LS Series



LS Series is the newest in open type ferrite wire wound chip inductors. The wire wound ferrite construction supports higher SRF, lower DCR and superior Q values than other ferrite chip inductors.

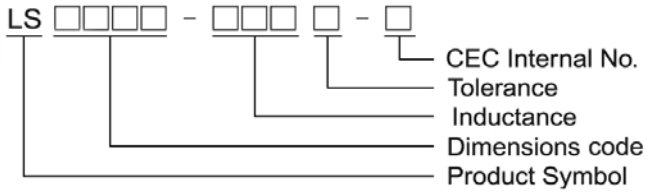
Features

- RoHS compliant
- Very strong solderability by reflow soldering and soldering iron
- Highly accurate dimensions
- Can be mounted automatically
- Terminals are highly resistant to external forces
- Highly resistant to mechanical shocks and pressure
- Highly reliable in environments of sudden temperature change and humidity
- Low DCR & better Q value in ferrite series

Applications

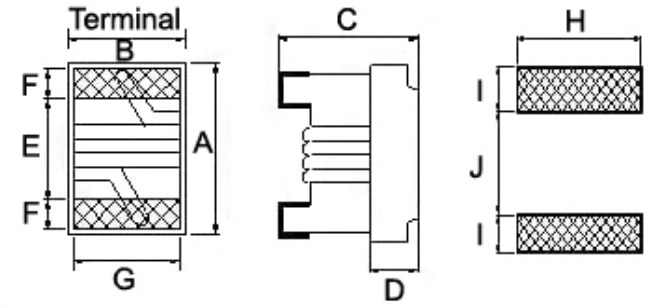
- Telecom and datacom applications such as xDSL
- Cable modem
- Set-top box
- CATV filter/tuner
- Wireless LAN, etc

Product Identification



Shape and Dimensions / Recommended Pattern

LS0402/0603/0805/1008



Dimensions in mm

TYPE	A Max	B Max	C Max	D	E	F	G	H	I	J
LS0402	1.02±0.1	0.55±0.1	0.56±0.1	0.25	0.54	0.23	0.50	0.65	0.38	0.44
LS0603	$1.6^{+0.2}_{-0.1}$	1.1±0.1	$0.9^{+0.2}_{-0.1}$	0.38	0.86	0.33	0.76	1.02	0.64	0.64
LS0805	2.4	1.72	1.52	0.70	1.02	0.50	1.27	1.78	1.02	0.76
LS1008	2.99	2.50	2.20	0.70	1.52	0.51	2.03	2.54	1.02	1.27

CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	Q Typ.	SRF (MHz)Typ.	RDC (Ω) Max	Irms (mA)Typ.
LS0402-20N□-N	0.020	10 / 5	100	10	2600	0.050	1600
LS0402-22N□-N	0.022	10	100	10	2500	0.072	1300
LS0402-33N□-N	0.033	10 / 5	100	10	2300	0.060	1400
LS0402-36N□-N	0.036	10 / 5	100	10	2300	0.092	1000
LS0402-39N□-N	0.039	10 / 5	100	10	2200	0.150	830
LS0402-51N□-N	0.051	10	100	10	1930	0.070	1100
LS0402-56N□-N	0.056	10	100	10	1900	0.125	900
LS0402-72N□-N	0.072	10 / 5	100	10	1650	0.100	900
LS0402-78N□-N	0.078	10 / 5	100	10	1600	0.190	850
LS0402-R10□-N	0.10	10	100	9	1400	0.160	900
LS0402-R14□-N	0.14	10 / 5	50	11	1220	0.260	540
LS0402-R18□-N	0.18	10	50	11	1150	0.330	560
LS0402-R20□-N	0.20	10 / 5	50	11	1000	0.440	400
LS0402-R22□-N	0.22	10 / 5	50	11	1150	0.530	380
LS0402-R25□-N	0.25	10 / 5	25	11	900	0.360	520
LS0402-R27□-N	0.27	10	25	11	860	0.550	360
LS0402-R30□-N	0.30	10 / 5	25	11	860	0.410	420
LS0402-R33□-N	0.33	10 / 5	7.9	11	820	0.680	350
LS0402-R36□-N	0.36	10 / 5	7.9	11	810	0.575	360
LS0402-R39□-N	0.39	10 / 5	7.9	11	760	0.890	300
LS0402-R42□-N	0.42	10 / 5	7.9	11	700	1.100	340
LS0402-R47□-N	0.47	10	7.9	11	650	0.730	310
LS0402-R56□-N	0.56	10 / 5	7.9	11	600	1.100	200

