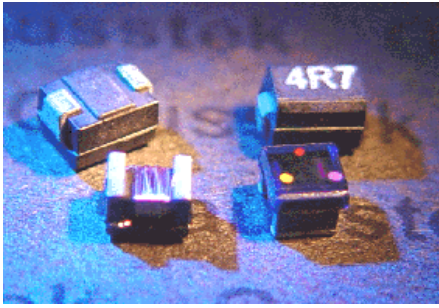


Series **WI - C**



**OUTLINE**

The characteristics of this series perform low RDC and carry large current.  
Best for power supply applications such as PC, conveyable telephone, and other

**FEATURES**

Very strong solderability by reflow soldering and soldering iron.  
Highly accurate dimensions can be mounted automatically  
Terminals are highly resistant to pull forces.  
Highly resistant to mechanical shocks and pressure.  
Highly reliable in environments of sudden temperature change and humidity.  
Superior IDC for DC to DC converter.

**PRODUCT IDENTIFICATION**

**WI 20 C 18 2 J 1U**

a b c d e f g

- a: Type of products - SMD Wire wound inductors with Ferrite Base
- b: Dimension - 20:252018 25:322522 32:453232 50:565050
- c: Materials - C - Ferrite Base for high current application.
- d: Thickness - 18 = 2.2mm Max. 22 = 2.6mm Max, 32 = 3.2mm, 50 = 5.0mm
- e: Packing - PCS/REEL - 1 = 1000, 2 = 2000, G = 400, I = 500
- f: Tolerance - J : ±5% K : ±10% M : ±20%
- g: Inductance - 1N2 = 0.0012uH, 100N = 0.1uH, 1U = 1.0uH, 1U2 = 1.2uH, 1M = 1000 mH, 1M2 = 1200mH

The Part number of Lead-Free Products will be added "X" after original one as identification. EX: WS03X314G1N8X

**APPLICATIONS**

Microtelevitions, liquid crystal televisions, video cameras, portable  
VCRs, car radios, car stereos, thin tape radios, television tuners,  
mobile telephones, radio and other electronic devices.

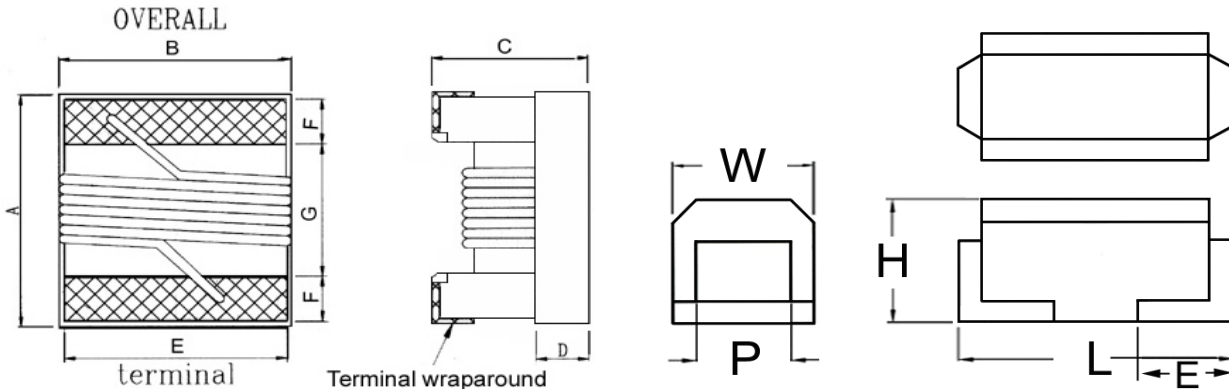
**SHAPES AND DIMENSIONS**

in mm

Type	Alias in mm	Alias in inch	A	B	C	D	E	F	G
			Max.	Max.	Max.	Ref.			
WI20C18	252018	1008	2.92	2.79	2.2	0.7	2.03	0.51	1.52
WI25C22	322522	1210	3.70	2.90	2.6	0.9	2.40	0.51	2.18

