

Power Inductor Apcf Series

**Automotive
AEC-Q200**

RoHS Compliant
Halogen Free
REACH Compliant



Power
Circuit

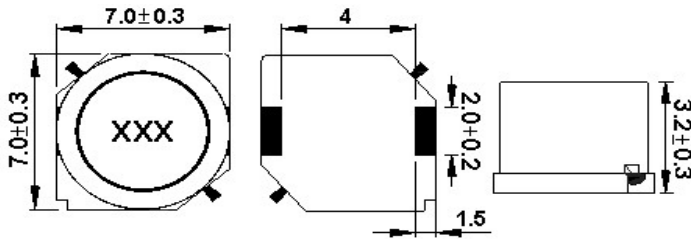
Shield

Wire
Wound

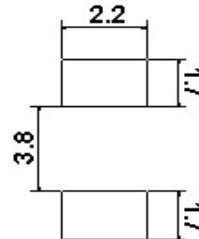
Ferrite

Part Numbering

A	PCF	00	070745	1R0	M	00
Grade	Series Name	Control Code	Dimensions Code (mm)	Inductance (uH)	Tolerance	Internal Code
			070732 7x7x3.2	1R0 1	M ±20%	00
			070745 7x7x4.5	100 10	T ±30%	Y0
			101045 10x10x4.5	101 100		
			131365 12.5x12.5x6.5			
			131375 12.5x12.5x7.5			

APCF00070732 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

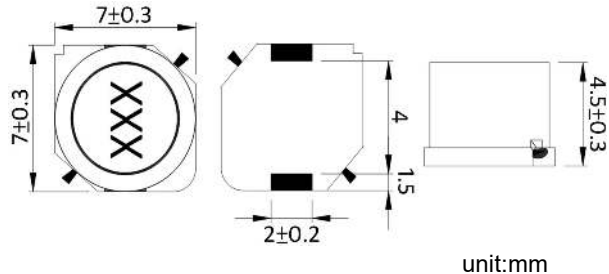
Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Max	Irms (A)Typ	Tolerance (±%)	Marking
APCF000707321R5□Y0	1.5	100kHz,0.5V	0.018	3.4	3.4	20,30	1R5
APCF000707322R2□Y0	2.2	100kHz,0.5V	0.021	2.8	2.8	20,30	2R2
APCF000707323R3□Y0	3.3	100kHz,0.5V	0.023	1.9	1.9	20,30	3R3
APCF000707324R7□Y0	4.7	100kHz,0.5V	0.036	1.7	1.7	20,30	4R7
APCF000707326R8□Y0	6.8	100kHz,0.5V	0.041	1.6	1.6	20,30	6R8
APCF00070732100□Y0	10	100kHz,0.5V	0.053	1.4	1.4	20,30	100
APCF00070732150□Y0	15	100kHz,0.5V	0.075	1.1	1.1	20,30	150
APCF00070732220□Y0	22	100kHz,0.5V	0.11	0.96	0.96	20,30	220
APCF00070732330□Y0	33	100kHz,0.5V	0.16	0.75	0.75	20,30	330
APCF00070732470□Y0	47	100kHz,0.5V	0.24	0.67	0.67	20,30	470
APCF00070732680□Y0	68	100kHz,0.5V	0.31	0.59	0.59	20,30	680
APCF00070732101□Y0	100	100kHz,0.5V	0.45	0.45	0.45	10,20	101
APCF00070732151□Y0	150	100kHz,0.5V	0.65	0.37	0.37	10,20	151
APCF00070732221□Y0	220	100kHz,0.5V	1.05	0.29	0.29	10,20	221
APCF00070732331□Y0	330	100kHz,0.5V	1.67	0.22	0.22	10,20	331
APCF00070732471□Y0	470	100kHz,0.5V	2.05	0.2	0.2	10,20	471
APCF00070732681□Y0	680	100kHz,0.5V	3.15	0.16	0.16	10,20	681
APCF00070732102□Y0	1000	100kHz,0.5V	4.78	0.13	0.13	10,20	102

Note: When ordering, please specify tolerance code. Tolerance: K=±10% / M=±20% / T=±30%

