Wire Wound Chip Quite Caused By Lead.

ce.

Application

* PDA

Portable Communication Equipment And PDA.

*

High Speed Electronic Device.

* , W-LAN.

RF Wireless Data Communication Module,W-LAN.

Part Number

FHD	0402	UC	068	J	S	T
D	D	D!	D"	D#	<	=

Product Typel

FHD

FHD: Wire Wound Inductor Series

Dimensions 0402(1.0×0.5mm) 0603 1.6×0.8mm

Material Code UC --- Ceramic Core

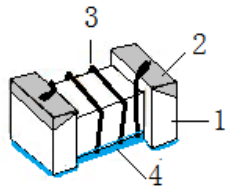
Inductance 1N0=1.0nH 010=10nH R10=100nH 1R0=1.0μH

Tolerance B--±0.1nH C--±0.2nH S--±0.3nH D--±0.5nH G---±2% J---±5% K---±10% M---±20%

Terminal S--- Tin

Packaging T: Tape & Reel B: Bulk

Product Structure



1. Core
2. Electrode
3. Wire
4. Encapsulation Layer

Dimension

Unit mm inch

Size	L (Max)	W (Max)	T (Max)	A	B
1005 (0402)	1.19 (0.047)	0.66 (0.026)	0.60 (0.024)	0.50 (0.020)	0.23 (0.009)
1608 (0603)	1.80 (0.070)	1.20 (0.043)	1.10 (0.037)	0.90 (0.035)	0.31 (0.012)

ELECTRICAL CHARACTERISTICS

0402 Type

Part NO	Inductance (nH)	Tolerance	Q Q (Min)	SRF (MHZ) Min	Rdc Max	Idc(mA) Max
FHD0402UC1N0□ST	1.0@250MHz	B,C,S,D,K	13@250MHz	10000	0.045	1
FHD0402UC1N2□ST	1.2@250MHz	B,C,S,D,K	8@250MHz	10000	0.135	
FHD0402UC1N8□ST	1.8@250MHz	C,S,D,K	16@250MHz	6000	0.070	
FHD0402UC1N9□ST	1.9@250MHz	C,S,D,K	16@250MHz	6000	0.070	
FHD0402UC2N0□ST	2.0@250MHz	C,S,D,K	18@250MHz	6000	0.070	
FHD0402UC2N2□ST	2.2@250MHz	C,S,D,K	18@250MHz	6000	0.070	
FHD0402UC2N4□ST	2.4@250MHz	C,S,D,K	16@250MHz	6000	0.0	
FHD0402UC2N5□ST	2.5@250MHz	C,S,D,K	15@250MHz	6000	0	
FHD0402UC2N7□ST	2.7@250MHz	C,S,D,K	15@250MHz	6000		
FHD0402UC2N9□ST	2.9@250MHz	C,S,D,K	8@250MHz	6000		
FHD0402UC3N0□ST	3.0@250MHz	C,S,D,K	8@250MHz	6000		
FHD0402UC3N3□ST	3.3@250MHz	C,S,D,K	20@250MHz	6000		
FHD0402UC3N6□ST	3.6@250MHz	B,C,S,D,J,K	20@250MHz	6000		
FHD0402UC3N9□ST	3.9@250MHz	B,C,S,D,J,K	20@250MHz	6000		
FHD0402UC4N0□ST	4.0@250MHz	B,C,S,D,J,K	20@250MHz	6000		
FHD0402UC4N2□ST	4.2@250MHz	B,C,S,D,J,K	20@250MHz	6000		
FHD0402UC4N3□ST	4.3@250MHz	C,S,D,J,K	20@250MHz	6000		
FHD0402UC4N7□ST	4.7@250MHz	B,C,S,D,J,K	18@250MHz	4500		
FHD0402UC5N1□ST	5.1@250MHz	B,C,S,D,J,K	18@250MHz	4800		
FHD0402UC5N6□ST	5.6@250MHz	C,S,D,J,K	C,S,MHz			

