45	10	41	0.8	30	MLI080505-3R3-10 des
	3.9	± 10%	45	10	38	0.9	30	MLI080505-3R9-10 des
	4.7	± 10%	45	10	35	1	30	MLI080505-4R7-10 des
	5.6	± 10%	45	4	32	0.9	15	MLI080505-5R6-10 des
	6.8	± 10%	45	4	29	1	15	MLI080505-6R8-10 des
	8.2	± 10%	45	4	26	1.1	15	MLI080505-8R2-10 des
	10	± 10%	45	2	24	1.15	15	MLI080505-100-10 des
	12	± 10%	45	2	22	1.25	15	MLI080505-120-10 des
	15	± 10%	30	1	19	0.8	5	MLI080505-150-10 des
	18	± 10%	30	1	18	0.9	5	MLI080505-180-10 des
1206	0.047	± 20%	30	50	320	0.15	300	MLI1206-47N-20 des
	0.068	± 20%	25	50	280	0.25	300	MLI1206-68N-20 des
	0.1	± 10%	30	25	235	0.25	250	MLI1206-R10-10 des
	0.12	± 10%	30	25	220	0.3	250	MLI1206-R12-10 des
	0.15	± 10%	30	25	200	0.3	250	MLI1206-R15-10 des
	0.18	± 10%	30	25	185	0.4	250	MLI1206-R18-10 des
	0.22	± 10%	30	25	170	0.4	250	MLI1206-R22-10 des
	0.27	± 10%	30	25	150	0.5	250	MLI1206-R27-10 des
	0.33	± 10%	30	25	145	0.6	250	MLI1206-R33-10 des
	0.39	± 10%	30	25	135	0.5	200	MLI1206-R39-10 des
	0.47	± 10%	30	25	125	0.6	200	MLI1206-R47-10 des
	0.56	± 10%	30	25	115	0.7	150	MLI1206-R56-10 des
	0.68	± 10%	30	25	105	0.8	150	MLI1206-R68-10 des
	0.82	± 10%	30	25	100	0.9	150	MLI1206-R82-10 des
	1.0	± 10%	45	10	75	0.4	100	MLI1206-1R0-10 des
	1.2	± 10%	45	10	65	0.5	100	MLI1206-1R2-10 des
	1.5	± 10%	45	10	60	0.5	80	MLI1206-1R5-10 des
	1.8	± 10%	45	10	55	0.5	70	MLI1206-1R8-10 des
	2.2	± 10%	45	10	50	0.6	60	MLI1206-2R2-10 des

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SIZE	L (μH)	L tol.	Q min.	L, Q test f (MHz).	SRF min. (MHz).	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER
1206	2.7	± 10%	45	10	45	0.6	60	MLI1206-2R7-10 des
	3.3	± 10%	45	10	41	0.7	60	MLI1206-3R3-10 des
	3.9	± 10%	45	10	38	0.8	50	MLI1206-3R9-10 des
	4.7	± 10%	45	10	35	0.9	50	MLI1206-4R7-10 des
	5.6	± 10%	45	4	32	0.7	25	MLI1206-5R6-10 des
	6.8	± 10%	45	4	29	0.8	25	MLI1206-6R8-10 des
	8.2	± 10%	45	4	26	0.9	25	MLI1206-8R2-10 des
	10	± 10%	45	2	24	1	25	MLI1206-100-10 des
	12	± 10%	45	2	22	1.05	15	MLI1206-120-10 des
	15	± 10%	35	1	19	0.7	5	MLI1206-150-10 des
	18	± 10%	35	1	18	0.7	5	MLI1206-180-10 des

- RDC: Resistance of component for DC current.
- Maximum rated current: measure of current capacity of the component. When the maximum rated current is applied, temperature rise shall not exceed 20°C.
- Other tolerances can be provided upon request.
- Operating temperature: -40°C to +125°C.