WI20C18 & WI25C22

WI32C32 & WI50C50



in mm

TYPE	Alias in m	Alias in inch	L	W	H	P	E
WI32C32	453232	1812	4.5±0.3	3.2±0.3	3.2±0.2	1.4±0.4	0.9±0.2
WI50C50	565050	2220	5.6±0.3	5.0±0.3	5.0±0.2	1.8±0.3	1.3±0.2



Series **WI - C**

ELECTRICAL CHARATERISTICS

**WI20C18**

Part Number	L (μH)	Tolerance ( ±% )	Q Min.	Test Frequency (MHz)	SRF (MHz) Min.	RDC (Ω )Max.	IDC (mA)
WI20C182 □ - 1U	1.00	J,K	25	7.96	300	0.34	1500
WI20C182 □ - 1U5	1.50	J,K	25	7.96	270	0.42	1400
WI20C182 □ - 2U2	2.20	J,K	25	7.96	140	0.5	1200
WI20C182 □ - 3U3	3.30	J,K	25	7.96	95	0.65	1000
WI20C182 □ - 4U7	4.70	J,K	25	7.96	90	0.8	800
WI20C182 □ - 6U8	6.80	J,K	25	7.96	68	1	730
WI20C182 □ - 10U	10.00	J,K	20	2.52	45	1.5	700
WI20C182 □ - 15U	15.00	J,K	20	2.52	40	2.2	500
WI20C182 □ - 22U	22.00	J,K	20	2.52	25	2.7	470
WI20C182 □ - 33U	33.00	J,K	20	2.52	25	4	400
WI20C182 □ - 47U	47.00	J,K	16	2.52	20	8	300

Tolerance: J = ±5%, K = ±10%

Operating temperature range from -25°C to 85°C .

L/Q : Agilent/HP4291 & Agilent/HP16193A

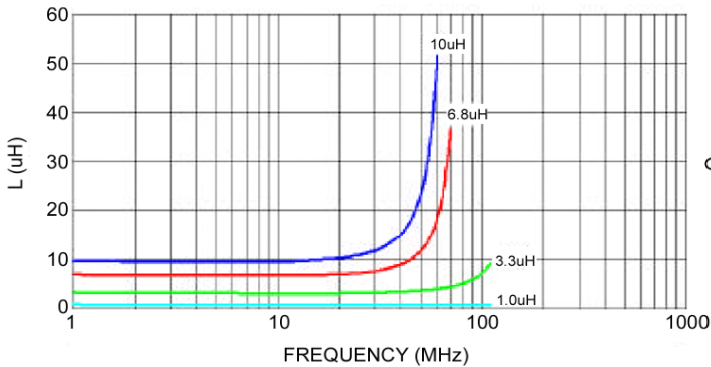
SRF: Agilent/HP4291A

RDC: DIGITAL MULTIMETER CH502BC / HP4338B

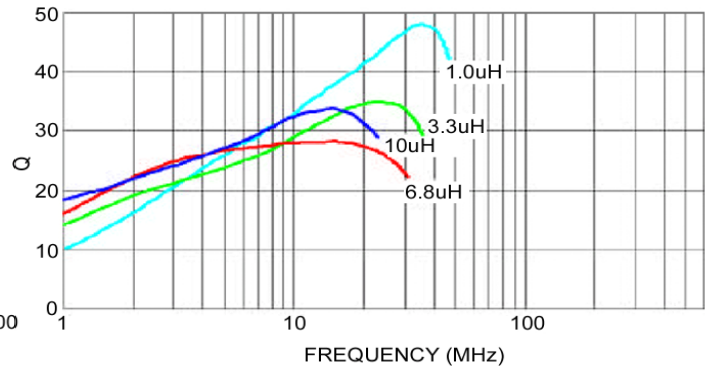
IDC for Inductance drp 10% from its value without current

