



SPECIFICATION FOR APPROVAL

CUSTOMER: _____
CUSTOMER P/N: _____
ATC P/N: DLCT0307-SERIES
QUANTITY: 0 PCS
DATE: 2021.02.09

Please confirm your acceptance of this approval sheet by return fax.

APPROVED

REJECTED



DRAWN BY	CHECKED BY	APPROVED BY
林月霞 <i>Alice</i>	張德名 <i>Richard</i>	葉任銘 <i>J.M.Yeh</i>

Acroparts Technology Co., Ltd.

1F No.16 Tze Chiang St. Yangmei, Taoyuan, Taiwan

TEL: +886-3-4881133 FAX: +886-3-4881177



SPECIFICATION

ATC's DWG
NUMBER

DLCT0307-SERIES

PROD.
NAME

AXIAL INDUCTOR

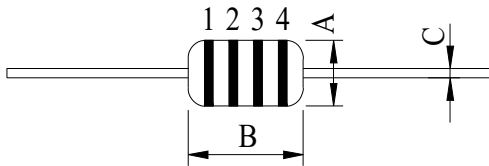
REV.

A

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1 Configuration and Dimensions :



Item	Spec. (mm)
A	3.20 max.
B	7.00 max.
C	0.50 ± 0.10

2 Schematic Diagram :



3 Rating :

Operating Temperature: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Storage Temperature: Under 25°C , Humidity $< 75\%$

4 Material List :

- Core: Ferrite DR core
- Wire: Enamelled copper wire
- Lead: Cu / Ni / Sn
- Coating: Epoxy resin



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5 Electrical Characteristics :

DWG No.	L (uH)	Q min.	Freq. (MHz)	SRF (MHz)min.	RDC (Ω)max.	IDC (mA)max.	Color Code				Tol.
							1st	2nd	3rd	4th	
DLCT0307-R22□Z	0.220	40	25.20	150.0	0.080	740.0	RED	RED	SIL	BLK	M
DLCT0307-R27□Z	0.270	40	25.20	150.0	0.085	740.0	RED	VIO	SIL	BLK	M
DLCT0307-R33□Z	0.330	40	25.20	150.0	0.095	740.0	ORN	ORN	SIL	BLK	M
DLCT0307-R39□Z	0.390	40	25.20	150.0	0.100	740.0	ORN	WHT	SIL	BLK	M
DLCT0307-R47□Z	0.470	40	25.20	150.0	0.110	740.0	YEL	VIO	SIL	BLK	M
DLCT0307-R56□Z	0.560	40	25.20	150.0	0.120	740.0	GRN	BLU	SIL	BLK	M
DLCT0307-R68□Z	0.680	40	25.20	150.0	0.130	740.0	BLU	GRY	SIL	BLK	M
DLCT0307-R82□Z	0.820	40	25.20	150.0	0.140	740.0	GRY	RED	SIL	BLK	M
DLCT0307-1R0□Z	1.000	40	25.20	150.0	0.150	740.0	BRN	BLK	GLD	SIL	K
DLCT0307-1R2□Z	1.200	40	7.960	150.0	0.180	740.0	BRN	RED	GLD	SIL	K
DLCT0307-1R5□Z	1.500	40	7.960	150.0	0.200	700.0	BRN	GRN	GLD	SIL	K
DLCT0307-1R8□Z	1.800	50	7.960	125.0	0.230	655.0	BRN	GRY	GLD	SIL	K
DLCT0307-2R2□Z	2.200	50	7.960	110.0	0.270	630.0	RED	RED	GLD	SIL	K
DLCT0307-2R7□Z	2.700	50	7.960	95.00	0.280	595.0	RED	VIO	GLD	SIL	K
DLCT0307-3R3□Z	3.300	50	7.960	70.00	0.320	575.0	ORN	ORN	GLD	SIL	K
DLCT0307-3R9□Z	3.900	50	7.960	65.00	0.320	555.0	ORN	WHT	GLD	SIL	K
DLCT0307-4R7□Z	4.700	50	7.960	36.00	0.350	530.0	YEL	VIO	GLD	SIL	K
DLCT0307-5R6□Z	5.600	50	7.960	32.00	0.400	500.0	GRN	BLU	GLD	SIL	K
DLCT0307-6R8□Z	6.800	50	7.960	28.00	0.480	470.0	BLU	GRY	GLD	SIL	K
DLCT0307-8R2□Z	8.200	50	7.960	23.00	0.560	425.0	GRY	RED	GLD	SIL	K
DLCT0307-100□Z	10.00	50	7.960	18.00	0.750	370.0	BRN	BLK	BLK	SIL	K
DLCT0307-120□Z	12.00	50	2.520	17.00	0.800	350.0	BRN	RED	BLK	SIL	K
DLCT0307-150□Z	15.00	50	2.520	16.00	0.930	335.0	BRN	GRN	BLK	SIL	K
DLCT0307-180□Z	18.00	50	2.520	15.00	1.000	315.0	BRN	GRY	BLK	SIL	K
DLCT0307-220□Z	22.00	50	2.520	13.00	1.200	285.0	RED	RED	BLK	SIL	K
DLCT0307-270□Z	27.00	50	2.520	11.00	1.800	270.0	RED	VIO	BLK	SIL	K
DLCT0307-330□Z	33.00	50	2.520	10.00	2.100	255.0	ORN	ORN	BLK	SIL	K
DLCT0307-390□Z	39.00	50	2.520	9.500	2.300	240.0	ORN	WHT	BLK	SIL	K
DLCT0307-470□Z	47.00	50	2.520	8.500	2.600	205.0	YEL	VIO	BLK	SIL	K
DLCT0307-560□Z	56.00	50	2.520	7.500	2.900	195.0	GRN	BLU	BLK	SIL	K