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

- Operating temperature range - 25℃ ~ 105℃(Including self - temperature rise)
- Irms for a 15℃ temperature rise from 25℃ ambient with current
- Measure Equipment：

  L & Q：Agilent E4991A+Agilent HP16197A

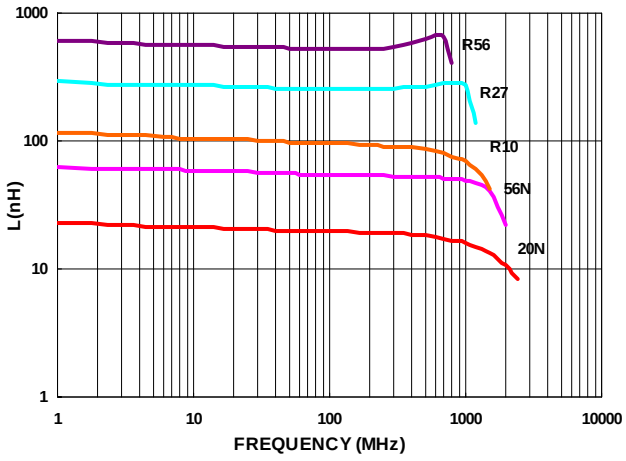
  SRF：Agilent E4991A

  RDC：DIGITAL MILLINHM METER CHROMA 16502

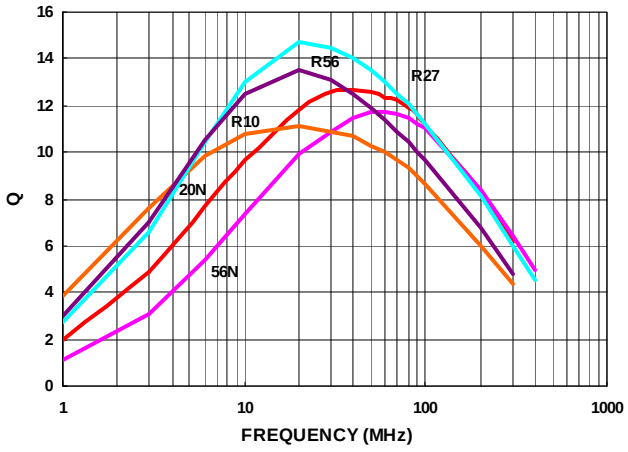
  Irms：HP4284A+HP42841A

Test Instruments：Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	Q Typ.	SRF (MHz) Min	RDC (Ω) Max	IDC (mA)	Color
LS0603-47N□-N	0.047	10 / 5	7.9	17	1700	0.075	1500	Black
LS0603-72N□-N	0.072	10 / 5	7.9	17	1700	0.12	1500	Brown
LS0603-R10□-N	0.10	10 / 5	7.9	17	1650	0.13	1500	Red
LS0603-R12□-N	0.12	10 / 5	7.9	17	1350	0.15	1500	Orange
LS0603-R15□-N	0.15	10 / 5	7.9	17	1350	0.15	1450	Yellow
LS0603-R18□-N	0.18	10 / 5	7.9	17	1150	0.15	1400	Green
LS0603-R22□-N	0.22	10 / 5	7.9	17	1050	0.16	1350	Blue
LS0603-R24□-N	0.24	10 / 5	7.9	17	1050	0.19	1300	Violet
LS0603-R27□-N	0.27	10 / 5	7.9	17	1050	0.30	1050	Gray
LS0603-R33□-N	0.33	10 / 5	7.9	17	850	0.46	1200	White
LS0603-R39□-N	0.39	10 / 5	7.9	17	810	0.51	1200	Black
LS0603-R47□-N	0.47	10 / 5	7.9	17	720	0.62	1050	Brown
LS0603-R56□-N	0.56	10 / 5	7.9	17	600	0.44	850	Red
LS0603-R68□-N	0.68	10 / 5	7.9	17	600	0.52	850	Orange