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Product specifications Multilayer High frequency Inductors MLH

SIZE	L (nH) 100 (MHz)	L tol.	Q min 100 (MHz)	Q typ 100 (MHz)	Q typ 800 (MHz)	SRF min. (MHz)	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER
0402	1.0	± 0.3	8	9	28	6000	0.10	300	MLH0402-1N0-03 des
	1.2	± 0.3	8	9	28	6000	0.10	300	MLH0402-1N2-03 des
	1.5	± 0.3	8	10	28	6000	0.10	300	MLH0402-1N5-03 des
	1.8	± 0.3	8	10	28	6000	0.10	300	MLH0402-1N8-03 des
	2.2	± 0.3	8	10	29	6000	0.12	300	MLH0402-2N2-03 des
	2.7	± 0.3	8	11	30	6000	0.12	300	MLH0402-2N7-03 des
	3.3	± 0.3	8	11	30	5200	0.15	300	MLH0402-3N3-03 des
	3.9	± 0.3	8	11	31	5150	0.15	300	MLH0402-3N9-03 des
	4.7	± 0.3	8	11	31	4800	0.18	300	MLH0402-4N7-03 des
	5.6	± 0.3	8	11	31	4100	0.20	300	MLH0402-5N6-03 des
	6.8	± 5%	8	11	33	3800	0.25	300	MLH0402-6N8-5 des
	8.2	± 5%	8	12	32	3500	0.25	300	MLH0402-8N2-5 des
	10.0	± 5%	8	12	32	3300	0.30	300	MLH0402-10N-5 des
	12.0	± 5%	8	12	31	2600	0.30	300	MLH0402-12N-5 des
	15.0	± 5%	8	12	30	2300	0.40	300	MLH0402-15N-5 des
	18.0	± 5%	8	12	29	2050	0.50	300	MLH0402-18N-5 des
	22.0	± 5%	8	12	28	1900	0.60	300	MLH0402-22N-5 des
	27.0	± 5%	8	12	27	1700	0.70	300	MLH0402-27N-5 des
	33.0	± 5%	8	10	25	1550	1.5	200	MLH0402-33N-5 des
	39.0	± 5%	8	10	25	1450	1.8	200	MLH0402-39N-5 des
	47.0	± 5%	8	9	22	1300	2.0	200	MLH0402-47N-5 des
	56.0	± 5%	8	10	21	1250	2.0	100	MLH0402-56N-5 des
0603	1.0	± 0.3	10	12	50	6000	0.10	500	MLH0603-1N0-03 des
	1.2	± 0.3	10	13	65	6000	0.10	500	MLH0603-1N2-03 des
	1.5	± 0.3	10	13	47	6000	0.10	500	MLH0603-1N5-03 des
	1.8	± 0.3	10	13	51	6000	0.10	500	MLH0603-1N8-03 des
	2.2	± 0.3	11	13	46	6000	0.10	500	MLH0603-2N2-03 des
	2.7	± 0.3	11	13	45	6000	0.10	500	MLH0603-2N7-03 des
	3.3	± 0.3	11	13	51	5900	0.12	500	MLH0603-3N3-03 des
	3.9	± 0.3	11	13	52	5600	0.14	500	MLH0603-3N9-03 des
	4.7	± 0.3	11	13	41	4800	0.16	500	MLH0603-4N7-03 des
	5.6	± 0.3	11	13	41	4350	0.18	500	MLH0603-5N6-5 des
	6.8	± 5%	11	13	44	3750	0.22	500	MLH0603-6N8-5 des
	8.2	± 5%	11	13	44	3300	0.24	500	MLH0603-8N2-5 des
	10.0	± 5%	11	13	45	2850	0.26	400	MLH0603-10N-5 des
	12.0	± 5%	13	15	46	2500	0.28	400	MLH0603-12N-5 des
	15.0	± 5%	13	15	48	2150	0.32	400	MLH0603-15N-5 des
	18.0	± 5%	13	15	48	2100	0.35	400	MLH0603-18N-5 des
	22.0	± 5%	15	17	45	1850	0.40	400	MLH0603-22N-5 des

