

⊕ Feature

- Low profile very effective in space-conscious applications.
- Low resistance and high energy storage.

⊕ Product Identification :



1



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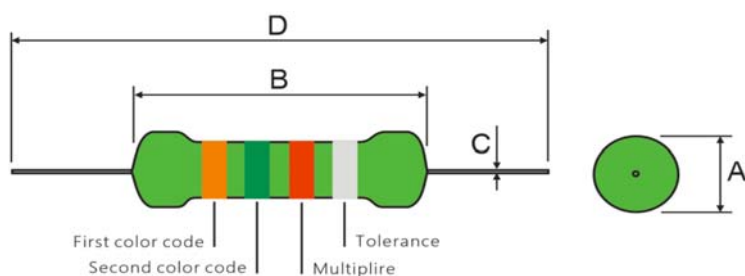


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Series name	Dimensions(ODxL)	Internal code
AL	0410 4.0*10.5mm	T = Tapping

Inductance		Tolerance	
100	10 μ H	J	5%
101	100 μ H	K	10%
102	1000 μ H	M	20%

⊕ Shapes And Dimensions



Part No.	Dimensions(mm)			
	A	B	C	D
AL0307 Series	3.0/3.2 Max	7.0 Max	0.50 ± 0.1	62.00 ± 2.0
AL0410 Series	4.0/4.5 Max	10.0 Max	0.55 ± 0.1	62.00 ± 2.0
AL0510 Series	5.0 Max	10.0 Max	0.60 ± 0.1	62.00 ± 2.0
AL0512 Series	5.0 Max	12.0 Max	0.60 ± 0.1	62.00 ± 2.0

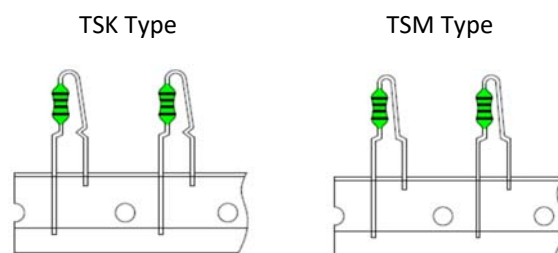
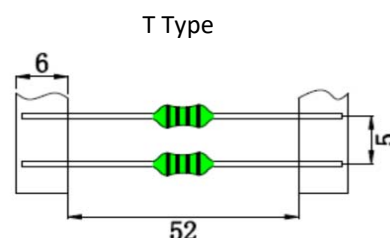
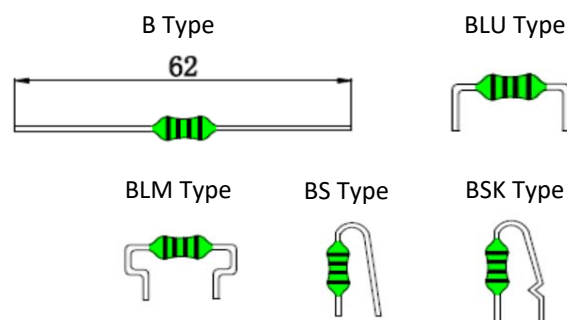
⊕ Equivalent Circuit Schematic :



⊕ Applications

VTR, OA equipment, digital camera, LCD TV, notebook PC, portable communication equipments, DC/DC converters, power supply etc.

⊕ Several common molding style and named



⊕ Material List :

No.	Location	Material
1	Core	Ferrite Core
2	Wire	2UEW-F,E233255
3	Epoxy Resin	DGT-1(Green)
4	Pin	TC or CP
5	Solder	Sn99.3 Cu0.7

1. Operating temperature -25°C ~ +85°C

2. Storage conditions -40°C ~ +85°C

⊕ Electrical Characteristics :