**Test Instruments : HP4291A Impedance / Material Analyzer**

Typical L vs. Frequency



Typical Q vs. Frequency





Series **WI - C**

ELECTRICAL CHARATERISTICS

**WI25C22**

Part Number	L (μH)	Tolerance ( ±% )	Q Min.	Test Frequency (MHz)	SRF (MHz) Min.	RDC (Ω ) Max.	IDC (mA)
WI25C222 □ - 1U	1.00	J,K	20	7.96	100.0	0.08	1500
WI25C222 □ - 1U5	1.50	J,K	20	7.96	80.0	0.13	1125
WI25C222 □ - 2U2	2.20	J,K	20	7.96	68.0	0.13	970
WI25C222 □ - 3U3	3.30	J,K	20	7.96	54.0	0.16	837
WI25C222 □ - 4U7	4.70	J,K	20	7.96	43.0	0.20	675
WI25C222 □ - 6U8	6.80	J,K	20	7.96	33.0	0.27	600
WI25C222 □ - 10U	10.00	J,K	15	2.52	28.0	0.36	520
WI25C222 □ - 15U	15.00	J,K	15	2.52	19.0	0.56	480
WI25C222 □ - 22U	22.00	J,K	15	2.52	16.0	0.77	310
WI25C222 □ - 33U	33.00	J,K	15	2.52	12.0	1.10	270
WI25C222 □ - 47U	47.00	J,K	15	2,52	10.0	1.64	210
WI25C222 □ - 68U	68.00	J,K	15	2.52	9.0	2.80	189
WI25C222 □ - 100U	100.00	J,K	15	0.796	6.0	3.70	145
WI25C222 □ - 150U	150.00	J,K	15	0.796	5.0	6.10	120
WI25C222 □ - 220U	220.00	J,K	15	0.796	4.0	8.40	100
WI25C222 □ - 330U	330.00	J,K	15	0.796	3.5	12.3	80
WI25C222 □ - 470U	470.00	J,K	15	0.796	2.8	22	75
WI25C222 □ - 680U	680.00	J,K	15	0.796	2.0	28	65

Tolerance: J = ±5%, K = ±10%

Operating temperature range from -25°C to 85°C .

L/Q : Agilent/HP4291A & Agilent/HP16193A (Over 1MHz)

Agilent/HP4285A & Agilent/HP16193A ((Under 1MHz)

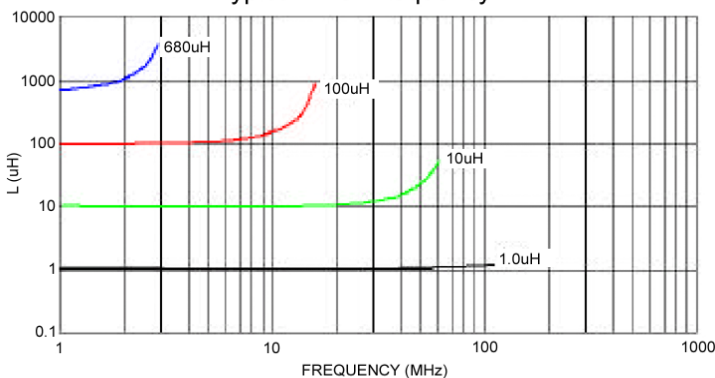
SRF: Agilent/HP4291A

RDC: DIGITAL MULTIMETER CH502BC / HP4338B

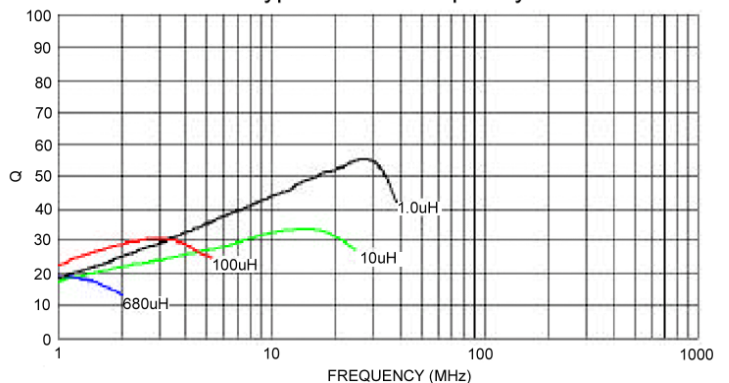
IDC for Inductance drp 10% from its value without current

