

此商品编号的参数规格是：MLF2012C330KT000/0805
33uH \pm 10%

Inductors for Standard Circuits

Multilayer/STD • magnetic shielded

MLF series

Type:	MLF1005L	1005[0402 inch]*
	MLF1608	1608[0603 inch]
	<u>MLF2012</u>	<u>2012[0805 inch]</u>

* Dimensions Code JIS[EIA]

Issue date: November 2011

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Inductors for Standard Circuits Multilayer/STD • Magnetic Shielded

Conformity to RoHS Directive

MLF Series MLF2012

FEATURES

- High-reliability monolithic structure.
- Ferrite core and magnetic shielding enables the design of compact circuits with high density mounting.
- Excellent solderability and high heat resistance permits either flow or reflow soldering.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

APPLICATIONS

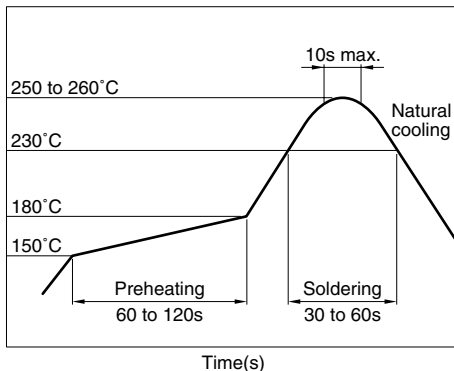
Digital cellular phone, car audio, TV, personal computers, or various electronic appliances

SPECIFICATIONS

Operating temperature range	-40 to +85°C
Storage temperature range	-40 to +85°C(After mount)

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



PRODUCT IDENTIFICATION

MLF	2012	A	1R0	K	T	□□□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimensions L×W

2012	2.0×1.25mm
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(3) Type name

(4) Inductance

47N	47nH[0.047μH]
R15	0.15μH
1R0	1μH
100	10μH

(5) Tolerance

K	±10%
M	±20%

(6) Packaging style

T	Taping [reel]
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(7) TDK internal code

PACKAGING STYLE AND QUANTITIES

Packaging style	Product's thickness	Quantity
Taping	0.85mm	4000 pieces/reel
	1.25mm	2000 pieces/reel

HANDLING AND PRECAUTIONS

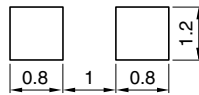
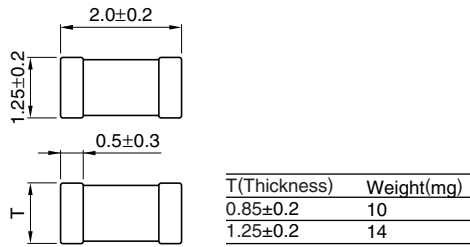
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- The inductance value may change due to magnetic saturation if the current exceeds the rated maximum.
- Do not expose the inductors to stray magnetic fields.
- Avoid static electricity discharge during handling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 350°C. Soldering time should not exceed 3 seconds.

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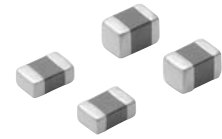
• Please contact our Sales office when your application is considered the following:
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

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SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm



ELECTRICAL CHARACTERISTICS

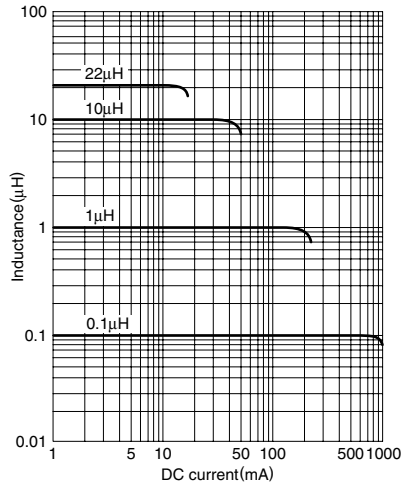
Inductance (μ H)	Inductance tolerance	Q		Test frequency L, Q (MHz)	Test current L, Q (mA)	Self-resonant frequency (MHz)		DC resistance (Ω)		Rated current (mA)max.	Thickness T (mm)	Part No.
		min.	typ.			min.	typ.	max.	typ.			
0.047	$\pm 20\%$	15	25	50	1.0	550	700	0.10	0.05	300	0.85	MLF2012D47N*MT
0.068	$\pm 20\%$	15	25	50	1.0	500	600	0.15	0.08	300	0.85	MLF2012D68NMT
0.082	$\pm 20\%$	15	25	50	1.0	450	550	0.15	0.08	300	0.85	MLF2012D82NMT
0.1	$\pm 10\%$	20	30	25	1.0	400	500	0.15	0.10	300	0.85	MLF2012DR10KT
0.12	$\pm 10\%$	20	30	25	1.0	360	450	0.20	0.12	300	0.85	MLF2012DR12KT
0.15	$\pm 10\%$	20	30	25	1.0	320	410	0.20	0.13	300	0.85	MLF2012DR15KT
0.18	$\pm 10\%$	20	30	25	1.0	280	370	0.25	0.15	300	0.85	MLF2012DR18KT
0.22	$\pm 10\%$	20	30	25	1.0	250	330	0.30	0.16	250	0.85	MLF2012DR22KT
0.27	$\pm 10\%$	20	30	25	1.0	220	300	0.35	0.18	250	0.85	MLF2012DR27KT
0.33	$\pm 10\%$	20	30	25	1.0	200	270	0.40	0.23	250	0.85	MLF2012DR33KT
0.39	$\pm 10\%$	25	35	25	1.0	180	250	0.45	0.25	200	0.85	MLF2012DR39KT
0.47	$\pm 10\%$	25	35	25	1.0	160	230	0.50	0.25	200	1.25	MLF2012DR47KT
0.56	$\pm 10\%$	25	35	25	1.0	150	210	0.55	0.30	150	1.25	MLF2012DR56KT
0.68	$\pm 10\%$	25	35	25	1.0	140	190	0.60	0.35	150	1.25	MLF2012DR68KT
0.82	$\pm 10\%$	25	35	25	1.0	130	170	0.65	0.40	150	1.25	MLF2012DR82KT
1	$\pm 10\%$	45	55	10	1.0	120	160	0.30	0.15	80	0.85	MLF2012A1R0KT
1.2	$\pm 10\%$	45	55	10	1.0	110	150	0.35	0.15	80	0.85	MLF2012A1R2KT
1.5	$\pm 10\%$	45	60	10	1.0	100	140	0.40	0.18	80	0.85	MLF2012A1R5KT
1.8	$\pm 10\%$	45	60	10	1.0	90	130	0.45	0.20	80	0.85	MLF2012A1R8KT
2.2	$\pm 10\%$	45	60	10	1.0	80	120	0.50	0.22	50	0.85	MLF2012A2R2KT
2.7	$\pm 10\%$	45	70	10	1.0	70	100	0.55	0.25	50	1.25	MLF2012A2R7KT
3.3	$\pm 10\%$	45	70	10	1.0	60	90	0.60	0.28	50	1.25	MLF2012A3R3KT
3.9	$\pm 10\%$	45	70	10	1.0	55	80	0.65	0.30	30	1.25	MLF2012A3R9KT
4.7	$\pm 10\%$	45	70	10	1.0	50	70	0.70	0.35	30	1.25	MLF2012A4R7KT
5.6	$\pm 10\%$	50	75	4	0.1	45	65	0.60	0.30	15	1.25	MLF2012E5R6KT
6.8	$\pm 10\%$	50	75	4	0.1	40	60	0.65	0.32	15	1.25	MLF2012E6R8KT
8.2	$\pm 10\%$	50	75	4	0.1	35	55	0.70	0.35	15	1.25	MLF2012E8R2KT
10	$\pm 10\%$	50	75	2	0.1	30	50	0.80	0.40	15	1.25	MLF2012E100KT
12	$\pm 10\%$	50	75	2	0.1	25	45	0.90	0.50	15	1.25	MLF2012E120KT
15	$\pm 10\%$	30	45	1	0.1	22	40	0.70	0.35	5	1.25	MLF2012C150KT
18	$\pm 10\%$	30	45	1	0.1	20	38	0.80	0.38	5	1.25	MLF2012C180KT
22	$\pm 10\%$	30	45	1	0.1	18	35	0.90	0.45	5	1.25	MLF2012C220KT
27	$\pm 10\%$	30	45	1	0.1	17	33	1.00	0.50	5	1.25	MLF2012C270KT
33	$\pm 10\%$	30	45	0.4	0.1	15	28	1.10	0.55	5	1.25	MLF2012C330KT
39	$\pm 10\%$	35	55	2	0.1	13	23	2.40	1.30	4	1.25	MLF2012K390KT
47	$\pm 10\%$	35	55	2	0.1	11	20	2.70	1.60	4	1.25	MLF2012K470KT
56	$\pm 10\%$	35	55	2	0.1	10	18	2.80	1.80	4	1.25	MLF2012K560KT
68	$\pm 10\%$	25	45	1	0.1	9	16	2.90	2.00	2	1.25	MLF2012C680KT
82	$\pm 10\%$	25	45	1	0.1	8	14	3.00	2.40	2	1.25	MLF2012C820KT
100	$\pm 10\%$	25	45	1	0.1	7	12	3.10	2.50	2	1.25	MLF2012C101KT

* 47N means for 47nH (0.047 μ H).