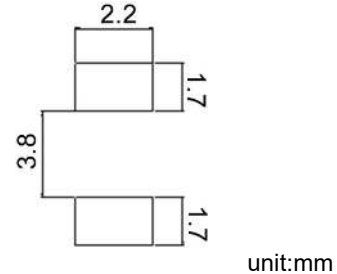
- Operating temperature range $-40^{\circ}\text{C} \sim 165^{\circ}\text{C}$ (Including self - temperature rise)
- Isat for Inductance drop 15% from its value without current
- Irms for a 25°C temprature rise from 25°C ambient with current
- Rated DC Current: The less value which is Isat or Irms
- Measure Equipment:
 - L: HP4284A PRECISION LCR METER (or equivalent)
 - RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
 - Isat:WK3255BQ+ WK3265B (or equivalent)
 - Irms: WK3255BQ+ WK3265B (or equivalent)

APCF00070745 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Max	Irms (A)Typ	Tolerance (±%)	Marking
APCF000707451R0□00	1.0	100kHz,0.5V	0.011	4.5	4.5	20,30	1R0
APCF000707452R2□00	2.2	100kHz,0.5V	0.015	3.4	3.3	20,30	2R2
APCF000707453R3□00	3.3	100kHz,0.5V	0.02	2.5	2.3	20,30	3R3
APCF000707454R7□00	4.7	100kHz,0.5V	0.03	2	2.1	20,30	4R7
APCF000707456R8□00	6.8	100kHz,0.5V	0.039	1.7	1.74	20,30	6R8
APCF00070745100□00	10	100kHz,0.5V	0.036	1.3	1.78	20,30	100
APCF00070745150□00	15	100kHz,0.5V	0.052	1.1	1.53	20,30	150
APCF00070745220□00	22	100kHz,0.5V	0.061	0.9	1.34	20,30	220
APCF00070745330□00	33	100kHz,0.5V	0.096	0.82	1.09	20,30	330
APCF00070745470□00	47	100kHz,0.5V	0.125	0.75	0.92	20,30	470
APCF00070745680□00	68	100kHz,0.5V	0.175	0.6	0.77	20,30	680
APCF00070745101□00	100	100kHz,0.5V	0.25	0.5	0.65	10,20	101
APCF00070745151□00	150	100kHz,0.5V	0.34	0.4	0.55	10,20	151
APCF00070745221□00	220	100kHz,0.5V	0.52	0.33	0.45	10,20	221
APCF00070745331□00	330	100kHz,0.5V	0.74	0.25	0.37	10,20	331
APCF00070745471□00	470	100kHz,0.5V	1.05	0.22	0.31	10,20	471
APCF00070745681□00	680	100kHz,0.5V	1.48	0.2	0.27	10,20	681
APCF00070745102□00	1000	100kHz,0.5V	2.28	0.14	0.25	10,20	102

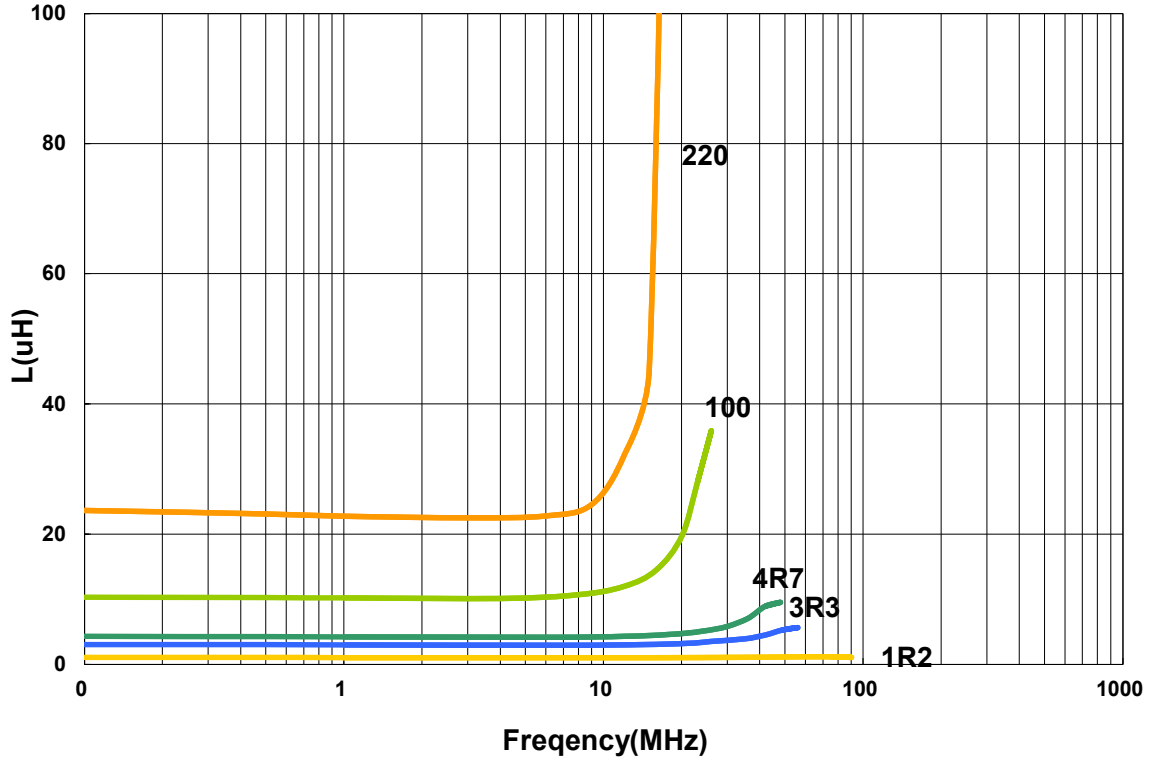
Note: When ordering, please specify tolerance code. Tolerance: K=±10% / M=±20% / T=±30%