Part No.	Inductance (μ H)	Isat (mA) Max	Q Min	DCR (Ω) Max	SRF (MHz) Min	Test Frequency L & Q
AL0307T-R33M	0.33 $\pm$ 20%	370	45	0.24	150	25.2MHz
AL0307T-R39M	0.39 $\pm$ 20%	350	45	0.26	150	25.2MHz
AL0307T-R47M	0.47 $\pm$ 20%	330	45	0.28	150	25.2MHz
AL0307T-R56M	0.56 $\pm$ 20%	320	50	0.31	150	25.2MHz
AL0307T-R68M	0.68 $\pm$ 20%	310	50	0.34	150	25.2MHz
AL0307T-R82M	0.82 $\pm$ 20%	290	55	0.37	150	25.2MHz
AL0307T-1R0K	1 $\pm$ 10%	270	60	0.4	150	25.2MHz
AL0307T-1R2K	1.2 $\pm$ 10%	740	40	0.18	165	7.96MHz
AL0307T-1R5K	1.5 $\pm$ 10%	700	45	0.2	150	7.96MHz
AL0307T-1R8K	1.8 $\pm$ 10%	655	50	0.23	125	7.96MHz
AL0307T-2R2K	2.2 $\pm$ 10%	630	50	0.25	110	7.96MHz
AL0307T-2R7K	2.7 $\pm$ 10%	595	50	0.28	95	7.96MHz
AL0307T-3R3K	3.3 $\pm$ 10%	575	50	0.3	70	7.96MHz
AL0307T-3R9K	3.9 $\pm$ 10%	555	45	0.32	65	7.96MHz
AL0307T-4R7K	4.7 $\pm$ 10%	530	45	0.35	50	7.96MHz
AL0307T-5R6K	5.6 $\pm$ 10%	500	45	0.4	40	7.96MHz
AL0307T-6R8K	6.8 $\pm$ 10%	470	40	0.45	30	7.96MHz
AL0307T-8R2K	8.2 $\pm$ 10%	425	40	0.55	28	7.96MHz
AL0307T-100K	10 $\pm$ 10%	370	40	0.72	22	7.96MHz
AL0307T-120K	12 $\pm$ 10%	350	45	0.8	20	2.52MHz
AL0307T-150K	15 $\pm$ 10%	335	50	0.88	16	2.52MHz
AL0307T-180K	18 $\pm$ 10%	315	50	1	15	2.52MHz
AL0307T-220K	22 $\pm$ 10%	285	50	1.2	13	2.52MHz
AL0307T-270K	27 $\pm$ 10%	270	50	1.35	11	2.52MHz
AL0307T-330K	33 $\pm$ 10%	255	50	1.5	10	2.52MHz
AL0307T-390K	39 $\pm$ 10%	240	50	1.7	9.5	2.52MHz
AL0307T-470K	47 $\pm$ 10%	205	50	2.3	8.5	2.52MHz
AL0307T-560K	56 $\pm$ 10%	195	50	2.6	7.5	2.52MHz
AL0307T-680K	68 $\pm$ 10%	185	50	2.9	6.5	2.52MHz
AL0307T-820K	82 $\pm$ 10%	175	50	3.2	6	2.52MHz
AL0307T-101K	100 $\pm$ 10%	165	50	3.5	5.5	2.52MHz
AL0307T-121K	120 $\pm$ 10%	160	50	3.8	5.4	0.796MHz
AL0307T-151K	150 $\pm$ 10%	150	50	4.4	4.75	0.796MHz
AL0307T-181K	180 $\pm$ 10%	140	50	5	4.35	0.796MHz
AL0307T-221K	220 $\pm$ 10%	130	50	5.7	4	0.796MHz
AL0307T-271K	270 $\pm$ 10%	120	50	6.5	3.7	0.796MHz
AL0307T-331K	330 $\pm$ 10%	100	50	9.5	3.4	0.796MHz
AL0307T-391K	390 $\pm$ 10%	95	50	10.5	2.8	0.796MHz
AL0307T-471K	470 $\pm$ 10%	90	50	11.6	2.55	0.796MHz
AL0307T-561K	560 $\pm$ 10%	85	50	13	2.35	0.796MHz
AL0307T-681K	680 $\pm$ 10%	75	50	18	2	0.796MHz
AL0307T-821K	820 $\pm$ 10%	65	50	23	1.5	0.796MHz
AL0307T-102K	1000 $\pm$ 10%	60	50	26	1.2	0.796MHz

⊕ Electrical Characteristics :

