



SPECIFICATION

ATC's DWG
NUMBER

DLCT0510-SERIES

PROD.
NAME

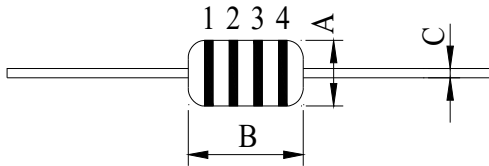
AXIAL INDUCTOR

REV.

PAGE

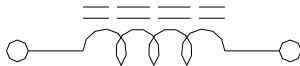
1

1 Configuration and Dimensions :



Item	Spec. (mm)
A	5.00 max.
B	11.0 max.
C	0.60 ± 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



SPECIFICATION		ATC's DWG NUMBER	DLCT0510-SERIES		
PROD. NAME	AXIAL INDUCTOR	REV.		PAGE	2

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	
DLCT0510-4R7□Z	4.700	20	7.960	50.00	0.060	900.0	YEL	VIO	GLD	SIL	K
DLCT0510-100□Z	10.00	15	7.960	30.00	0.450	750.0	BRN	BLK	BLK	SIL	K
DLCT0510-220□Z	22.00	30	2.520	8.00	0.650	450.0	RED	RED	BLK	SIL	K
DLCT0510-820□Z	82.00	20	2.520	3.800	0.820	330.0	GRY	RED	BLK	SIL	K
DLCT0510-101□Z	100.0	20	2.520	3.500	0.750	300.0	BRN	BLK	BRN	SIL	K
DLCT0510-121□Z	120.0	20	0.796	3.300	1.200	250.0	BRN	RED	BRN	SIL	K
DLCT0510-151□Z	150.0	20	0.796	3.200	1.800	225.0	BRN	GRN	BRN	SIL	K
DLCT0510-181□Z	180.0	20	0.796	2.800	2.000	200.0	BRN	GRY	BRN	SIL	K
DLCT0510-221□Z	220.0	30	0.796	2.600	2.100	180.0	RED	RED	BRN	SIL	K
DLCT0510-271□Z	270.0	30	0.796	2.400	2.500	170.0	RED	VIO	BRN	SIL	K
DLCT0510-331□Z	330.0	30	0.796	2.200	3.000	160.0	ORN	ORN	BRN	SIL	K
DLCT0510-391□Z	390.0	30	0.796	2.000	3.500	150.0	ORN	WHT	BRN	SIL	K
DLCT0510-471□Z	470.0	30	0.796	1.900	4.000	140.0	YEL	VIO	BRN	SIL	K
DLCT0510-561□Z	560.0	30	0.796	1.800	5.400	130.0	GRN	BLU	BRN	SIL	K
DLCT0510-681□Z	680.0	40	0.796	1.500	6.000	120.0	BLU	GRY	BRN	SIL	K
DLCT0510-821□Z	820.0	50	0.796	1.200	7.500	110.0	GRY	RED	BRN	SIL	K
DLCT0510-102□Z	1000	50	0.252	1.000	8.000	100.0	BRN	BLK	RED	SIL	K
DLCT0510-122□Z	1200	60	0.252	0.950	14.50	95.00	BRN	RED	RED	SIL	K
DLCT0510-152□Z	1500	60	0.252	0.900	16.50	90.00	BRN	GRN	RED	SIL	K
DLCT0510-182□Z	1800	60	0.252	0.900	19.00	85.00	BRN	GRY	RED	SIL	K
DLCT0510-222□Z	2200	60	0.252	0.800	27.50	80.00	RED	RED	RED	SIL	K
DLCT0510-272□Z	2700	60	0.252	0.750	40.00	75.00	RED	VIO	RED	SIL	K
DLCT0510-332□Z	3300	50	0.252	0.700	50.00	62.00	ORN	ORN	RED	SIL	K
DLCT0510-392□Z	3900	50	0.252	0.650	53.00	59.00	ORN	WHT	RED	SIL	K
DLCT0510-472□Z	4700	50	0.252	0.600	60.00	55.00	YEL	VIO	RED	SIL	K
DLCT0510-562□Z	5600	50	0.252	0.500	64.00	40.00	GRN	BLU	RED	SIL	K
DLCT0510-682□Z	6800	50	0.252	0.450	73.00	35.00	BLU	GRY	RED	SIL	K
DLCT0510-822□Z	8200	30	0.252	0.400	80.00	30.00	GRY	RED	RED	SIL	K
DLCT0510-103□Z	10000	25	0.079	0.350	132.0	25.00	BRN	BLK	ORN	SIL	K
DLCT0510-123□Z	12000	25	0.079	0.300	143.0	20.00	BRN	RED	ORN	SIL	K