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SIZE	L (nH) 100 (MHz)	L tol.	Q min 100 (MHz)	Q typ 100 (MHz)	Q typ 800 (MHz)	SRF min. (MHz)	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER	
603	27.0	± 5%	15	17	43	1680	0.45	400	MLH0603-27N-5	des
	33.0	± 5%	15	18	39	1580	0.55	400	MLH0603-33N-5	des
	39.0	± 5%	15	18	37 ⁽¹⁾	1400	0.60	300	MLH0603-39N-5	des
	47.0	± 5%	15	18	35 ⁽¹⁾	1200	0.70	300	MLH0603-47N-5	des
	56.0	± 5%	15	18	32 ⁽¹⁾	1100	0.75	300	MLH0603-56N-5	des
	68.0	± 5%	15	18	34 ⁽¹⁾	1050	0.85	300	MLH0603-68N-5	des
	82.0	± 5%	15	18	32 ⁽¹⁾	900	1.0	300	MLH0603-82N-5	des
	100	± 5%	15	18	20 ⁽¹⁾	850	1.2	300	MLH0603-R10-5	des
	120	± 5%	8 ⁽³⁾	16 ⁽³⁾	23 ⁽²⁾	680	1.6	250	MLH0603-R12-5	des
	150	± 5%	8 ⁽³⁾	14 ⁽³⁾	23 ⁽²⁾	620	2.0	250	MLH0603-R15-5	des
	180	± 5%	8 ⁽³⁾	14 ⁽³⁾	21 ⁽²⁾	570	2.4	250	MLH0603-R18-5	des
	220	± 5%	8 ⁽³⁾	13 ⁽³⁾	20 ⁽²⁾	530	2.8	200	MLH0603-R22-5	des
0805	1.5	± 0.3	11	13	40	6000	0.10	500	MLH0805-1N5-03	des
	1.8	± 0.3	11	13	45	6000	0.10	500	MLH0805-1N8-03	des
	2.2	± 0.3	11	13	48	6000	0.10	500	MLH0805-2N2-03	des
	2.7	± 0.3	11	13	40	6000	0.10	500	MLH0805-2N7-03	des
	3.3	± 0.3	13	15	56	6000	0.13	500	MLH0805-3N3-03	des
	3.9	± 0.3	13	15	54	5400	0.15	500	MLH0805-3N9-03	des
	4.7	± 0.3	13	15	50	4500	0.20	500	MLH0805-4N7-03	des
	5.6	± 0.3	13	15	53	4000	0.23	500	MLH0805-5N6-03	des
	6.8	± 5%	13	15	51	3650	0.25	500	MLH0805-6N8-5	des
	8.2	± 5%	13	15	53	3000	0.28	500	MLH0805-8N2-5	des
	10.0	± 5%	14	16	45	2500	0.30	500	MLH0805-10N-5	des
	12.0	± 5%	14	16	48	2450	0.35	400	MLH0805-12N-5	des
	15.0	± 5%	15	17	48	2000	0.40	400	MLH0805-15N-5	des
	18.0	± 5%	15	17	43	1750	0.45	400	MLH0805-18N-5	des
	22.0	± 5%	15	17	47	1700	0.50	400	MLH0805-22N-5	des
	27.0	± 5%	16	18	38	1550	0.55	400	MLH0805-27N-5	des
	33.0	± 5%	17	19	35	1350	0.60	400	MLH0805-33N-5	des
	39.0	± 5%	19	21	40	1300	0.65	400	MLH0805-39N-5	des
	47.0	± 5%	19	21	38	1200	0.70	400	MLH0805-47N-5	des
	56.0	± 5%	16	21	31	1150	0.75	400	MLH0805-56N-5	des
	68.0	± 5%	19	21	28	1000	0.80	400	MLH0805-68N-5	des
	82.0	± 5%	20	22	16	850	0.90	400	MLH0805-82N-5	des
	100	± 5%	18	23	-	730	1.0	300	MLH0805-R10-5	des
	120 ⁽³⁾	± 5%	13 ⁽³⁾	22	-	650	1.2	300	MLH0805-R12-5	des
	150 ⁽¹⁾	± 5%	13 ⁽³⁾	22	-	550	1.4	300	MLH0805-R15-5	des
	180 ⁽¹⁾	± 5%	13 ⁽³⁾	23	-	500	1.8	300	MLH0805-R18-5	des
	220 ⁽¹⁾	± 5%	12 ⁽¹⁾	20	-	450	1.8	300	MLH0805-R22-5	des

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SIZE	L (nH) 100 (MHz)	L tol.	Q min 100 (MHz)	Q typ 100 (MHz)	Q typ 800 (MHz)	SRF min. (MHz)	R _{DC} max. (Ω)	I max. (mA)	TYPE NUMBER
0805	270 ⁽¹⁾	± 5%	12 ⁽¹⁾	20	-	400	2.5	200	MLH0805-R27-5 
	330 ⁽¹⁾	± 5%	12 ⁽¹⁾	22	-	380	3.0	200	MLH0805-R33-5 
	390 ⁽¹⁾	± 5%	10 ⁽¹⁾	17	-	330	3.5	200	MLH0805-R39-5 
	470 ⁽¹⁾	± 5%	10 ⁽¹⁾	17	-	300	4.0	200	MLH0805-R47-5 