FHD0402UC013□ST	13@250MHz	G,J,K	25@250MHz	3450	0.210	440
FHD0402UC015□ST	15@250MHz	G,J,K	25@250MHz	3280	0.300	560
FHD0402UC016□ST	16@250MHz	G,J,K	25@250MHz	3100	0.220	560
FHD0402UC018□ST	18@250MHz	G,J,K	25@250MHz	3100	0.230	420
FHD0402UC019□ST	19@250MHz	G,J,K	25@250MHz	3040	0.200	480
FHD0402UC020□ST	20@250MHz	G,J,K	25@250MHz	3000	0.250	420
FHD0402UC022□ST	22@250MHz	G,J,K	25@250MHz	2800	0.300	400
FHD0402UC023□ST	23@250MHz	G,J,K	22@250MHz	2720	0.380	310
FHD0402UC024□ST	24@250MHz	G,J,K	25@250MHz	2700	0.300	400
FHD0402UC027□ST	27@250MHz	G,J,K	24@250MHz	2480	0.520	280
FHD0402UC030□ST	30@250MHz	G,J,K	25@250MHz	2350	0.500	400
FHD0402UC033□ST	33@250MHz	G,J,K	24@250MHz	2350	0.650	350
FHD0402UC036□ST	36@250MHz	G,J,K	25@250MHz	2320	0.600	250
FHD0402UC039□ST	39@250MHz	G,J,K	25@250MHz	2100	0.750	200
FHD0402UC040□ST	40@250MHz	G,J,K	25@250MHz	2240	0.600	220
FHD0402UC043□ST	43@250MHz	J,K	25@250MHz	2030	0.810	100
FHD0402UC047□ST	47@250MHz	G,J,K	25@250MHz	2100	0.830	150
FHD0402UC051□ST	51@250MHz	J,K	25@250MHz	1750	0.820	100
FHD0402UC056□ST	56@250MHz	G,J,K	25@250MHz	1760	0.970	100
FHD0402UC062□ST	62@250MHz	G,J,K	25@250MHz	1620	1.120	100
FHD0402UC068□ST	68@250MHz	G,J,K	25@250MHz	1620	1.120	100
FHD0402UC075□ST	75@250MHz	G,J,K	25@250MHz	1400	1.630	50
FHD0402UC082□ST	82@250MHz	G,J,K	25@250MHz	1260	1.700	50
FHD0402UCR10□ST	100@250MHz	G,J,K	25@250MHz	1160	2.000	30
FHD0402UCR12□ST	120@250MHz	G,J,K	25@250MHz	1100	2.200	30

0603Type

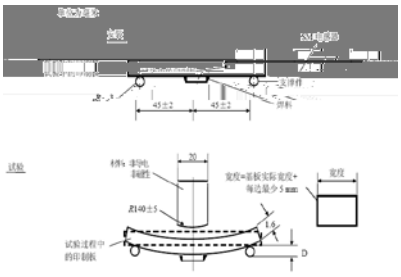
Part NO	Inductance (nH)	Tolerance	Q Q (Min)	SRF (MHZ) Min	Rdc Max	Idc(mA) Max
FHD0603UC1N6□ST	1.6@250MHz	C,S,D,K	18@250MHz	12500	0.040	700
FHD0603UC1N7□ST	1.7@250MHz	B,C,S,D,K	18@250MHz	12500	0.045	700
FHD0603UC1N8□ST	1.8@250MHz	C,S,D,K	16@250MHz	12500	0.045	700
FHD0603UC2N0□ST	2.0@250MHz	C,S,D,K	12@250MHz	10000	0.090	700
FHD0603UC2N2□ST	2.2@250MHz	C,S,D,K	12@250MHz	10000	0.090	700
FHD0603UC3N3□ST	3.3@250MHz	S,D,K	20@250MHz	5900	0.075	700
FHD0603UC3N6□ST	3.6@250MHz	B,C,S,D,K	22@250MHz	5900	0.075	700
FHD0603UC3N9□ST	3.9@250MHz	B,C,S,D,K	22@250MHz	6900	0.080	700
FHD0603UC4N3□ST	4.3@250MHz	B,C,S,D,K	22@250MHz	5900	0.075	700
FHD0603UC4N7□ST	4.7@250MHz	B,C,S,D,K	20@250MHz	5800	0.116	700
FHD0603UC5N1□ST	5.1@250MHz	B,C,S,D,K	20@250MHz	5700	0.120	700
FHD0603UC6N0□ST	6.0@250MHz	C,S,D,K	27@250MHz	5700	0.110	700
FHD0603UC6N2□ST	6.2@250MHz	C,S,D,K	27@250MHz	5700	0.110	700
FHD0603UC6N8□ST	6.8@250MHz	G,J,K	27@250MHz	5800	0.110	700