**Test Instruments : HP4291A Impedance / Material Analyzer**

Typical L vs. Frequency



Typical Q vs. Frequency





Series **WI - C**

ELECTRICAL CHARACTERISTICS

**WI32C32**

Part Number	L (μH)	Tolerance (±%)	Q Min.	Test Frequency (MHz)	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA)
WI32C32IK - 1U	1.00	K	10	7.96	200.0	0.11	1050
WI32C32IK - 1U2	1.20	K	10	7.96	155.0	0.12	1000
WI32C32IK - 1U5	1.50	K	10	7.96	130.0	0.15	950
WI32C32IK - 1U8	1.80	K	10	7.96	100.0	0.16	900
WI32C32IK - 2U2	2.20	K	10	7.96	80.0	0.18	850
WI32C32IK - 2U7	2.70	K	10	7.96	55.0	0.20	800
WI32C32IK - 3U3	3.30	K	10	7.96	45.0	0.22	750
WI32C32IK - 3U9	3.90	K	10	7.96	40.0	0.24	700
WI32C32IK - 4U7	4.70	K	10	7.96	35.0	0.27	650
WI32C32IK - 5U6	5.60	K	10	7.96	30.0	0.30	650
WI32C32IK - 6U8	6.80	K	10	7.96	28.0	0.35	600
WI32C32IK - 8U2	8.20	K	10	7.96	25.0	0.40	600
WI32C32IK - 10U	10.00	K	10	2.52	22.0	0.50	550
WI32C32IK - 12U	12.00	K	10	2.52	21.0	0.60	500
WI32C32IK - 15U	15.00	K	10	2.52	20.0	0.70	450
WI32C32IK - 18U	18.00	K	10	2.52	18.0	0.80	400
WI32C32IK - 22U	22.00	K	10	2.52	17.0	0.90	370
WI32C32IK - 27U	27.00	K	10	2.52	15.0	1.20	330
WI32C32IK - 33U	33.00	K	10	2.52	14.0	1.40	300
WI32C32IK - 39U	39.00	K	10	2.52	12.0	1.60	280
WI32C32IK - 47U	47.00	K	10	2.52	11.5	1.90	260
WI32C32IK - 56U	56.00	K	10	2.52	10.5	2.20	240
WI32C32IK - 68U	68.00	K	10	2.52	9.0	2.60	220
WI32C32IK - 82U	82.00	K	10	2.52	8.5	3.50	200
WI32C32IK - 100U	100.00	K	20	0.796	7.0	4.00	180
WI32C32IK - 120U	120.00	K	20	0.796	6.5	4.50	160
WI32C32IK - 150U	150.00	K	20	0.796	6.0	6.50	140
WI32C32IK - 180U	180.00	K	20	0.796	5.5	7.50	120
WI32C32IK - 220U	220.00	K	20	0.796	5.0	9.00	120
WI32C32IK - 270U	270.00	K	20	0.796	4.5	11.00	100
WI32C32IK - 330U	330.00	K	20	0.796	4.0	13.00	90

Tolerance: J = ±5%, K = ±10%

Operating temperature range from -25°C to 85°C .