1. Operating temperature range -40°C ~ 165°C (Including self - temperature rise)
2. Isat for Inductance drop 15% from its value without current
3. Irms for a 25°C temprature rise from 25°C ambient with current
4. Rated DC Current: The less value which is Isat or Irms
5. Measure Equipment:
 - L: HP4284A PRECISION LCR METER (or equivalent)
 - RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
 - Isat:WK3255BQ+ WK3265B (or equivalent)
 - Irms: WK3255BQ+ WK3265B (or equivalent)

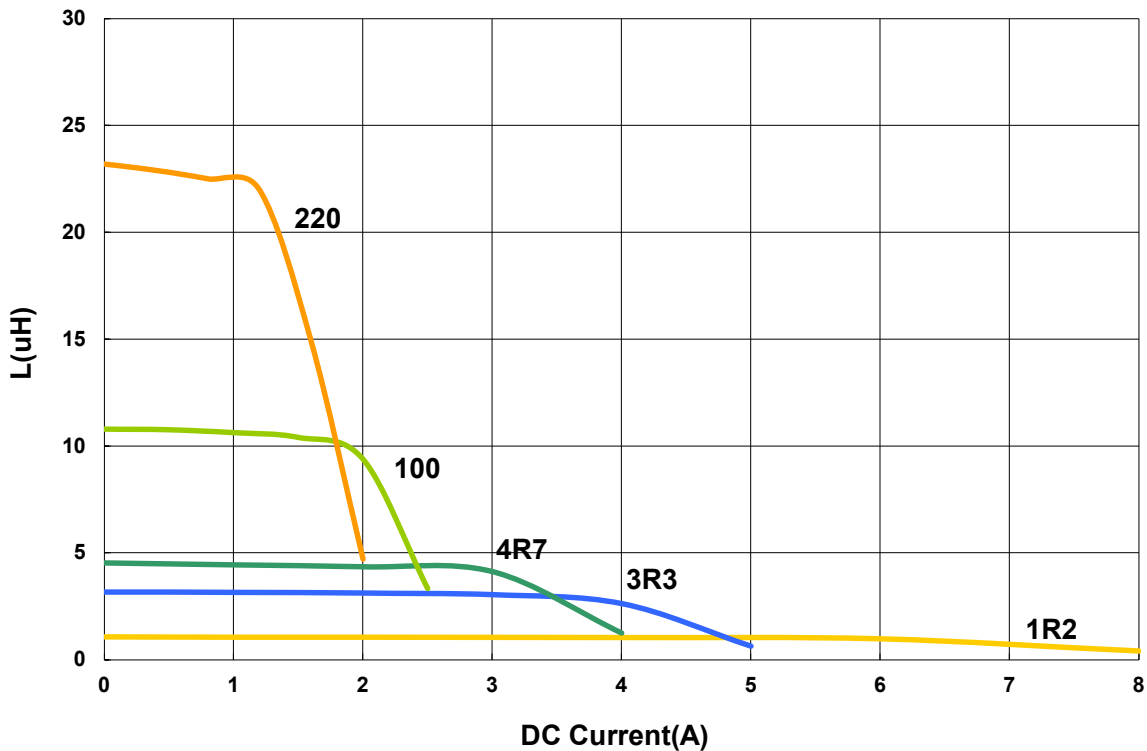
APCF00070745 Type

Characteristics Graph

Inductance vs. Frequency Characteristics



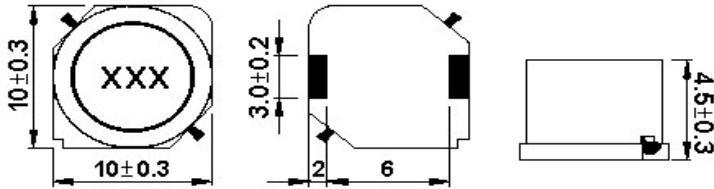
Inductance vs. DC Current



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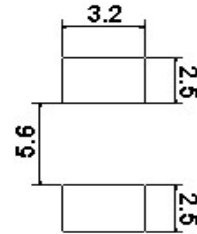
APCF00101045 Type

■ Dimensions



unit:mm

■ Recommended Land Pattern



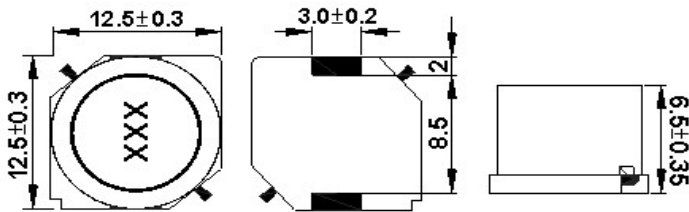
unit:mm

■ Electrical Characteristics

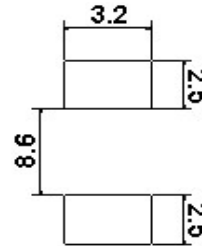
Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Typ	Irms (A)Typ	Tolerance (±%)	Marking
APCF001010451R5□Y0	1.5	100kHz,0.25V	0.0118	7.5	6	30	1R5
APCF001010453R3□Y0	3.3	100kHz,0.25V	0.0161	4.9	3.7	30	3R3
APCF001010454R7□Y0	4.7	100kHz,0.25V	0.0198	4.2	3.5	20,30	4R7
APCF001010455R6□Y0	5.6	100kHz,0.25V	0.022	3.8	3.2	30	5R6
APCF00101045100□Y0	10	100kHz,0.25V	0.0364	3	2.5	20,30	100