Part No.	Inductance (μ H)	Isat (mA) Max	Q Min	DCR (Ω) Max	SRF (MHz) Min	Test Frequency L & Q
AL0410T-R22M	0.22 $\pm$ 20%	880	25	0.21	380	25.2MHz
AL0410T-R27M	0.27 $\pm$ 20%	800	25	0.24	340	25.2MHz
AL0410T-R33M	0.33 $\pm$ 20%	750	25	0.28	300	25.2MHz
AL0410T-R39M	0.39 $\pm$ 20%	680	25	0.32	280	25.2MHz
AL0410T-R47M	0.47 $\pm$ 20%	650	25	0.36	250	25.2MHz
AL0410T-R56M	0.56 $\pm$ 20%	600	25	0.41	230	25.2MHz
AL0410T-R68M	0.68 $\pm$ 20%	550	25	0.47	210	25.2MHz
AL0410T-R82M	0.82 $\pm$ 20%	980	45	0.17	172	25.2MHz
AL0410T-1R0K	1 $\pm$ 10%	920	45	0.19	157	25.2MHz
AL0410T-1R2K	1.2 $\pm$ 10%	880	50	0.21	144	7.96MHz
AL0410T-1R5K	1.5 $\pm$ 10%	830	50	0.23	131	7.96MHz
AL0410T-1R8K	1.8 $\pm$ 10%	790	55	0.25	121	7.96MHz
AL0410T-2R2K	2.2 $\pm$ 10%	750	55	0.28	110	7.96MHz
AL0410T-2R7K	2.7 $\pm$ 10%	720	60	0.3	100	7.96MHz
AL0410T-3R3K	3.3 $\pm$ 10%	670	65	0.34	94	7.96MHz
AL0410T-3R9K	3.9 $\pm$ 10%	640	65	0.37	86	7.96MHz
AL0410T-4R7K	4.7 $\pm$ 10%	620	70	0.39	80	7.96MHz
AL0410T-5R6K	5.6 $\pm$ 10%	590	70	0.43	74	7.96MHz
AL0410T-6R8K	6.8 $\pm$ 10%	550	75	0.48	68	7.96MHz
AL0410T-8R2K	8.2 $\pm$ 10%	530	80	0.52	53	7.96MHz
AL0410T-100K	10 $\pm$ 10%	500	85	0.58	45	7.96MHz
AL0410T-120K	12 $\pm$ 10%	480	75	0.63	34	2.52MHz
AL0410T-150K	15 $\pm$ 10%	460	70	0.72	20	2.52MHz
AL0410T-180K	18 $\pm$ 10%	430	65	0.77	14	2.52MHz
AL0410T-220K	22 $\pm$ 10%	410	60	0.84	9.9	2.52MHz
AL0410T-270K	27 $\pm$ 10%	390	55	0.94	7.6	2.52MHz
AL0410T-330K	33 $\pm$ 10%	370	55	1.03	6.3	2.52MHz
AL0410T-390K	39 $\pm$ 10%	350	50	1.12	6.3	2.52MHz
AL0410T-470K	47 $\pm$ 10%	340	45	1.22	6.3	2.52MHz
AL0410T-560K	56 $\pm$ 10%	320	40	1.34	6.2	2.52MHz
AL0410T-680K	68 $\pm$ 10%	305	40	1.47	5.7	2.52MHz
AL0410T-820K	82 $\pm$ 10%	290	35	1.62	5.3	2.52MHz
AL0410T-101K	100 $\pm$ 10%	275	30	1.8	4.8	2.52MHz
AL0410T-121K	120 $\pm$ 10%	185	70	3.7	3.8	0.796MHz
AL0410T-151K	150 $\pm$ 10%	175	70	4.2	3.5	0.796MHz
AL0410T-181K	180 $\pm$ 10%	165	70	4.6	3.3	0.796MHz
AL0410T-221K	220 $\pm$ 10%	155	70	5.1	3	0.796MHz
AL0410T-271K	270 $\pm$ 10%	145	65	5.8	2.8	0.796MHz
AL0410T-331K	330 $\pm$ 10%	137	65	6.4	2.6	0.796MHz
AL0410T-391K	390 $\pm$ 10%	133	65	7	2.4	0.796MHz
AL0410T-471K	470 $\pm$ 10%	126	60	7.7	2.25	0.796MHz
AL0410T-561K	560 $\pm$ 10%	120	60	8.5	2.1	0.796MHz
AL0410T-681K	680 $\pm$ 10%	113	55	9.4	1.95	0.796MHz
AL0410T-821K	820 $\pm$ 10%	105	55	10.5	1.85	0.796MHz

⊕ Electrical Characteristics :