L/Q' SRF : HP4286A RF Impedance Analyzer

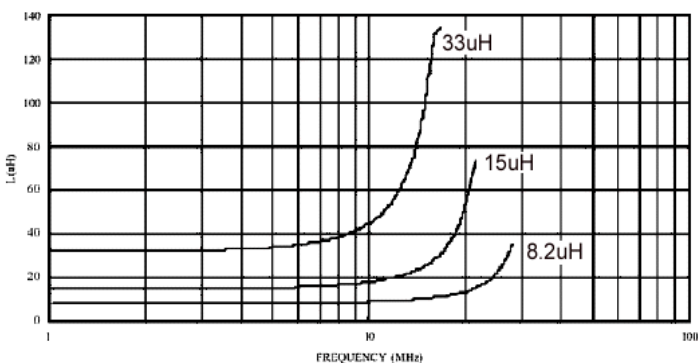
L/Q : HP4284A LF Impedance Analyzer

RDC: DIGITAL MULTIMETER HP4338B / CH502BC

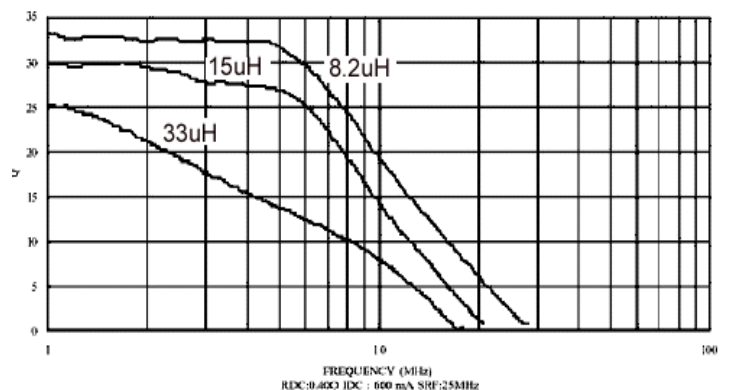
IDC : HP4284A & HP42841A

**Test Instruments : HP4291A Impedance / Material Analyzer**

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS





Series **WI - C**

ELECTRICAL CHARACTERISTICS

**WI50C50**

Part Number	L (μH)	Tolerance ( ±% )	Q Min.	Test Frequency (MHz)	SRF (MHz) Min.	RDC (Ω )Max.	IDC (mA)
WI50C50GK - 1U	1.00	K	10	7.96	95.0	0.030	1800
WI50C50GK - 1U2	1.20	K	10	7.96	70.0	0.035	1700
WI50C50GK - 1U5	1.50	K	10	7.96	55.0	0.040	1600
WI50C50GK - 1U8	1.80	K	10	7.96	47.0	0.050	1400
WI50C50GK - 2U	2.20	K	10	7.96	42.0	0.060	1300
WI50C50GK - 2U7	2.70	K	10	7.96	37.0	0.070	1200
WI50C50GK - 3U3	3.30	K	10	7.96	34.0	0.080	1120
WI50C50GK - 3U9	3.90	K	10	7.96	32.0	0.090	1050
WI50C50GK - 4U7	4.70	K	10	7.96	29.0	0.110	950
WI50C50GK - 5U6	5.60	K	10	7.96	26.0	0.130	880
WI50C50GK - 6U8	6.80	K	10	7.96	24.0	0.150	810
WI50C50GK - 8U2	8.20	K	10	7.96	22.0	0.180	750
WI50C50GK - 10U	10.00	K	10	2.52	19.0	0.210	690
WI50C50GK - 12U	12.00	K	10	2.52	17.0	0.250	630
WI50C50GK - 15U	15.00	K	10	2.52	16.0	0.300	580
WI50C50GK - 18U	18.00	K	10	2.52	14.0	0.360	530
WI50C50GK - 22U	22.00	K	10	2.52	13.0	0.430	480
WI50C50GK - 27U	27.00	K	10	2.52	11.5	0.520	440
WI50C50GK - 33U	33.00	K	10	2.52	10.5	0.620	400
WI50C50GK - 39U	39.00	K	10	2.52	9.5	0.720	370
WI50C50GK - 47U	47.00	K	10	2.52	8.5	0.850	340
WI50C50GK - 56U	56.00	K	10	2.52	7.8	1.000	310
WI50C50GK - 68U	68.00	K	10	2.52	7.0	1.200	290
WI50C50GK - 82U	82.00	K	10	2.52	6.4	1.400	270
WI50C50GK - 100U	100.00	K	20	0.796	6.0	1.600	250
WI50C50GK - 120U	120.00	K	20	0.796	5.4	1.900	230
WI50C50GK - 150U	150.00	K	20	0.796	4.8	2.200	210
WI50C50GK - 180U	180.00	K	20	0.796	4.4	2.800	190
WI50C50GK - 220U	220.00	K	20	0.796	3.9	3.400	170
WI50C50GK - 270U	270.00	K	20	0.796	3.6	4.200	155
WI50C50GK - 330U	330.00	K	20	0.796	3.2	4.900	140
WI50C50GK - 390U	390.00	K	20	0.796	2.9	5.800	130
WI50C50GK - 470U	470.00	K	20	0.796	2.6	7.000	120
WI50C50GK - 560U	560.00	K	20	0.796	2.4	8.500	110
WI50C50GK - 680U	680.00	K	20	0.796	2.2	10.000	100
WI50C50GK - 820U	820.00	K	20	0.796	2.0	13.000	90
WI50C50GK - 1M	1000	K	20	0.252	1.8	15.000	85

