

APH □□□□□□ TYPE

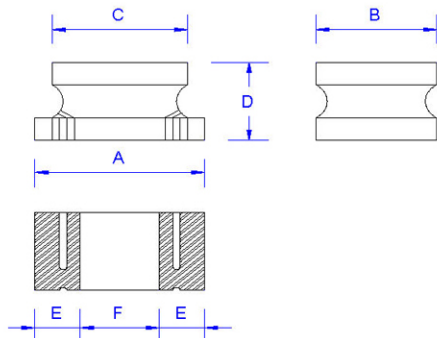
●FEATURE

1. Excellent solder heat resistance(add "C" is for high current type)
2. Low voltage drops and small variations inductance

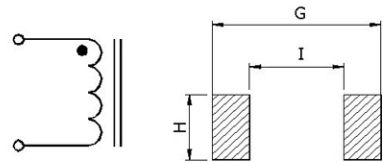
●Applications

1. DC power supply circuits
2. Power line choke coils,etc

●Shape and Dimension



●Schematics and Land Patterns(mm)



●Specification

Dimension in m/m

TYPE	A	B	C	D	E	F	G	I	H
APH322516	3.2±0.30	2.5±0.30	2.5±0.30	1.6±0.30	0.9	1.3	3.70	1.10	2.90
APH321618	3.2±0.30	1.6±0.30	2.3±0.30	1.8±0.30	0.9	1.3	3.70	0.70	2.00
APH322520	3.2±0.30	2.5±0.30	2.5±0.30	2.0±0.30	0.9	1.3	3.70	1.10	2.90
APH453226	4.5±0.30	3.2±0.30	3.6±0.30	2.6±0.30	1.0	1.0	5.00	1.00	3.70
APH575047	5.7±0.30	5.0±0.30	5.0±0.30	4.7±0.30	1.3	1.7	6.20	1.70	5.50
APH322520C	3.2±0.30	2.5±0.30	2.5±0.30	2.0±0.30	0.9	1.3	3.70	1.10	2.90
APH453226C	4.5±0.30	3.2±0.30	3.6±0.30	2.6±0.30	1.0	1.0	5.00	1.00	3.70

Note1. Measurement frequency of Inductance value : at 1KHz, 0.25V

Note2. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note3. IDC : This indicates the value of current when the inductances is 10% lower than its initial value at D.C. superimposition or D.C. current when at $\Delta t=40^{\circ}\text{C}$, which is lower. ($T_a=20^{\circ}\text{C}$)

Note4. Inductance tolerance: K: $\pm 10\%$; M: $\pm 20\%$

Note5. Ordering Code: TYPE NAME: APH322516

Main Inductance: 100 (10uH)

Tolerance : M ($\pm 20\%$)

Note6. This specification might be changed without notice due to under developing and improving.

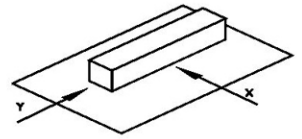
Thank you for your understanding.

Part No.	Inductance(uH)	D.C.R.(Ω Max)/Rated D.C. Current(A)				
		APH322516	APH321618	APH322520	APH453226	APH575047
R12	0.12		0.13 / 0.184			0.010 / 6.00
R27	0.27			0.25 / 0.600		0.014 / 5.30
R47	0.47		0.17 / 0.178			0.018 / 4.80
1R0	1.0	0.06 / 1.48	0.49 / 0.175	0.50 / 0.445	0.20 / 0.500	0.027 / 4.00
1R5	1.5		0.52 / 0.155	0.60 / 0.400	0.30 / 0.500	0.031 / 3.70
2R2	2.2	0.125 / 1.25	0.54 / 0.140	0.80 / 0.370	0.30 / 0.500	0.041 / 3.20
3R3	3.3	0.160 / 1.08	0.61 / 0.130	1.00 / 0.300	0.35 / 0.500	0.050 / 2.90
4R2	4.2					
4R7	4.7	0.236 / 0.98	1.70 / 0.120	1.20 / 0.270	0.40 / 0.500	0.057 / 2.70
6R8	6.8	0.371 / 0.79	2.00 / 0.110	1.50 / 0.240	0.50 / 0.450	0.100 / 2.00
8R2	8.2	0.471 / 0.72	2.20 / 0.105	1.60 / 0.225	0.56 / 0.450	
100	10	0.576 / 0.66	2.50 / 0.100	1.80 / 0.190	0.56 / 0.400	0.130 / 1.70
120	12	0.684 / 0.59	2.70 / 0.095	2.00 / 0.180	0.62 / 0.380	0.200 / 1.50
150	15	0.888 / 0.54	2.90 / 0.090	2.20 / 0.170	0.73 / 0.360	0.210 / 1.40
180	18	1.087 / 0.48	3.00 / 0.085	2.50 / 0.160	0.82 / 0.340	
220	22	1.343 / 0.43	3.10 / 0.085	2.80 / 0.150	0.94 / 0.320	0.270 / 1.20
330	33	2.245 / 0.35	3.80 / 0.080	3.50 / 0.115	1.20 / 0.270	0.450 / 0.90
390	39		4.50 / 0.085	3.90 / 0.110	1.40 / 0.240	
470	47	3.064 / 0.29	6.30 / 0.085	4.30 / 0.100	1.50 / 0.220	0.560 / 0.80
560	56	4.120 / 0.27	7.10 / 0.050	4.90 / 0.085	1.70 / 0.200	
680	68	5.289 / 0.24	7.90 / 0.050	5.50 / 0.080	1.90 / 0.180	0.940 / 0.64
820	82	7.223 / 0.20	8.70 / 0.045	6.20 / 0.080	2.20 / 0.170	
101	100	8.209 / 0.19	11.57 / 0.045	7.00 / 0.080	2.50 / 0.160	1.20 / 0.56
151	150	12.57 / 0.16	15.03 / 0.015	9.30 / 0.070		2.66 / 0.42
181	180	19.65 / 0.14	16.60 / 0.013	10.20 / 0.065	4.50 / 0.120	
221	220	22.31 / 0.13		11.80 / 0.065	5.40 / 0.110	3.36 / 0.32
271	270	24.61 / 0.12	29.70 / 0.011	12.50 / 0.065	6.80 / 0.100	
331	330	28.21 / 0.11	43.06 / 0.010	13.00 / 0.065	8.20 / 0.095	6.16 / 0.27
391	390	32.19 / 0.10		22.00 / 0.050	9.70 / 0.090	
471	470	48.75 / 0.09	53.50 / 0.008	25.00 / 0.045	11.80 / 0.080	7.56 / 0.24
561	560	53.89 / 0.08		28.00 / 0.040	14.50 / 0.070	
681	680	63.01 / 0.07		30.00 / 0.035	17.00 / 0.065	11.30 / 0.19
821	820		66.10 / 0.005		20.50 / 0.060	
102	1000			39.20 / 0.030	25.00 / 0.050	14.40 / 0.15