FHD0603UC7N5□ST	7.5@250MHz	G,J,K	28@250MHz	4800	0.110	700
FHD0603UC8N2□ST	8.2@250MHz	G,J,K	28@250MHz	4700	0.120	700
FHD0603UC8N7□ST	8.7@250MHz	G,J,K	28@250MHz	4600	0.120	700
FHD0603UC9N1□ST	9.1@250MHz	G,J,K	26@250MHz	4500	0.150	700
FHD0603UC9N5□ST	9.5@250MHz	G,J,K	26@250MHz	5400	0.150	700
FHD0603UC010□ST	10@250MHz	G,J,K	31@250MHz	4800	0.130	700
FHD0603UC011□ST	11@250MHz	G,J,K	33@250MHz	4000	0.130	700
FHD0603UC012□ST	12@250MHz	G,J,K	35@250MHz	4000	0.130	700
FHD0603UC013□ST	13@250MHz	G,J,K	30@250MHz	4000	0.140	700
FHD0603UC014□ST	14@250MHz	G,J,K	35@250MHz	4000	0.140	700
FHD0603UC015□ST	15@250MHz	G,J,K	30@250MHz	4000	0.150	700
FHD0603UC016□ST	16@250MHz	G,J,K	34@250MHz	3300	0.160	700
FHD0603UC018□ST	18@250MHz	G,J,K	35@250MHz	3100	0.170	700
FHD0603UC020□ST	20@250MHz	G,J,K	38@250MHz	3000	0.190	700
FHD0603UC022□ST	22@250MHz	G,J,K	38@250MHz	3000	0.190	700
FHD0603UC024□ST	24@250MHz	G,J,K	37@250MHz	2650	0.200	700
FHD0603UC025□ST	25@250MHz	G,J,K	38@250MHz	2600	0.210	700
FHD0603UC027□ST	27@250MHz	G,J,K	36@250MHz	2800	0.220	600
FHD0603UC030□ST	30@250MHz	G,J,K	37@250MHz	2250	0.220	600
FHD0603UC033□ST	33@250MHz	J,K	36@250MHz	2300	0.220	600
FHD0603UC036□ST	36@250MHz	G,J,K	36@250MHz	2080	0.250	600
FHD0603UC039□ST	39@250MHz	G,J,K	40@250MHz	2200	0.250	600
FHD0603UC043□ST	43@250MHz	G,J,K	36@250MHz	2000	0.280	600
FHD0603UC047□ST	47@200MHz	G,J,K	36@200MHz	2000	0.280	600
FHD0603UC049□ST	49@200MHz	G,J,K	36@200MHz	2000	0.280	600
FHD0603UC050□ST	50@200MHz	G,J,K	36@200MHz	1900	0.295	600
FHD0603UC051□ST	51@200MHz	G,J,K	36@200MHz	1900	0.300	600
FHD0603UC056□ST	56@200MHz	G,J,K	38@200MHz	1900	0.280	600
FHD0603UC068□ST	68@200MHz	G,J,K	36@200MHz	1700	0.340	600
FHD0603UC072□ST	72@150MHz	G,J,K	34@150MHz	1700	0.530	400
FHD0603UC075□ST	75@150MHz	G,J,K	30@150MHz	1400	0.600	400
FHD0603UC082□ST	82@150MHz	G,J,K	34@150MHz	1700	0.550	400
FHD0603UC091□ST	91@150MHz	G,J,K	30@150MHz	1400	0.630	400
FHD0603UCR10□ST	100@150MHz	G,J,K	30@150MHz	1400	0.630	400
FHD0603UCR11□ST	110@150MHz	G,J,K	32@150MHz	1350	0.670	300
FHD0603UCR12□ST	120@150MHz	G,J,K	32@150MHz	1300	0.730	300
FHD0603UCR15□ST	150@150MHz	G,J,K	28@150MHz	990	0.800	280
FHD0603UCR16□ST	160@100MHz	G,J,K	25@100MHz	990	1.250	250
FHD0603UCR18□ST	180@100MHz	G,J,K	25@100MHz	990	1.450	240
FHD0603UCR20□ST	200@100MHz	G,J,K	25@100MHz	900	1.550	200
FHD0603UCR22□ST	220@100MHz	G,J,K	25@100MHz	900	2.100	200
FHD0603UCR25□ST	250@100MHz	G,J,K	25@100MHz	822	3.550	120
FHD0603UCR27□ST	270@100MHz	G,J,K	24@100MHz	900	2.300	170
FHD0603UCR30□ST	300@100MHz	G,J,K	24@100MHz	1000	3.000	100
FHD0603UCR33□ST	330@100MHz	G,J,K	25@100MHz	900	3.890	100
FHD0603UCR39□ST	390@100MHz	G,J,K	25@100MHz	800	4.350	100
FHD0603UCR47□ST	470@100MHz	G,J,K	25@100MHz	700	7.000	75