Part No.	Inductance (μ H)	Isat (mA) Max	Q Min	DCR (Ω) Max	SRF (MHz) Min	Test Frequency L & Q
AL0410T-102K	1000 $\pm$ 10%	100	50	12	1.4	1KHz/0.252MHz
AL0410T-122K	1200 $\pm$ 10%	55	30	16	1.2	1KHz/0.252MHz
AL0410T-152K	1500 $\pm$ 10%	55	30	25	1	1KHz/0.252MHz
AL0410T-182K	1800 $\pm$ 10%	45	30	27	0.9	1KHz/0.252MHz
AL0410T-222K	2200 $\pm$ 10%	45	30	30	0.8	1KHz/0.252MHz
AL0410T-272K	2700 $\pm$ 10%	40	30	32	0.7	1KHz/0.252MHz
AL0410T-332K	3300 $\pm$ 10%	35	30	42	0.65	1KHz/0.252MHz
AL0410T-392K	3900 $\pm$ 10%	30	30	45	0.65	1KHz/0.252MHz
AL0410T-472K	4700 $\pm$ 10%	25	30	78	0.6	1KHz/0.252MHz

⊕ Electrical Characteristics :

Part No.	Inductance (μ H)	Isat (mA) Max	Q Min	DCR (Ω) Max	SRF (MHz) Min	Test Frequency L & Q
AL0510T-100K	10 $\pm$ 10%	650	20	0.3	-	1KHz/0.796MHz
AL0510T-120K	12 $\pm$ 10%	610	25	0.15	-	1KHz/2.52MHz
AL0510T-220K	22 $\pm$ 10%	540	30	0.2	-	1KHz/2.52MHz
AL0510T-330K	33 $\pm$ 10%	490	30	0.6	-	1KHz/2.52MHz
AL0510T-470K	47 $\pm$ 10%	410	30	0.7	-	1KHz/2.52MHz
AL0510T-560K	56 $\pm$ 10%	340	30	0.75	-	1KHz/2.52MHz
AL0510T-680K	68 $\pm$ 10%	320	30	0.8	-	1KHz/2.52MHz
AL0510T-820K	82 $\pm$ 10%	300	30	0.85	-	1KHz/2.52MHz
AL0510T-101K	100 $\pm$ 10%	300	45	0.9	-	1KHz/0.796MHz
AL0510T-151K	150 $\pm$ 10%	220	40	2	-	1KHz/0.796MHz
AL0510T-221K	220 $\pm$ 10%	200	40	3.2	-	1KHz/0.796MHz
AL0510T-331K	330 $\pm$ 10%	180	40	3.5	2	1KHz/0.796MHz
AL0510T-391K	390 $\pm$ 10%	150	40	4	1.9	1KHz/0.796MHz
AL0510T-471K	470 $\pm$ 10%	126	50	6	1.9	1KHz/0.796MHz
AL0510T-561K	560 $\pm$ 10%	120	50	6	1.8	1KHz/0.796MHz
AL0510T-681K	680 $\pm$ 10%	113	50	6	1.5	1KHz/0.796MHz
AL0510T-821K	820 $\pm$ 10%	95	45	9	1.2	1KHz/0.796MHz
AL0510T-102K	1000 $\pm$ 10%	95	45	10	1	1KHz/0.252MHz
AL0510T-122K	1200 $\pm$ 10%	95	40	11	0.95	1KHz/0.252MHz
AL0510T-152K	1500 $\pm$ 10%	90	40	12	0.9	1KHz/0.252MHz
AL0510T-182K	1800 $\pm$ 10%	85	40	15	0.85	1KHz/0.252MHz
AL0510T-222K	2200 $\pm$ 10%	80	40	19	0.8	1KHz/0.252MHz
AL0510T-272K	2700 $\pm$ 10%	70	40	24	0.75	1KHz/0.252MHz
AL0510T-332K	3300 $\pm$ 10%	60	40	25	0.7	1KHz/0.252MHz
AL0510T-392K	3900 $\pm$ 10%	55	40	35	0.65	1KHz/0.252MHz
AL0510T-472K	4700 $\pm$ 10%	45	40	37	0.6	1KHz/0.252MHz
AL0510T-562K	5600 $\pm$ 10%	40	20	39	0.5	1KHz/0.252MHz
AL0510T-682K	6800 $\pm$ 10%	35	20	65	0.45	1KHz/0.252MHz
AL0510T-822K	8200 $\pm$ 10%	30	20	70	0.4	1KHz/0.252MHz
AL0510T-103K	10000 $\pm$ 10%	25	20	75	0.35	1KHz/79.6KHz