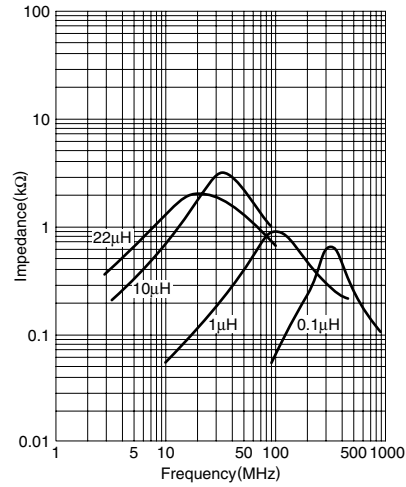
• Test equipment

Inductance, Q: Ag4294A-16034G

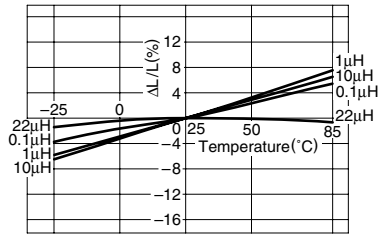
TYPICAL ELECTRICAL CHARACTERISTICS INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



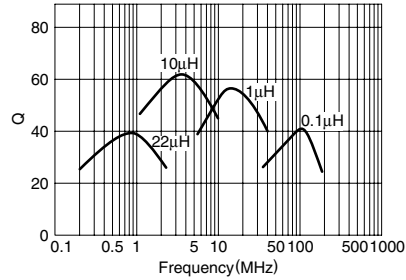
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



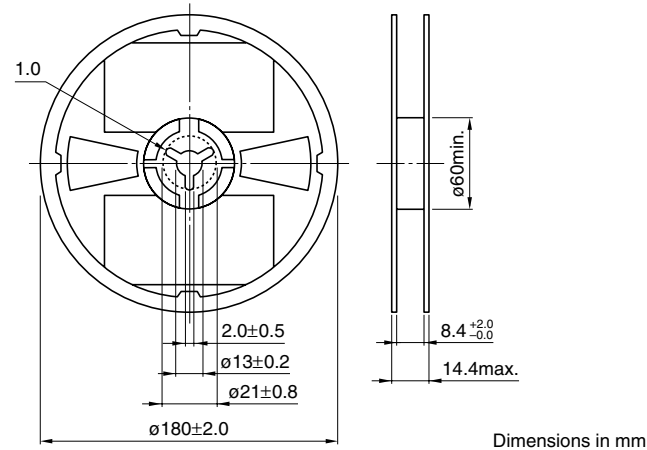
INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



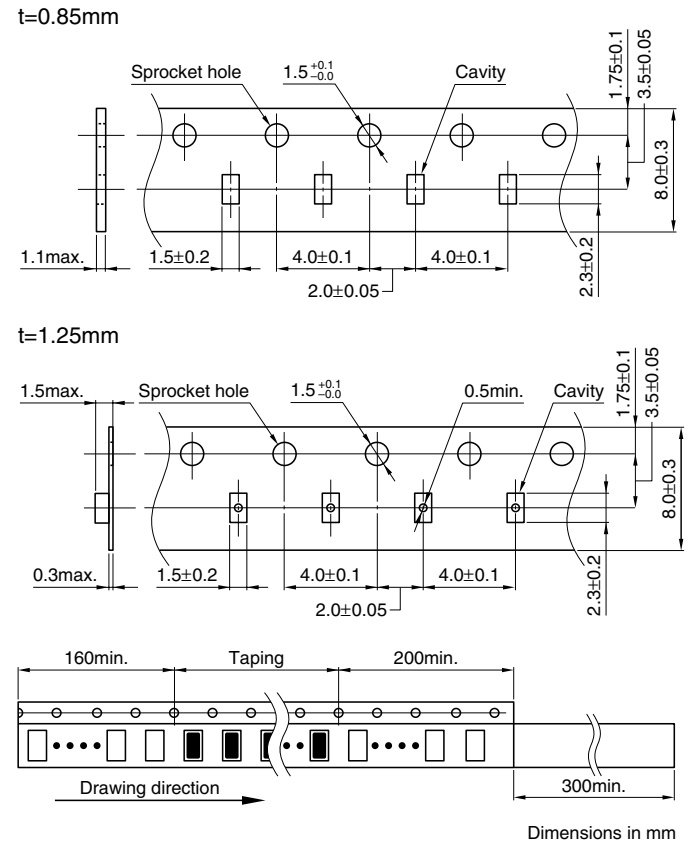
Q vs. FREQUENCY CHARACTERISTICS



PACKAGING STYLES REEL DIMENSIONS



TAPE DIMENSIONS



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