Tolerance: J = ±5%, K = ±10%

Operating temperature range from -25°C to 85°C .

L/Q' SRF : HP4286A RF Impedance Analyzer

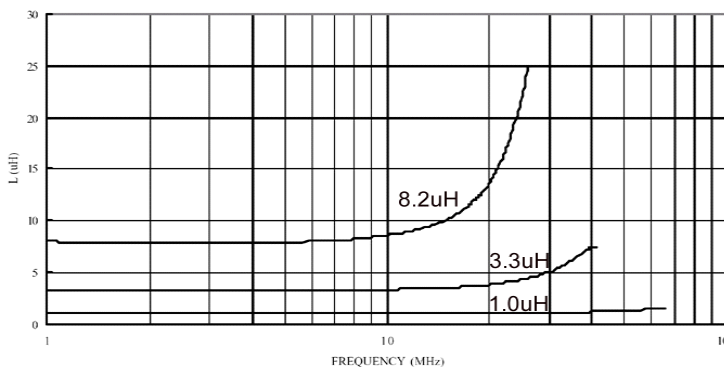
L/Q : HP4284A LF Impedance Analyzer

RDC: DIGITAL MULTIMETER HP4338B / CH502BC

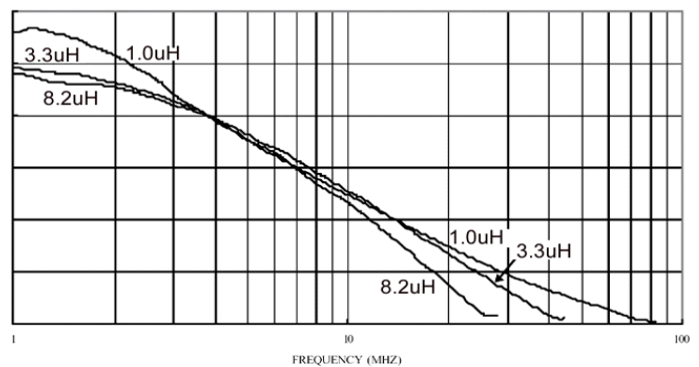
IDC : HP4284A & HP42841A

**Test Instruments : HP4291A Impedance / Material Analyzer**

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



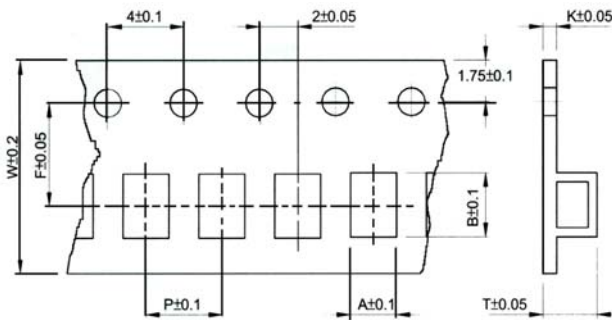


Series **WI - C**

**PACKAGING**

TYPE	Alias in mm	Alias in inch	Bulk	PCS/REEL
WI20C18	252018	1008	✓	2,000
WI25C22	322522	1210	✓	2,000
WI32C32	453232	1812	✓	500
WI50C50	565050	2220	✓	400

**TAPE DIMENSIONS**



Dimensions in mm

TYPE	Alias in mm	Alias in inch	A	B	T	W	P	F	K
WI20C18	252018	1008	2.70	2.95	2.25	8	4	3.5	0.23
WI25C22	322522	1210	2.95	3.85	2.45	12	4	3.5	0.25