⊕ Electrical Characteristics :

Part No.	Inductance (μ H)	Isat (mA) Max	Q Min	DCR (Ω) Max	SRF (MHz) Min	Test Frequency L & Q
AL0512T-101K	100 $\pm$ 10%	700	20	0.7	-	1KHz/0.796MHz
AL0512T-151K	150 $\pm$ 10%	350	20	2	-	1KHz/0.796MHz
AL0512T-221K	220 $\pm$ 10%	400	20	1.5	-	1KHz/0.796MHz
AL0512T-331K	330 $\pm$ 10%	350	20	1.8	-	1KHz/0.796MHz
AL0512T-471K	470 $\pm$ 10%	300	20	3.5	-	1KHz/0.796MHz
AL0512T-561K	560 $\pm$ 10%	300	20	5	-	1KHz/0.796MHz
AL0512T-681K	680 $\pm$ 10%	280	20	6	-	1KHz/0.796MHz
AL0512T-821K	820 $\pm$ 10%	250	20	6.5	-	1KHz/0.796MHz
AL0512T-102K	1000 $\pm$ 10%	200	50	7	-	1KHz/0.252MHz
AL0512T-122K	1200 $\pm$ 10%	200	50	8	-	1KHz/0.252MHz
AL0512T-152K	1500 $\pm$ 10%	190	50	10	-	1KHz/0.252MHz
AL0512T-222K	2200 $\pm$ 10%	150	40	12	-	1KHz/0.252MHz
AL0512T-332K	3300 $\pm$ 10%	110	25	22	-	1KHz/0.252MHz
AL0512T-392K	3900 $\pm$ 10%	100	20	24	-	1KHz/0.252MHz
AL0512T-472K	4700 $\pm$ 10%	100	20	25	-	1KHz/0.252MHz
AL0512T-223K	22000 $\pm$ 10%	30	30	120	-	79.6KHz

※Test Equipments

1. Inductance : HM-9481/TH-2829A

2. Q : HM-9481

3. DCR : CH-502BC/TH-2829A

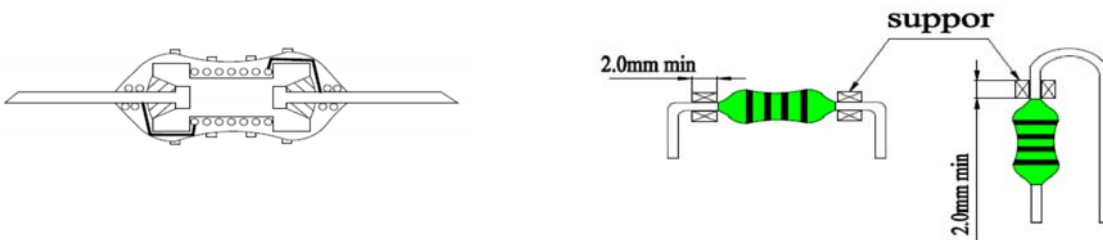
4. SRF : HM-9461

5. Isat : TH-2829A/TH-1772B+TL-2812D

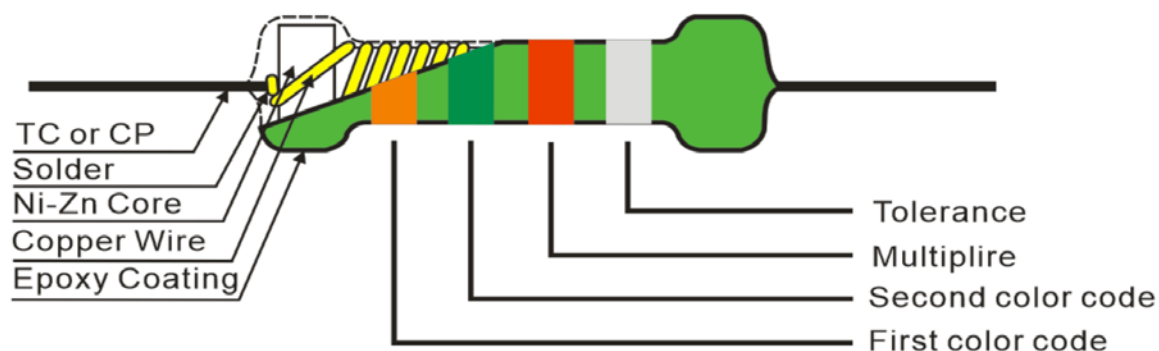
Test Condition : at 25°C, 75%H.