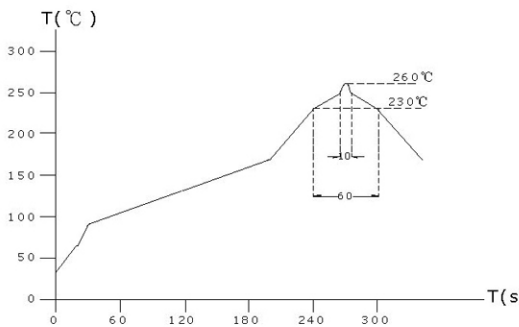
Part No.	Inductance(uH)	D.C.R.(ΩMax)/Rated D.C. Current(A)	
		APH322520C	APH453226C
R12	0.12		
R22	0.22		
R27	0.27		
R47	0.47		
1R0	1.0	0.117 / 0.800	0.08 / 1.08
1R5	1.5		0.09 / 1.00
2R2	2.2	0.169 / 0.600	0.11 / 0.90
3R3	3.3	0.180 / 0.500	0.13 / 0.80
4R2	4.2		
4R7	4.7	0.260 / 0.450	0.15 / 0.75
6R8	6.8	0.300 / 0.430	0.20 / 0.72
8R2	8.2	0.392 / 0.400	
100	10	0.572 / 0.300	0.24 / 0.65
120	12	0.650 / 0.290	
150	15	0.700 / 0.285	0.32 / 0.57
180	18	0.800 / 0.265	
220	22	0.923 / 0.250	0.60 / 0.42
330	33	1.352 / 0.230	1.00 / 0.31
390	39		
470	47	1.690 / 0.170	1.10 / 0.28
560	56	2.00 / 0.160	1.34 / 0.26
680	68	2.67 / 0.150	1.70 / 0.22
820	82		
101	100	4.55 / 0.100	2.20 / 0.19
151	150	5.80 / 0.095	3.50 / 0.13
181	180	6.27 / 0.090	
221	220	10.90 / 0.070	4.00 / 0.11
271	270		
331	330	13.00 / 0.060	6.80 / 0.10
391	390	22.10 / 0.060	
471	470	24.70 / 0.060	
561	560	28.60 / 0.060	
681	680		
102	1000		

GENERAL CHARACTERISTICS

1. Operating temperature range: -30 TO $+80^{\circ}\text{C}$ (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Y withstanding at below conditions.
Terminal should not peel off. (refer to figure at right) 5. 0N 60 sec.
4. Insulating resistance: Over $100\text{M}\Omega$ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$ ($-25\sim +80^{\circ}\text{C}$).
7. Humidity characteristics (Moisture Resistance): Inductance deviation within $\pm 5\%$, after 96 hours in $90\sim 95\%$ relative humidity at $40 \pm 2^{\circ}\text{C}$ and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within $\pm 5\%$, after vibration for 1 hour. In each of three orientations at sweep vibration ($10\sim 55\sim 10\text{ Hz}$) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within $\pm 5\%$, after being dropped once with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C , 10 seconds (See attached recommend reflow)
11. Storage environment: Storage condition: Temperature Range: $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$ (Generally: $21^{\circ}\text{C} \sim 31^{\circ}\text{C}$) , Humidity Range: $50\% \sim 80\% \text{ RH}$ (Generally: $65\% \sim 75\%$) ; Transportation condition: Temperature Range: $-35^{\circ}\text{C} \sim 85^{\circ}\text{C}$, Humidity Range: $50\% \sim 95\% \text{ RH}$
12. Use components within 6 months. If 6 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead-free heat endurance test



Lead-free the recommended reflow condition