APCF00101045150□Y0	15	100kHz,0.25V	0.0472	2.4	2.2	20,30	150
APCF00101045220□Y0	22	100kHz,0.25V	0.0591	2.1	1.9	20,30	220
APCF00101045330□Y0	33	100kHz,0.25V	0.0815	1.6	1.7	20,30	330
APCF00101045470□Y0	47	100kHz,0.25V	0.1	1.4	1.5	20,30	470
APCF00101045680□Y0	68	100kHz,0.25V	0.14	1.2	1.3	20,30	680
APCF00101045101□Y0	100	100kHz,0.25V	0.2	1	1.1	20,30	101
APCF00101045151□Y0	150	100kHz,0.25V	0.35	0.79	0.81	20,30	151
APCF00101045221□Y0	220	100kHz,0.25V	0.47	0.65	0.7	20,30	221
APCF00101045331□Y0	330	100kHz,0.25V	0.68	0.54	0.58	20,30	331
APCF00101045471□Y0	470	100kHz,0.25V	1.03	0.47	0.47	20,30	471
APCF00101045681□Y0	680	100kHz,0.25V	1.6	0.38	0.38	20,30	681
APCF00101045102□Y0	1000	100kHz,0.25V	2.8	0.32	0.29	20,30	102
APCF00101045152□Y0	1500	100kHz,0.25V	3.4	0.22	0.26	20,30	152

Note: When ordering, please specify tolerance code. Tolerance: M=±20% / T=±30%

1. Operating temperature range -40°C ~ 165°C (Including self - temperature rise)
2. Isat for Inductance drop 10% from its value without current
3. I rms for a 40°C temprature rise from 25°C ambient with current
4. Rated DC Current: The less value which is Isat or I rms
5. Measure Equipment:
 L: HP4284A PRECISION LCR METER (or equivalent)
 RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
 Isat:WK3255BQ+ WK3265B (or equivalent)
 I rms: WK3255BQ+ WK3265B (or equivalent)