※Matters needing attention

The middle part of the core of the inductor is wound with enameled wires and is connected with the pins at both ends · Pin forming process may cause open circuit or damage the body. When you perform the pin forming process, Please comply with the following instruction :



⊕ Construction



⊕ Inductor Color Code

Color	Nomial Inductance(μ H)			
	1st Band	2st Band	Multiplier	Tolerance
Black	0	0	1	$\pm 20\%$
Brown	1	1	10	Military $\pm 1\%$
Red	2	2	100	Military $\pm 2\%$
Orange	3	3	1,000	Military $\pm 3\%$
Yellow	4	4	10,000	Military $\pm 4\%$
Green	5	5	-	-
Blue	6	6	-	-
Purple	7	7	-	-
Grey	8	8	-	-
White	9	9	-	-
None	-	-	-	Military $\pm 20\%$
Gold	-	-	0.1	Both $\pm 5\%$
Silver	-	-	0.01	Both $\pm 10\%$

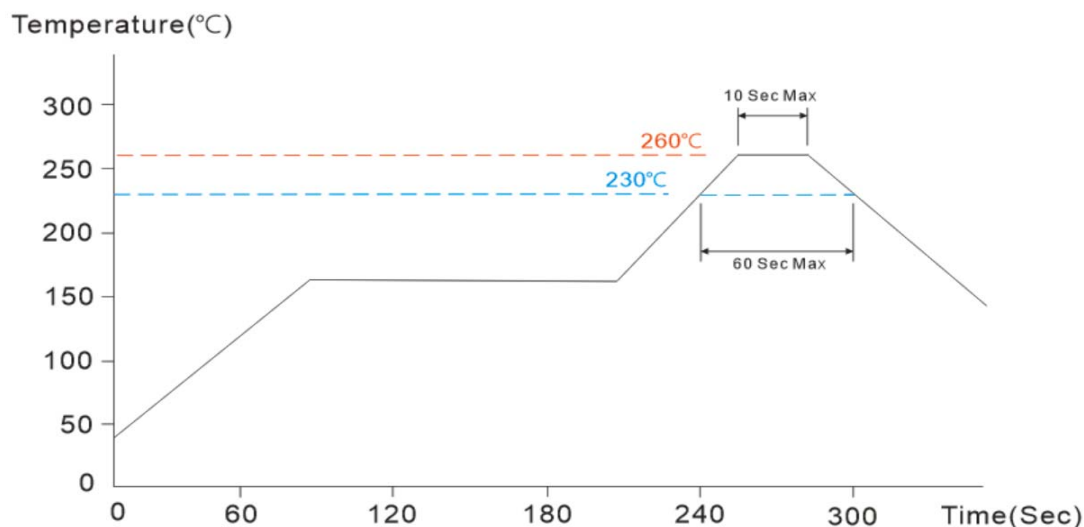
INDUCTOR COLOR CODE (EIA Standard & Military Standard)

⊕ Inductor Tolerance Codes

Symbol	B	C	S	D	F	G	H
Tolerance	$\pm 0.15nH$	$\pm 0.2nH$	$\pm 0.3nH$	$\pm 0.5nH$	$\pm 1\%$	$\pm 2\%$	$\pm 3\%$

Symbol	J	K	L	M	Y	N
Tolerance	$\pm 5\%$	$\pm 10\%$	$\pm 15\%$	$\pm 20\%$	$\pm 25\%$	$\pm 30\%$