Note:

- -Tolerance: K=±10% / M=±20%
- IDC obtained when temp. rise to 40°C or the initial inductance drop by 10% , whichever is smaller.



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5 Electrical Characteristics :

DWG No.	L (uH)	Q min.	Freq. (MHz)	SRF (MHz)min.	RDC (Ω)max.	IDC (mA)max.	Color Code				Tol.
							1st	2nd	3rd	4th	
DLCT0307-680□Z	68.00	50	2.520	6.500	3.300	185.0	BLU	GRY	BLK	SIL	K
DLCT0307-820□Z	82.00	50	2.520	6.000	3.800	175.0	GRY	RED	BLK	SIL	K
DLCT0307-101□Z	100.0	50	2.520	5.500	4.200	165.0	BRN	BLK	BRN	SIL	K
DLCT0307-121□Z	120.0	60	0.796	5.400	4.700	160.0	BRN	RED	BRN	SIL	K
DLCT0307-151□Z	150.0	60	0.796	4.700	5.400	150.0	BRN	GRN	BRN	SIL	K
DLCT0307-181□Z	180.0	60	0.796	4.300	6.000	140.0	BRN	GRY	BRN	SIL	K
DLCT0307-221□Z	220.0	60	0.796	4.000	7.000	130.0	RED	RED	BRN	SIL	K
DLCT0307-271□Z	270.0	60	0.796	3.700	7.700	120.0	RED	VIO	BRN	SIL	K
DLCT0307-331□Z	330.0	60	0.796	3.400	11.10	100.0	ORN	ORN	BRN	SIL	K
DLCT0307-391□Z	390.0	60	0.796	2.800	12.60	95.00	ORN	WHT	BRN	SIL	K
DLCT0307-471□Z	470.0	60	0.796	2.500	14.00	90.00	YEL	VIO	BRN	SIL	K
DLCT0307-561□Z	560.0	60	0.796	2.300	15.50	85.00	GRN	BLU	BRN	SIL	K
DLCT0307-681□Z	680.0	60	0.796	2.000	25.30	75.00	BLU	GRY	BRN	SIL	K
DLCT0307-821□Z	820.0	60	0.796	1.500	27.50	65.00	GRY	RED	BRN	SIL	K
DLCT0307-102□Z	1000	50	0.796	1.200	31.40	60.00	BRN	BLK	RED	SIL	K
DLCT0307-122□Z	1200	50	0.252	0.900	37.00	50.00	BRN	RED	RED	SIL	K
DLCT0307-152□Z	1500	45	0.252	0.800	39.00	40.00	BRN	GRN	RED	SIL	K

Note:

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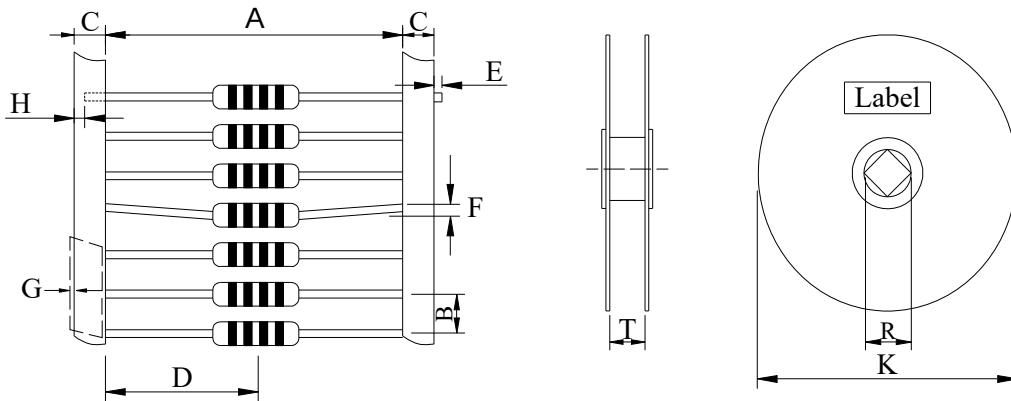
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6 DWG Expression :

D L C T 0 3 0 7

ATC General no.
Inductance tolerance
Inductance
Dimensions
Product symbol



52.0 ± 1.00	5.00 ± 0.50	6.00 ± 1.00	26.0 ± 1.50	0.50 max.	1.00 max.
G	H	K	R	T	Reel Q'ty
1.00 max.	2.50 max.	355 typ.	15.0 typ.	71.0 typ.	5000pcs



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8 Reliability Test :

1-1.Environmental tests

No	Item	Specification	Test Method
1	High temperature storage test	1. No case deformation or change in appearance. 2. $\Delta L/L \leq 10\%$ 3. $\Delta Q/Q \leq 30\%$	Temperature: $85 \pm 2^\circ\text{C}$ Time: 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature
2	Low temperature storage test	4. $\Delta RDC/RDC \leq 10\%$	Temperature: $-25 \pm 2^\circ\text{C}$ Time: 96 ± 2 hours Tested not less than 1 hour, nor more than 2 hours at room temperature
3	Humidity test		1. Dry oven at a temperature of $40 \pm 5^\circ\text{C}$ for 24 hours 2. Measurements at the end of this period 3. Exposure: Temperature: $40 \pm 2^\circ\text{C}$, Humidity: $93 \pm 3\% \text{RH}$, Time: 96 ± 2 hours 4. Tested while the specimens are still in the chamber 5. Tested not less than 1 hour, nor more than 2 hours at room temperature
4	Thermal shock test		First -40°C for time, last 125°C time as 1 cycle, go through 20 cycles

1-2.Physical characteristic tests

No	Item	Specification	Test Method
1	Heat endurance of flow soldering	1. No case deformation or change in appearance. 2. $\Delta L/L \leq 10\%$ 3. $\Delta Q/Q \leq 30\%$	1. Dip pads in flux then dip in solder pot at $260 \pm 5^\circ\text{C}$ for 10 seconds 2. Solder: Sn(96)/Ag(4) 3. Flux: rosin flux
2	Vibration test	4. $\Delta RDC/RDC \leq 10\%$	Apply frequency 10~55Hz 0.75mm amplitude in each of perpendicular direction for 2 hours (total 6 hours)
3	Drop test		Packaged & Drop down from 1m with 981m/s^2 (100G) attitude in 1 angle 1 ridges & 2 surfaces orientations
4	Terminal strength	1. Terminal should not come out 2. $\Delta L/L \leq 10\%$ 3. $\Delta Q/Q \leq 30\%$ 4. $\Delta RDC/RDC \leq 10\%$	A. Pull Force: 0.45Kg the force shall be applied gradually to the terminal and then maintained for 10 seconds C. Wire-lead bend: 0.23Kg the rate of bending shall be approximately 3 seconds per bend in each direction The load shall be suspended at a point within 1/4 inch from the free end of the terminal
5	Solderability test	Terminals area must have 95% min. solder coverage	1. Dip pads in flux then dip in solder pot at $245 \pm 5^\circ\text{C}$ for 5 seconds 2. Solder: Sn(96)/Ag(4) 3. Flux: rosin flux
6	Resistance to solvent test	No case deformation or change in appearance, or obliteration of marking	To dip parts into IPA solvent for 5 ± 0.5 min, then drying them at room temp for 5min, at last, to brushing making 10 times

1-3.Electrical characteristic tests

1	Overload test	1. During the test no smoke, no peculiar, smell, no fire 2. The characteristic is normal	Apply twice as rated current for 5 minutes
2	Voltage resistance test	1. During the test no breakdown 2. The characteristic is normal	Refer to product's specification