APCF00131365 Type
■ Dimensions


unit:mm

■ Recommended Land Pattern


unit:mm

■ Electrical Characteristics

Part No.	Inductance (μ H)	Test Freq.	RDC (Ω) \pm 20%	Isat (A)Max	Irms (A)Typ	Tolerance (\pm %)	Marking
APCF001313652R0□Y0	2.0	100kHz,0.5V	0.0117	10	6.2	30	2R0
APCF001313654R2□Y0	4.2	100kHz,0.5V	0.015	7.3	5.5	30	4R2
APCF001313657R0□Y0	7.0	100kHz,0.5V	0.0177	5.7	5	30	7R0
APCF00131365100□Y0	10.0	100kHz,0.5V	0.0202	5	4.8	20,30	100
APCF00131365150□Y0	15	100kHz,0.5V	0.0237	4.2	4.4	20,30	150
APCF00131365220□Y0	22	100kHz,0.5V	0.0316	3.5	3.8	20,30	220
APCF00131365330□Y0	33	100kHz,0.5V	0.0406	2.8	3.4	20,30	330
APCF00131365470□Y0	47	100kHz,0.5V	0.0578	2.4	2.8	20,30	470
APCF00131365680□Y0	68	100kHz,0.5V	0.0787	2	2.4	20,30	680
APCF00131365101□Y0	100	100kHz,0.5V	0.123	1.6	1.9	20,30	101
APCF00131365221□Y0	220	100kHz,0.5V	0.273	1	1.2	20,30	221
APCF00131365102□Y0	1000	100kHz,0.5V	1.1	0.3	0.35	20,30	102

Note: When ordering, please specify tolerance code. Tolerance: M= \pm 20% / T= \pm 30%

1. Operating temperature range $-40^{\circ}\text{C} \sim 165^{\circ}\text{C}$ (Including self - temperature rise)
2. Isat for Inductance drop 10% from its value without current
3. Iirms for a 40°C temperature rise from 25°C ambient with current
4. Rated DC Current: The less value which is Isat or Iirms
5. Measure Equipment:

L: HP4284A PRECISION LCR METER (or equivalent)

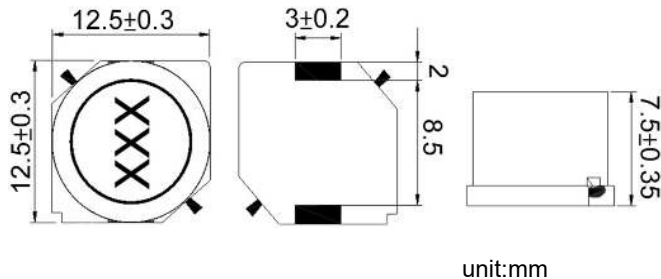
RDC: CHROMA MODEL 16502 MILLIOHMETER (or equivalent)

Isat: WK3255BQ+ WK3265B (or equivalent)

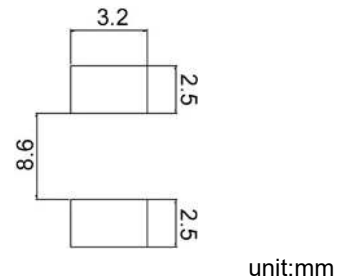
Iirms: WK3255BQ+ WK3265B (or equivalent)