Reliability Test Method

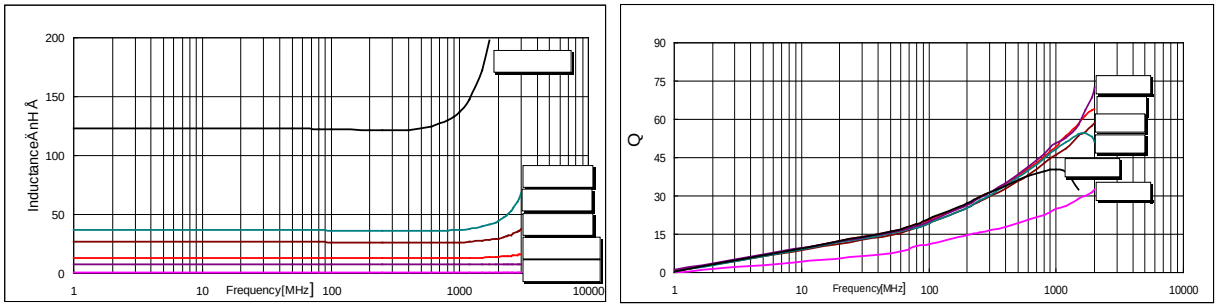
No.	Items	Requirements	Test Methods and Remarks
1	Solder ability	No visible mechanical damage. Electrode surface solder coverage. FHD-UC series 90%	245±3 96.5%Sn/3.0%Ag/0.5%Cu 3±0.3s Dip pads in flux and dip in solder pot(96.5Sn/3.0Ag/0.5Cu)at 245±3 for 3±0.3s.
2	Resistance to Soldering	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	260±5 96.5%Sn/ 3.0%Ag/0.5%Cu 10±1s Dip pads in flux and dip in solder pot(96.5Sn/3.0Ag/0.5Cu)at 260±5 for 10±1s.
3	Vibration	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	1.5mm 10~55Hz (X Y Z) 2 Inductors shall be subjected to vibration of 1.5mm amplitude freque(1 v) /TT2 1 Tf -05,adf

5	Low temperature resistance	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	FHD-UC -55 2 +24 1000 É0 h FHD-UC series shall be subjected to-55±2 for 1000 +24 É0 h
6	High temperature resistance	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	FHD-UC +125 5 +24 1000 É0 h FHD-UC series shall be subjected to +125±5 for1000 +24 É0 h
7	Temperature Shock	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	FHD-UC +125 30 -40 30 100 FHD-UC series +125 30minutes ←→ -40 30minutes 100 Cycles.
8	High temperature load	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	FHD-UC 125 2 +24 1000 É0 h +24 FHD-UC series shall be store at 125±2 for 1000 É0 h with rated current applied.
9	Static Humidity	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	90% 95%, 60 2 +24 1000 É0 h Inductors shall be subjected to 90% 95%RH. at 60±2 +24 for 1000 É0 h
10	Bending strength	No visible mechanical damage.	Install the inductor on the test substrate; Apply force in the vertical direction (as shown below). 1 0.5 mm/s 2 0.2 mm 20 1 s The epoxy plate should bend down to 2 0.2 mm at the bending rate of 1 0.5