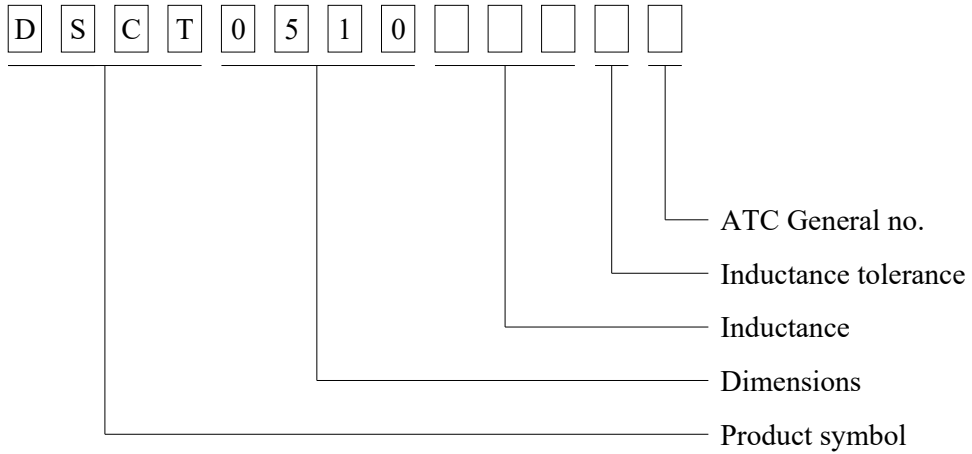
Note :

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

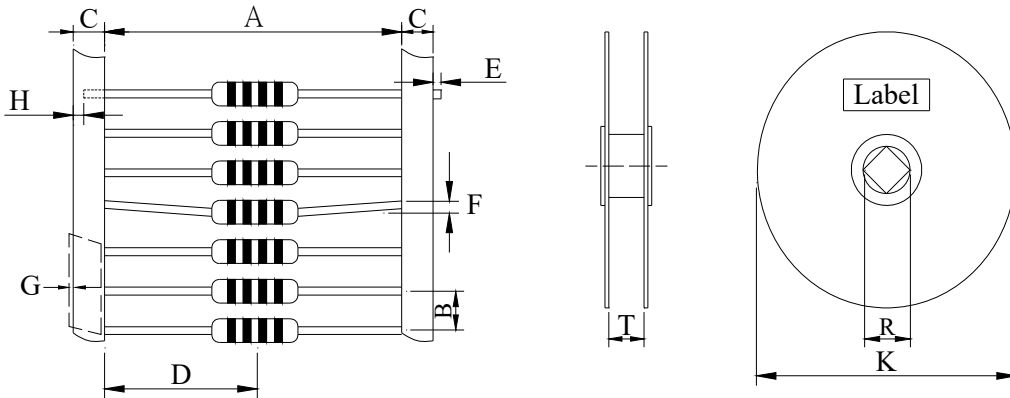


SPECIFICATION		ATC's DWG NUMBER	DLCT0510-SERIES		
PROD. NAME	AXIAL INDUCTOR	REV.	PAGE	3	

6 DWG Expression :



7 Packaging Information :



unit : mm

A	B	C	D	E	F
52.0 ± 1.00	5.00 ± 0.50	6.00 ± 1.00	26.0 ± 1.50	0.80 max.	1.00 max.
G	H	K	R	T	Reel Q'ty
1.00 max.	2.50 max.	355 typ.	17.5 typ.	71.0 typ.	3000pcs



SPECIFICATION		ATC's DWG NUMBER	DLCT0510-SERIES		
PROD. NAME	AXIAL INDUCTOR	REV.		PAGE	4

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 : $93 \pm 3\%RH$, 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