LS0603-R78□-N	0.78	10 / 5	7.9	17	460	0.83	850	Yellow
LS0603-R82□-N	0.82	10 / 5	7.9	17	480	0.69	750	Green
LS0603-R91□-N	0.91	10 / 5	7.9	17	330	0.76	670	Black
LS0603-1R0□-N	1.0	10 / 5	7.9	18	310	0.81	600	Blue
LS0603-1R2□-N	1.2	10 / 5	7.9	17	270	0.87	550	Violet
LS0603-1R5□-N	1.5	10 / 5	7.9	17	270	1.06	540	Gray
LS0603-1R8□-N	1.8	10 / 5	7.9	17	230	1.10	520	White
LS0603-2R2□-N	2.2	10 / 5	7.9	17	140	1.20	500	Black
LS0603-2R7□-N	2.7	10 / 5	7.9	17	105	1.50	480	Brown
LS0603-3R3□-N	3.3	10 / 5	7.9	17	84	1.50	440	Red
LS0603-3R9□-N	3.9	10 / 5	7.9	17	80	1.60	430	Orange
LS0603-4R7□-N	4.7	10 / 5	7.9	18	69	2.10	420	Yellow
LS0603-5R6□-N	5.6	10 / 5	7.9	18	65	2.60	400	Green
LS0603-6R8□-N	6.8	10 / 5	7.9	19	55	3.10	400	Blue
LS0603-7R8□-N	7.8	10 / 5	7.9	17	47	3.50	400	Violet
LS0603-8R2□-N	8.2	10 / 5	7.9	17	42	3.80	400	Gray
LS0603-100□-N	10	10 / 5	7.9	19	40	4.80	300	White

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

- Operating temperature range - 25℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：

  L & Q：Agilent E4991A+Agilent HP16197A

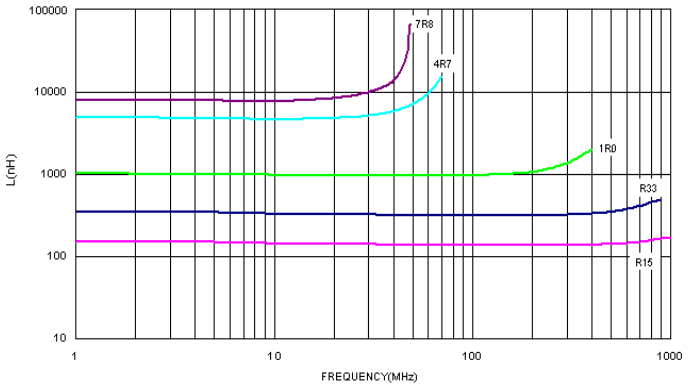
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  RDC：CHEN HWA 502

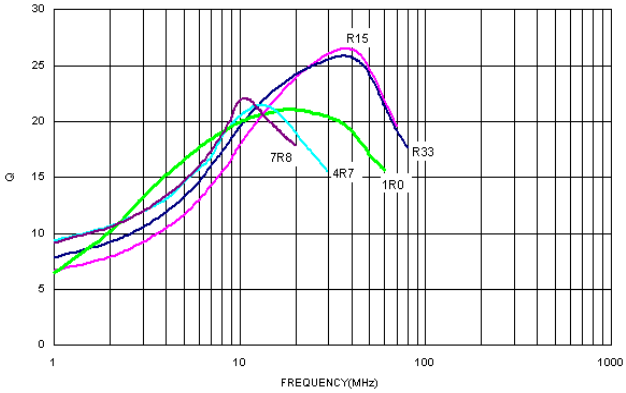
  IDC：HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments：Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



CHILISIN ELECTRONICS CORP.