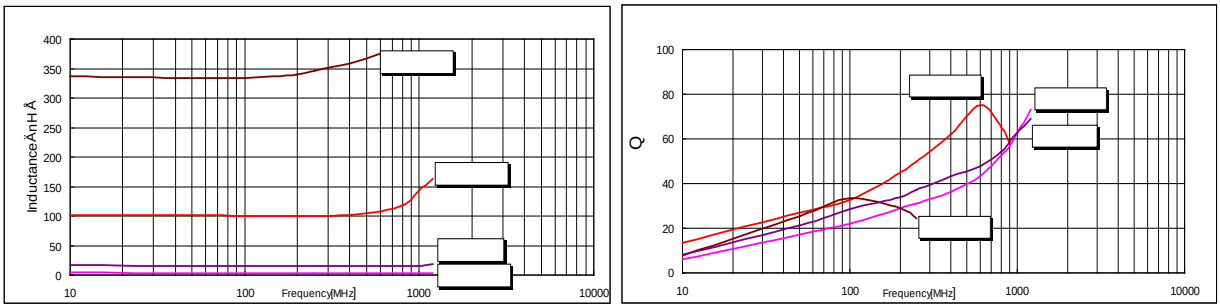
			mm/s Keep time 20 1 sec. 
11	Solvent Resistance	No visible mechanical damage. ±5 Inductance shall not change more than ±5%; Q ±10% Q shall not change more than±10 .	23±5 5±0.5 Soak in the element 23±5 in isopropyl alcohol solution, keep 5±0.5 min.

Product Characteristic Curve

FHD0402 Type.

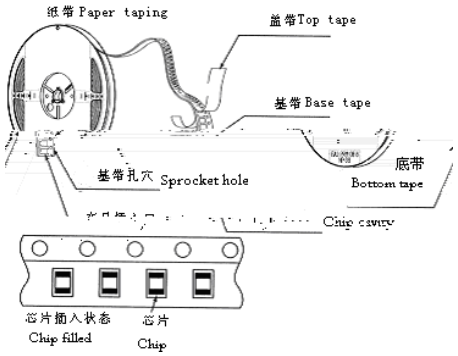


FHD0603 Type.

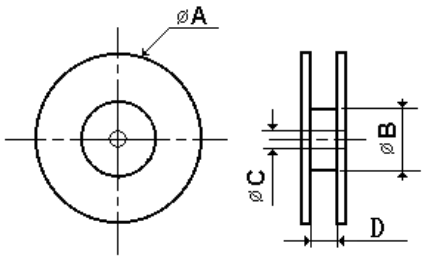


Packaging

* Taping drawings

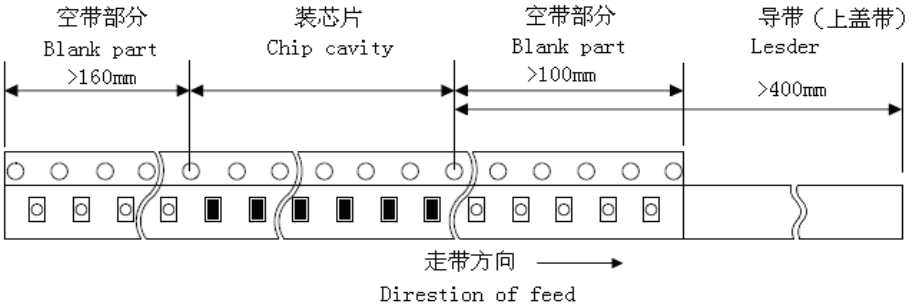


* Reel dimensions (Unit:mm)



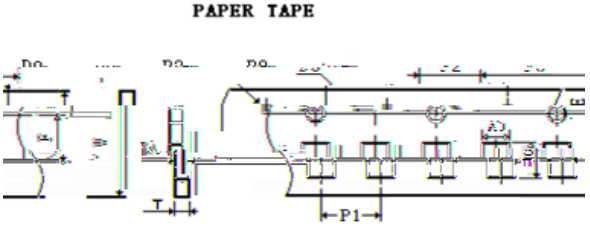
Part NO.	ΦA typ.	ΦB typ.	ΦC typ.	D typ.
0402-0603	178	60	13	8.4

* Leader and blank portion



* Taping dimensions (Unit: mm)

Paper tape



Part NO.	W	E	F	D0	P0	P1	P2	P0×10	A0	B0	K0	T