WI32C32	453232	1812	3.30	5.00	3.50	12	8	5.5	0.30
WI50C50	565050	2220	5.35	6.10	5.50	16	12	7.5	0.35

**REEL DIMENSIONS**

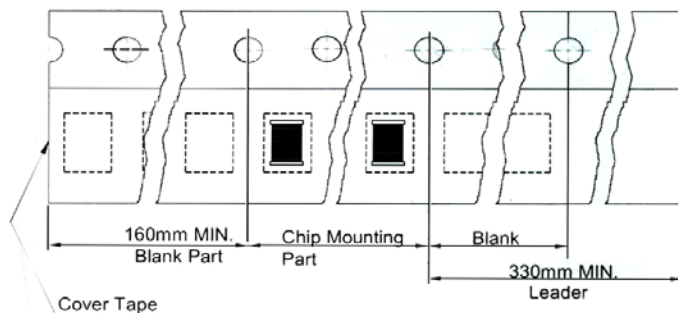
Dimensions in mm

TYPE	Alias in mm	Alias in inch	Fig	A	B	C	D
WI20C18	252018	1008	2	178	60	12	1.5
WI25C22	322522	1210	2	178	60	16	1.4
WI32C32	453232	1812	2	178	60	16	1.4
WI50C50	565050	2220	1	330	100	22	2.3

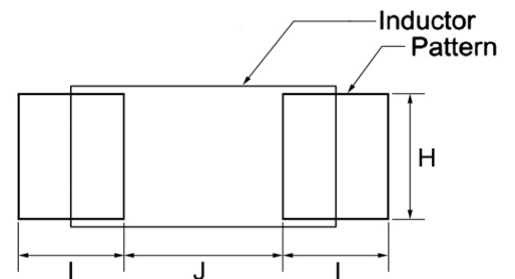
**Tape Material**

Carrier tape: Polystyrene

Cover type: Polystyrene



**Recommended Pattern**



**PATTERN DIMENSIONS**

in mm

TYPE	Alias in mm	Alias in inch	I	J	H
WI20C18	252018	1008	1.02	1.27	2.54
WI25C22	322522	1210	1.00	2.00	2.70
WI32C32	453232	1812	1.50	3.00	2.80
WI50C50	565050	2220	2.00	4.00	4.50

**REEL DIMENSIONS**

Figure 1

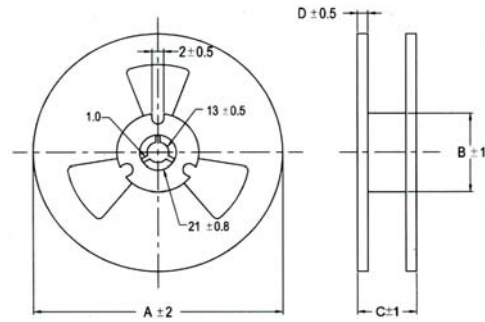


Figure 2