APCF00131375 Type

■ Dimensions



■ Recommended Land Pattern



■ Electrical Characteristics

Part No.	Inductance (uH)	Test Freq.	RDC (Ω)±20%	Isat (A)Max	Irms (A)Typ	Tolerance (±%)	Marking
APCF001313751R2□00	1.2	100kHz,0.5V	0.0069	13	8.2	30	1R2
APCF001313752R7□00	2.7	100kHz,0.5V	0.0094	10	7	30	2R7
APCF001313753R9□00	3.9	100kHz,0.5V	0.0104	9	6.7	30	3R9
APCF001313755R6□00	5.6	100kHz,0.5V	0.0116	7.8	6.3	30	5R6
APCF001313756R8□00	6.8	100kHz,0.5V	0.0131	7.2	5.9	30	6R8
APCF00131375100□00	10	100kHz,0.5V	0.0156	5.5	5.4	20,30	100
APCF00131375150□00	15	100kHz,0.5V	0.0184	4.7	5	20,30	150
APCF00131375220□00	22	100kHz,0.5V	0.0263	4	4	20,30	220
APCF00131375330□00	33	100kHz,0.5V	0.0395	3.2	3.4	20,30	330
APCF00131375470□00	47	100kHz,0.5V	0.0528	2.7	3	20,30	470
APCF00131375680□00	68	100kHz,0.5V	0.0778	2	2.4	20,30	680
APCF00131375101□00	100	100kHz,0.5V	0.125	1.9	1.9	20,30	101
APCF00131375151□00	150	100kHz,0.5V	0.175	1.5	1.6	20,30	151
APCF00131375221□00	220	100kHz,0.5V	0.258	1.3	1.3	20,30	221

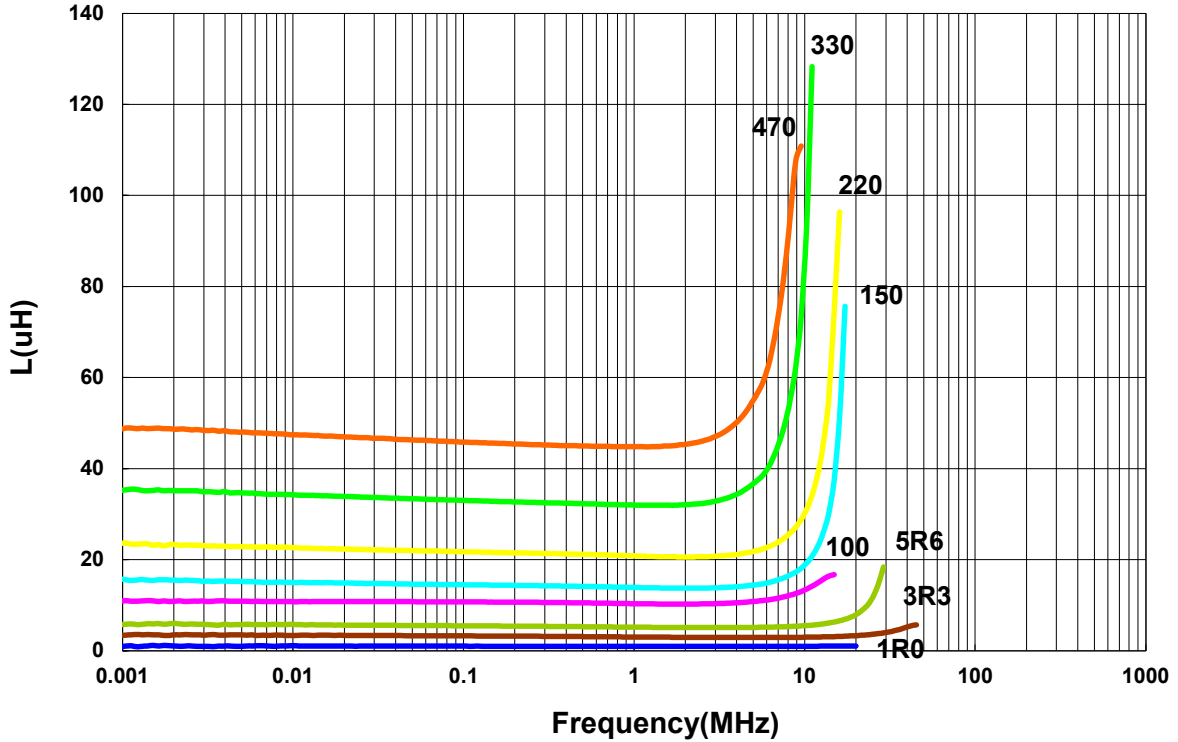
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5. Measure Equipment:
 L: HP4284A PRECISION LCR METER (or equivalent)
 RDC: CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
 Isat:WK3255BQ+ WK3265B (or equivalent)
 I rms: WK3255BQ+ WK3265B (or equivalent)