Note

1. at 500 MHz
2. at 300 MHz
3. at 50 MHz

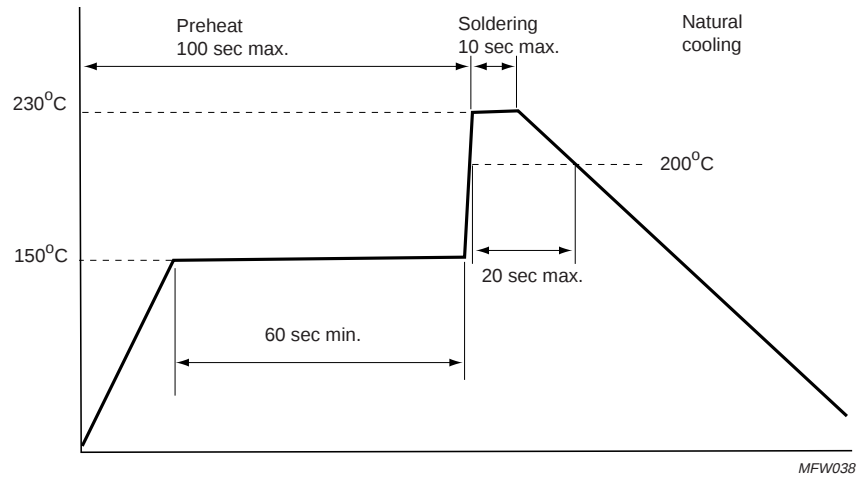
- RDC: Resistance of component for DC current.
- Maximum rated current: measure of current capacity of the component. When the maximum rated current is applied, temperature rise shall not exceed 20°C.
- Other tolerances can be provided upon request.
- Operating temperature: -40°C to +125°C.

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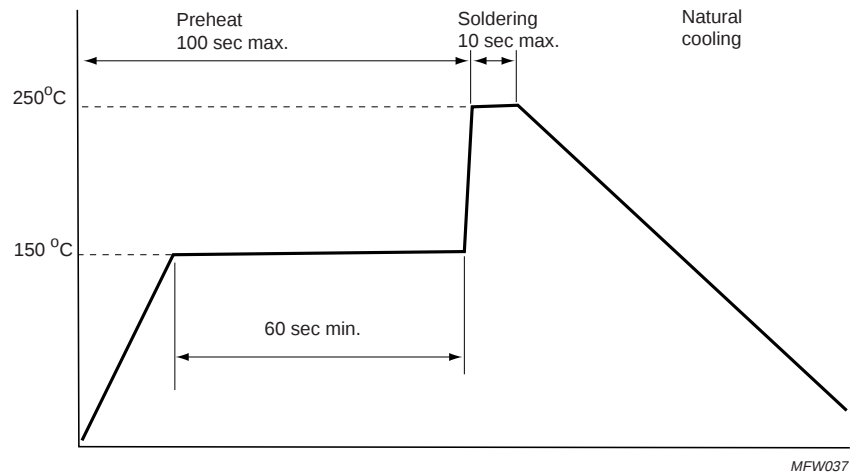
MOUNTING

Soldering profiles



Typical values (solid line).
Process limits (dotted lines).

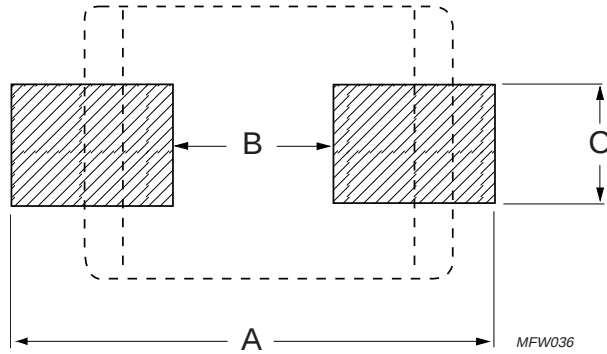
Fig.3 Reflow soldering.



Typical values (solid line).
Process limits (dotted lines).

Fig.4 Double wave soldering.

Dimensions of solderlands



For dimensions see Table 1.

Fig.5 Recommended dimensions of solder lands.