Electrical Characteristics

Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	Q Typ.	SRF (MHz) Min	RDC (Ω) Max	IDC (mA)	Color
LS0805-78N□-N	0.078	10 / 5	7.9	19	1440	0.06	2000	Black
LS0805-90N□-N	0.090	10 / 5	7.9	19	1200	0.07	2000	Red
LS0805-R11□-N	0.11	10 / 5	7.9	19	1200	0.07	2000	Brown
LS0805-R47□-N	0.47	10 / 5	7.9	19	480	0.40	800	Red
LS0805-R56□-N	0.56	10 / 5	7.9	35	480	0.40	800	Yellow
LS0805-R68□-N	0.68	10 / 5	7.9	20	480	0.40	800	Orange
LS0805-R91□-N	0.91	10 / 5	7.9	20	400	0.69	700	Yellow
LS0805-1R0□-N	1.0	10 / 5	7.9	20	400	0.69	700	Yellow
LS0805-1R2□-N	1.2	10 / 5	7.9	20	330	0.83	700	Red
LS0805-1R5□-N	1.5	10 / 5	7.9	20	330	0.83	700	Green
LS0805-1R8□-N	1.8	10 / 5	7.9	20	300	1.00	650	Blue
LS0805-2R2□-N	2.2	10 / 5	7.9	20	250	1.10	650	Violet
LS0805-2R7□-N	2.7	10 / 5	7.9	23	200	1.25	650	Gray
LS0805-3R3□-N	3.3	10 / 5	7.9	23	160	1.45	650	White
LS0805-3R9□-N	3.9	10 / 5	7.9	23	90	1.50	600	Black
LS0805-4R7□-N	4.7	10 / 5	7.9	20	70	1.60	530	Brown
LS0805-5R6□-N	5.6	10 / 5	7.9	20	65	1.70	500	Red
LS0805-6R8□-N	6.8	10 / 5	7.9	20	45	1.95	470	Orange
LS0805-8R2□-N	8.2	10 / 5	2.5	16	45	2.10	450	Yellow
LS0805-100□-N	10	10 / 5	2.5	16	40	2.40	400	Green
LS0805-120□-N	12	10 / 5	2.5	16	38	3.20	360	Red
LS0805-150□-N	15	10 / 5	2.5	16	30	3.55	350	Blue
LS0805-180□-N	18	10 / 5	2.5	16	25	4.90	300	Orange
LS0805-220□-N	22	10 / 5	2.5	16	20	5.45	270	Violet
LS0805-270□-N	27	10 / 5	2.5	16	19	7.80	240	Gray
LS0805-330□-N	33	10 / 5	2.5	16	16	9.50	210	White
LS0805-470□-N	47	10 / 5	2.5	16	15	14.50	180	Brown

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

- Operating temperature range - 25℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：

  L & Q：Agilent E4991A+Agilent HP16197A

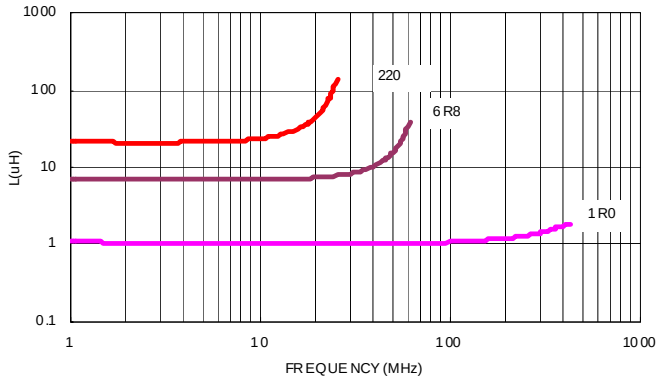
  SRF：Agilent E4991A

  RDC：HP4338B or CHEN HWA 502

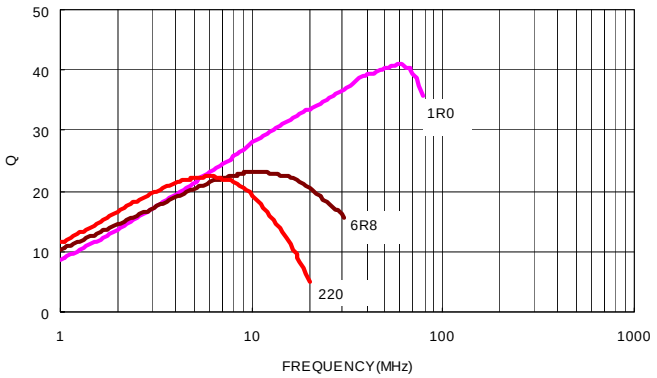
  IDC：HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments：Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



CHILISIN ELECTRONICS CORP.