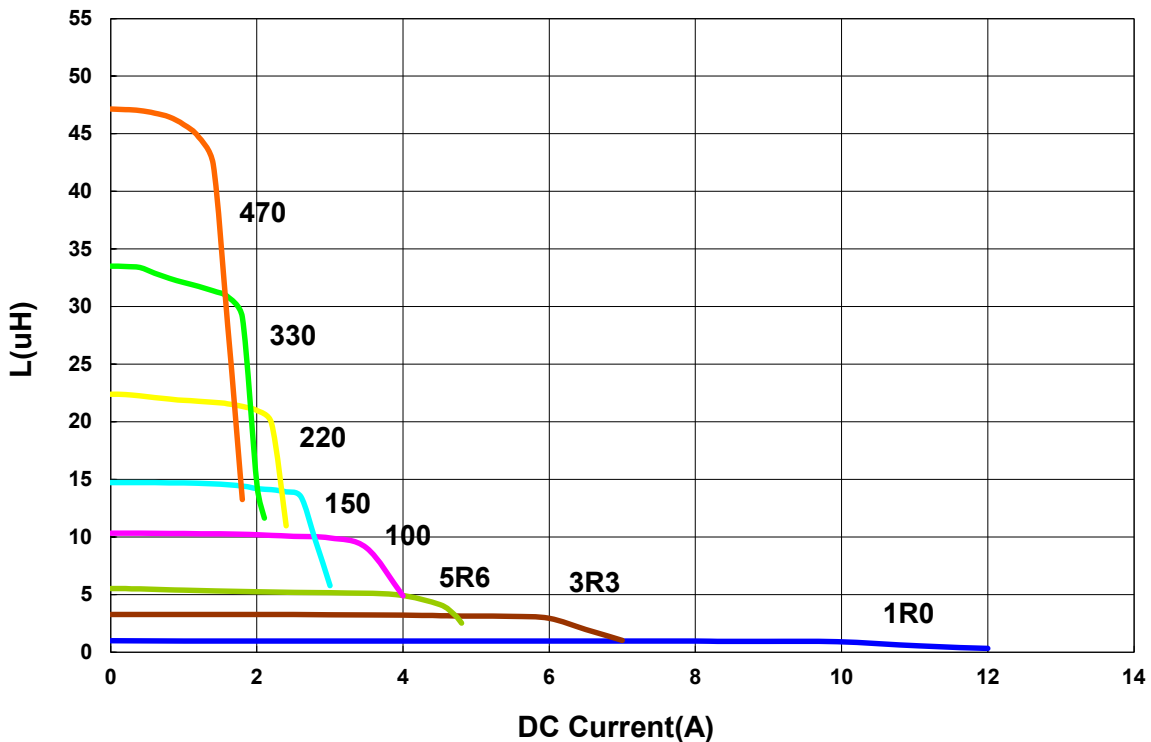
APCF00131375 Type

Characteristics Graph

Inductance vs. Frequency Characteristics



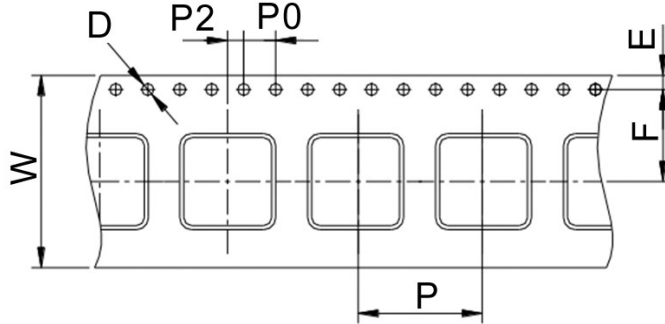
Inductance vs. DC Current



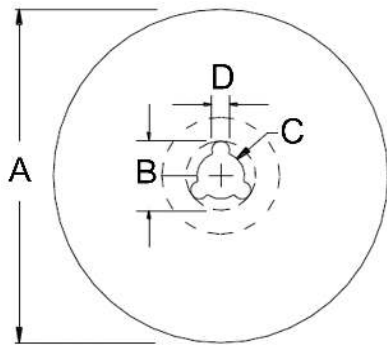
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■ Packaging

Tape Dimensions



Reel Dimensions



Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity PCS / REEL
	W	D	E	F	P	P0	P2	A	B	C	D	
APCF00070732	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000
APCF00070745	16	1.5	1.75	7.5	12	4	2	330	20	13	2	1000
APCF00101045	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500
APCF00131365	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500
APCF00131375	24	1.5	1.75	11.5	16	4	2	330	20	13	2	500