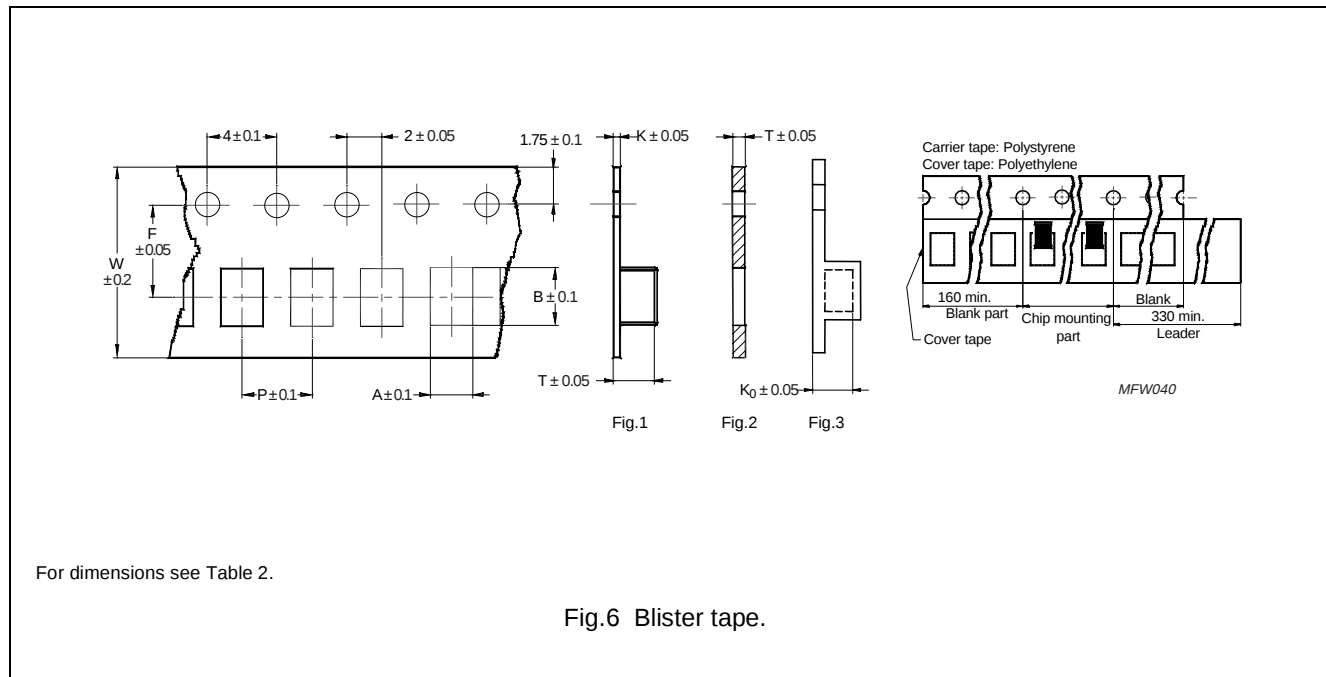
Table 1 Solder land dimensions for MLI and MLH types; see Fig.5

SIZE	FOOTPRINT DIMENSIONS (mm)		
	A	B	C
0402	1.2 – 1.4	0.4	0.4
0603	2.4 – 3.4	0.8	0.6
0805	3.0 – 4.0	1.2	1.0
080505	3.0 – 4.0	1.2	1.0
1206	4.2 – 5.2	2.0	1.2

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BLISTER TAPE AND REEL DIMENSIONS

**Table 2** Dimensions of blister tape for relevant product size code; see Fig.6

DIMENSION	PRODUCT SIZE CODE						
	MLH0402	MLI0603	MLH0603	MLI0805	MLH0805	MLI080505	MLI1206
A	0.65	1.1	1.1	1.54	1.42	1.54	1.94
B	1.15	1.9	1.9	2.32	2.25	2.32	3.54
T	0.6	0.95	0.95	1.15	(1)	1.35	1.29
W	8	8	8	8	8	8	8
P	2	4	4	4	4	4	4
F	3.5	3.5	3.5	3.5	3.5	3.5	3.5
K ₀	0.6	--	0.95	0.2	0.22	0.2	0.2
Tape fig.	3	2	3	1	3	1	1

Note 1):K₀ = 1.04 for L < 180 nHK₀ = 1.4 for L ≥ 180 nH**MATERIAL BLISTER TAPE:**

- Sizes 0402 and 0603: paper
- Other sizes: Polystyrene

MATERIAL COVER FILM:

- Polyethylene

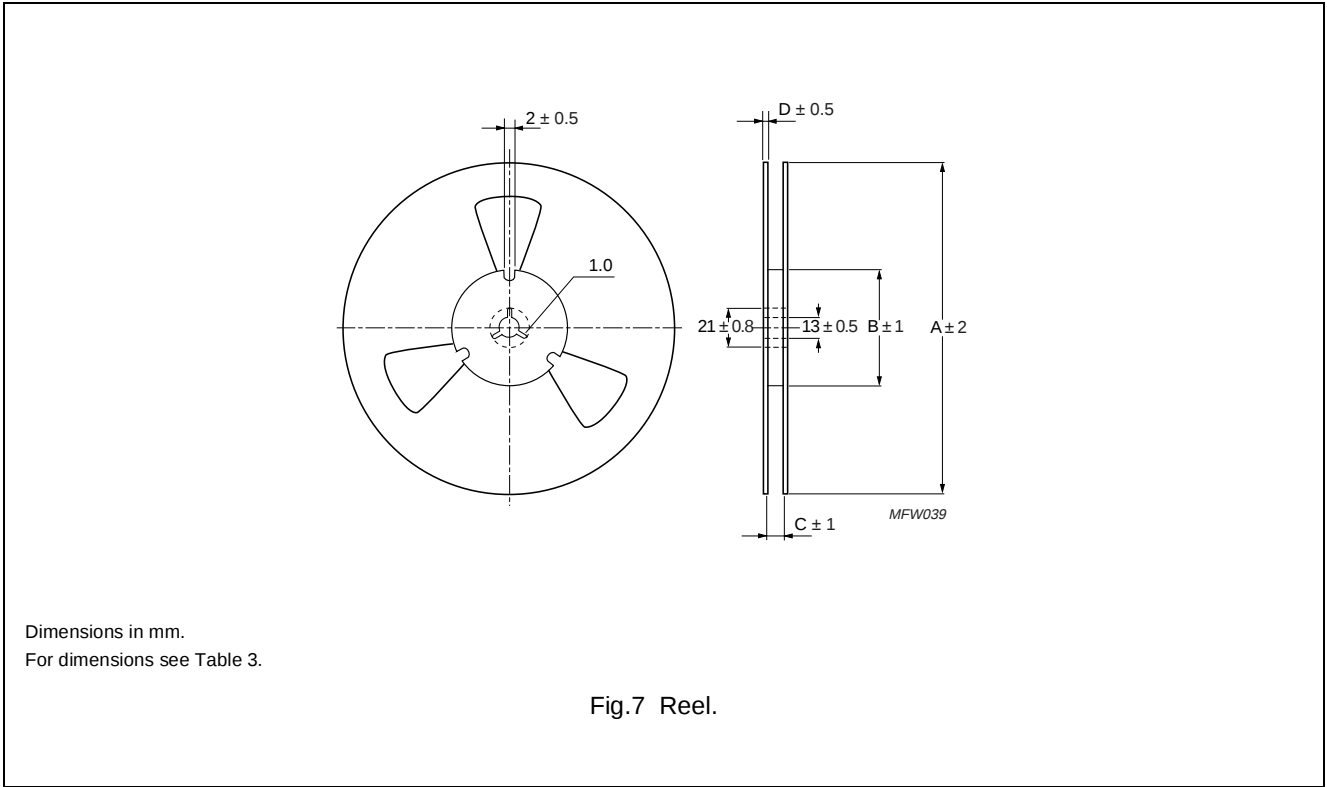


Table 3 Reel dimensions; see Fig.7

DIMENSION	PRODUCT SIZE CODE						
	MLH0402	MLI0603	MLH0603	MLI0805	MLH0805	MLI080505	MLI1206
A	178	178	178	178	178	178	178
B	60	60	60	60	60	60	60
C	12	10	12	10	12	10	10
D	1.5	2	1.5	2	1.5	2	2

Table 4 Packing quantities

	PRODUCT SIZE CODE				
	0402	0603	0805	080505	1206
Pcs./reel	10 000	4 000	4 000	3 000	3 000

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DATA SHEET STATUS DEFINITIONS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
Preliminary specification	Development	This data sheet contains preliminary data. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.
Product specification	Production	This data sheet contains final specifications. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.

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PRODUCT STATUS DEFINITIONS

STATUS	INDICATION	DEFINITION
Prototype		These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change.
Design-in		These products are recommended for new designs.
Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support		These products are not recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.