Electrical Characteristics

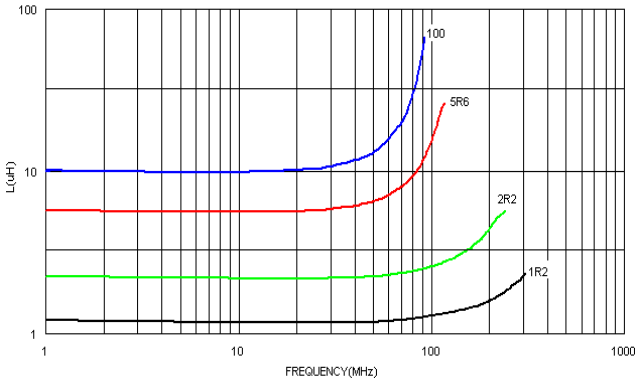
Part Number	Inductance (uH)	Tolerance (±%)	Test Frequency (MHz)	Q Typ.	Test Frequency (MHz)	SRF (MHz) Min	RDC (Ω) Max	IDC (mA)	Color Coding 1ST	2ND	3RD
LS1008-1R2□-N	1.2	10 / 5	7.9	55	50	350	0.50	1200	Brown	Red	Red
LS1008-1R5□-N	1.5	10 / 5	7.9	58	50	300	0.65	1200	Brown	Green	Red
LS1008-1R8□-N	1.8	10 / 5	7.9	54	50	280	0.75	1050	Brown	Gray	Red
LS1008-2R2□-N	2.2	10 / 5	7.9	48	50	250	0.90	950	Red	Red	Red
LS1008-2R7□-N	2.7	10 / 5	7.9	51	50	200	1.00	950	Red	Violet	Red
LS1008-3R3□-N	3.3	10 / 5	7.9	58	50	200	1.15	900	Orange	Orange	Red
LS1008-3R9□-N	3.9	10 / 5	7.9	37	7.9	170	1.25	850	Orange	White	Red
LS1008-4R7□-N	4.7	10 / 5	7.9	37	7.9	130	1.35	700	Yellow	Violet	Red
LS1008-5R6□-N	5.6	10 / 5	7.9	36	7.9	110	1.45	700	Green	Blue	Red
LS1008-6R8□-N	6.8	10 / 5	7.9	33	7.9	105	1.60	600	Blue	Gray	Red
LS1008-8R2□-N	8.2	10 / 5	7.9	40	7.9	90	1.80	550	Gray	Red	Red
LS1008-100□-N	10	10 / 5	7.9	40	7.9	85	2.40	500	Brown	Black	Orange
LS1008-120□-N	12	10 / 5	7.9	40	7.9	80	2.40	450	Brown	Red	Orange
LS1008-150□-N	15	10 / 5	7.9	35	7.9	38	2.40	450	Brown	Green	Orange
LS1008-390□-N	39	10 / 5	2.5	33	2.5	26	10	170	Orange	White	Orange

Note: When ordering, please specify tolerance code. Tolerance : J=±5% , K=±10%

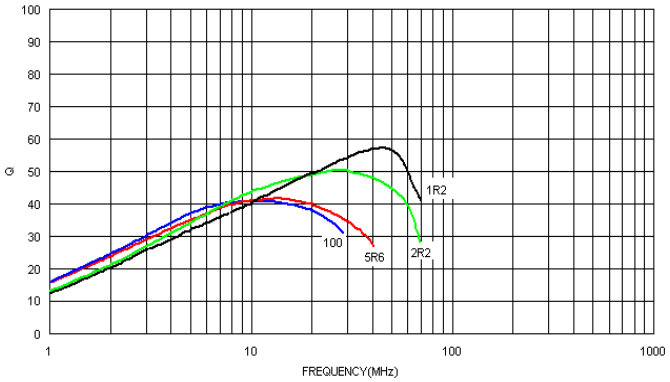
- Operating temperature range - 25℃ ~ 105℃(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment：
  L & Q：Agilent E4991A+Agilent HP16197A
  SRF：Agilent E4991A
  RDC：HP4338B or CHEN HWA 502
  IDC：HP4284A+HP42841A/HP4285A+HP42841A