⊕ Reflow Soldering Heat Endurance

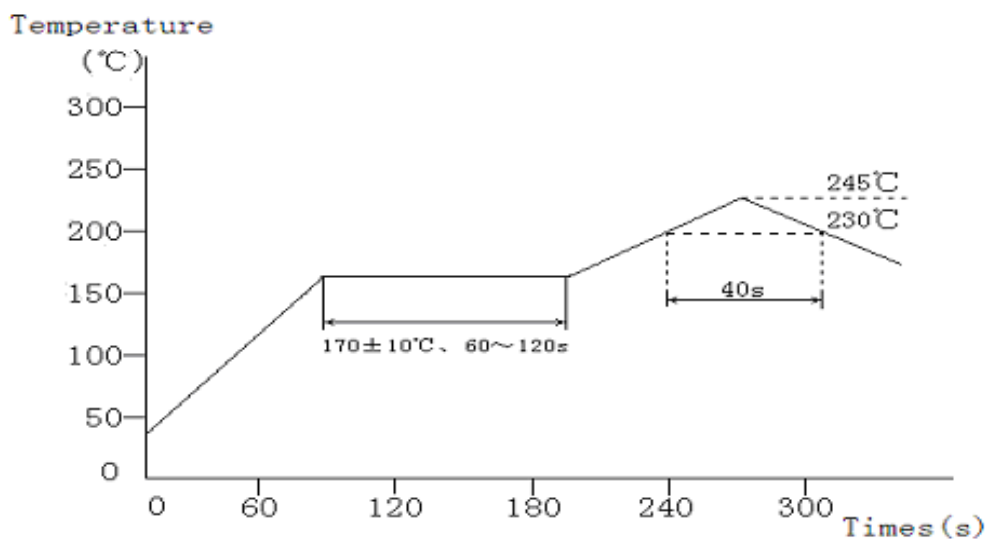


No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

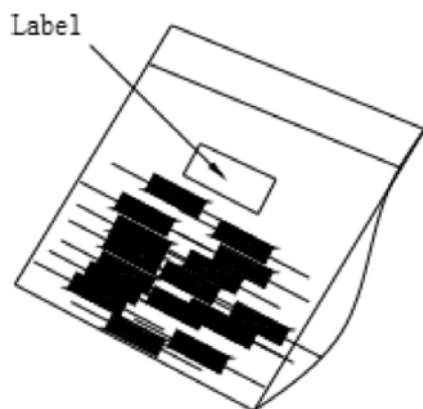
The reflow test profile may vary with the testing instruments.

⊕ Recommended Reflow Conditions



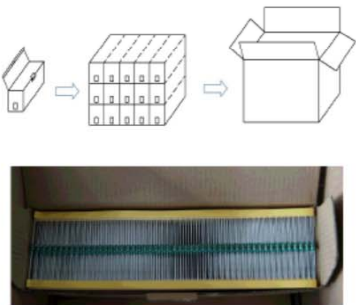
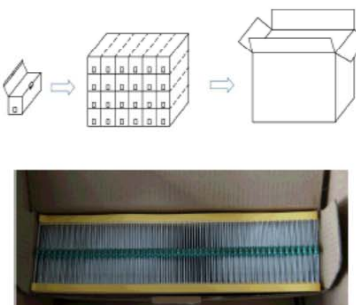
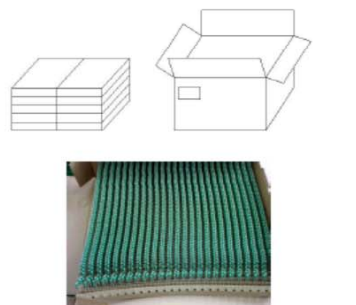
The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

⊕Bulk


Series	Quantity per Bag
AL0307	1,000 Pcs/Bag
AL0410	1,000 Pcs/Bag
AL0510	500 Pcs/Bag
AL0512	500 Pcs/Bag

⊕Taping Pack

包装代码 code	色感常规编带-15盒		色感常规编带-24盒		色感立式编带-10盒	
包装物料 material	内盒 Inside the box	外箱 carton	内盒 Inside the box	外箱 carton	内盒 Inside the box	外箱 carton
包装尺寸 size	255*70*93mm	380*280*300mm	255*70*93mm	440*275*392mm	343*236*55mm	495*340*265mm
包装示意图 Packaging sketch map						

Number of packages 包装数量

包装代码 code	色感常规编带-15盒		色感常规编带-24盒		色感立式编带-10盒	
	内盒 Inside the box	外箱 carton	内盒 Inside the box	外箱 carton	内盒 Inside the box	外箱 carton
0307	3000PCS	45000PCS	3000PCS	72000PCS	3500PCS	35000PCS
0410	2000/1500PCS	30000/22500PCS	2000/1500PCS	48000/36000PCS	3000PCS	30000PCS
0510	1000PCS	15000PCS	1000PCS	24000PCS	2500PCS	25000PCS
0512	1000PCS	15000PCS	1000PCS	24000PCS	2500PCS	25000PCS