Test Instruments：Agilent E4991A Material/Impedance Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency

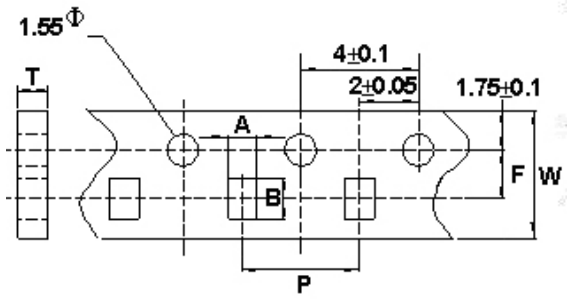


CHILISIN ELECTRONICS CORP.

Packaging Specifications

Tape Dimensions

Figure 1



Tape Material

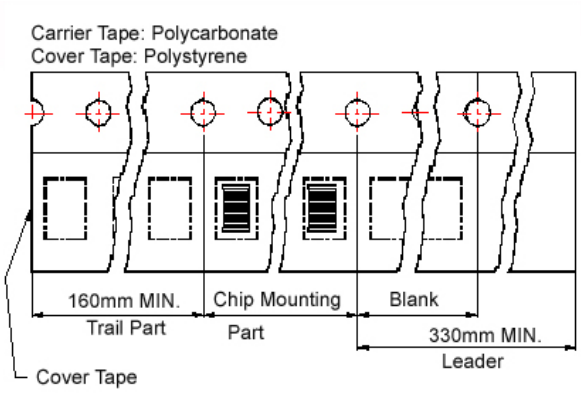
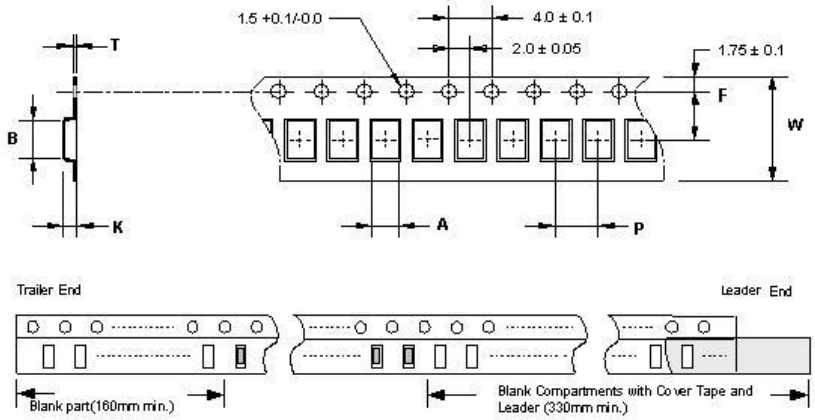
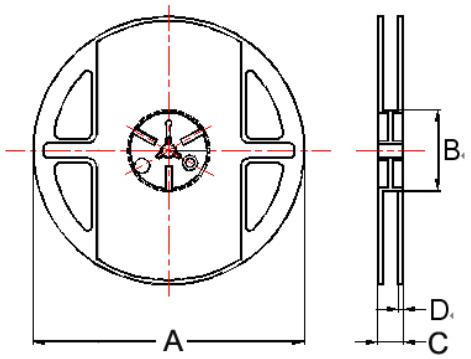


Figure 2



Reel Dimensions



Dimensions in mm

TYPE	Fig.	Tape Dimensions							Reel Dimensions				Quantity
		A	B	T	W	P	F	K	A	B	C	D	PCS / REEL
LS0402	2	0.67	1.20	0.75	8	2	3.5	0.53	178	60	12	1.5	4000
LS0603	1	1.23	1.90	0.97	8	4	3.5	-	178	60	12	1.5	4000
LS0805	2	1.60	2.42	0.22	8	4	3.5	1.45	178	60	12	1.5	2000
LS1008	2	2.40	2.93	0.26	8	4	3.5	2.25	178	60	12	1.5	2000