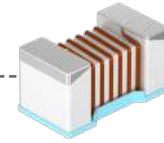


Wire Wound Chip Ceramic Inductors-HWI Series



FEATURES

- Ceramic body and wire wound construction provide high SRFs.
- Highest possible SRFs as well as excellent Q values.
- Designed for filtering, impedance matching, resonance and choke circuits for RF designer.
- The non-magnetic coil from assures utmost thermal stability, predictability and batch consistency.

APPLICATIONS

- RF products for cellular phone, GPS receiver, base station and Repeater, Wireless LAN/Mouse/keyboard/earphone, Remote control and Security syte.

PRODUCT IDENTIFICATION

01 ZHWI	02 1008	—	03 68N	04 K	05 G	06 T
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01 Type	
ZHWI	Wire Wound Chip Ceramic Inductor

02 External Dimensions (LxW)(mm)	
0402	0.4x 0.2
0603 [0201]	0.6x 0.3
0805[0302]	0.8x 0.5
1005[0402]	1.0 x 0.5
1608 [0603]	1.6 x 0.8
2012 [0805]	2.0 x 1.25

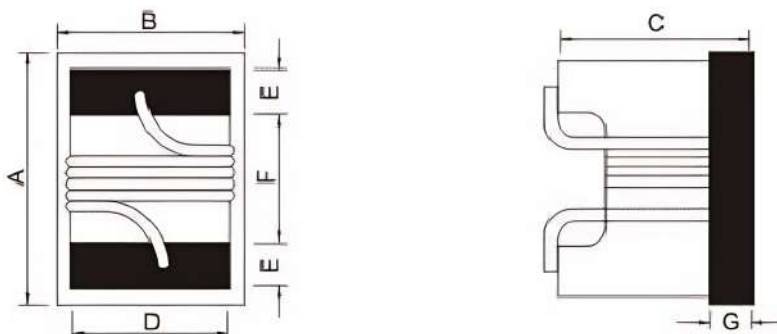
03 Nominal Inductance	
Example	Nominal value
6N8	6.8nH
68N	68nH
R68	680nH

04 Tolerance	
F	±1%
G	±2%
J	±5%
K	±10%

05 Performance Code	
S,G	

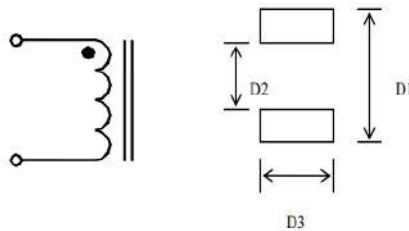
06 Packing	
T	Tape & Reel

SHAPE AND DIMENSIONS



Part Number	Dimensions(mm)					
	A Max	B Max	C Max	D Max	E Max	F Max
ZHWI0402	1.19	0.66	0.66	0.60	0.30	0.50
ZHWI0603	1.80	1.20	1.10	0.85	0.40	0.92
ZHWI0805	2.30	1.70	1.45	1.38	0.60	1.03
ZHWI1008	2.80	2.70	2.10	2.20	0.60	1.50
ZHWI1210	3.50	2.90	2.25	2.50	0.60	2.20
ZHWI1812	4.80	3.40	3.15	2.60	0.70	3.00

RECOMMENDED PC BOARD PATTERN



Part Number	Dimensions(mm)		
	D1	D2	D3
ZHWI0402	1.20	0.46	0.64
ZHWI0603	1.92	0.64	1.02
ZHWI0805	2.80	0.76	1.78
ZHWI1008	3.30	1.27	2.54
ZHWI1210	3.90	1.80	2.54
ZHWI1812	5.28	3.00	3.05

SPECIFICATIONS

● ZHWI0402 TYPE

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI0402-1N0	1.0	J、K	10	250/0.05	3000	0.07	1000
ZHWI0402-1N5	1.5	J、K	12	250/0.05	3000	0.07	980
ZHWI0402-2N0	2.0	J、K	15	250/0.05	3000	0.07	960
ZHWI0402-2N4	2.4	J、K	15	250/0.05	3000	0.10	750
ZHWI0402-2N7	2.7	J、K	15	250/0.05	3000	0.12	640
ZHWI0402-3N3	3.3	J、K	12	250/0.05	3000	0.10	800



Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI0402-3N6	3.6	J、K	18	250/0.05	3000	0.10	800
ZHWI0402-3N9	3.9	J、K	18	250/0.05	3000	0.10	800
ZHWI0402-4N3	4.3	J、K	17	250/0.05	3000	0.13	780
ZHWI0402-4N7	4.7	J、K	15	250/0.05	3000	0.20	750
ZHWI0402-5N1	5.1	J、K	22	250/0.05	3000	0.15	750
ZHWI0402-5N6	5.6	J、K	15	250/0.05	3000	0.10	700
ZHWI0402-6N8	6.8	J、K	20	250/0.05	3000	0.15	650
ZHWI0402-7N5	7.5	J、K	24	250/0.05	3000	0.11	650
ZHWI0402-8N2	8.2	J、K	24	250/0.05	3000	0.11	650
ZHWI0402-9N0	9.0	J、K	24	250/0.05	3000	0.18	650
ZHWI0402-10N	10	J、K	24	250/0.05	3000	0.28	480
ZHWI0402-12N	12	J、K	24	250/0.05	3000	0.12	600
ZHWI0402-15N	15	J、K	24	250/0.05	3000	0.25	550
ZHWI0402-18N	18	J、K	24	250/0.05	3000	0.30	450
ZHWI0402-22N	22	J、K	25	250/0.05	2750	0.40	380
ZHWI0402-27N	27	J、K	25	250/0.05	2430	0.45	380
ZHWI0402-30N	30	J、K	25	250/0.05	2350	0.50	380
ZHWI0402-33N	33	J、K	25	250/0.05	2350	0.65	380
ZHWI0402-39N	39	J、K	24	250/0.05	2050	0.75	180
ZHWI0402-47N	47	J、K	20	250/0.05	2050	0.80	140
ZHWI0402-51N	51	J、K	25	250/0.05	1860	0.90	100
ZHWI0402-56N	56	J、K	25	250/0.05	1760	0.97	100
ZHWI0402-68N	68	J、K	24	250/0.05	1600	1.15	100
ZHWI0402-82N	82	J、K	24	250/0.05	1600	1.80	80
ZHWI0402-R10	100	J、K	25	250/0.05	1600	2.60	60
ZHWI0402-R12	120	J、K	25	250/0.05	1100	3.00	60

● ZHWI0603 TYPE

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI0603-6N8	6.8	J、K	27	250/0.05	5800	0.110	700
ZHWI0603-8N2	8.2	J、K	28	250/0.05	4600	0.120	700
ZHWI0603-10N	10	J、K	31	250/0.05	4800	0.130	700
ZHWI0603-12N	12	J、K	35	250/0.05	4000	0.130	700
ZHWI0603-15N	15	J、K	30	250/0.05	4000	0.150	700
ZHWI0603-18N	18	J、K	35	250/0.05	3100	0.170	700
ZHWI0603-22N	22	J、K	38	250/0.05	3000	0.190	700
ZHWI0603-27N	27	J、K	36	250/0.05	2800	0.220	600
ZHWI0402-33N	33	J、K	36	250/0.05	2300	0.220	600
ZHWI0603-39N	39	J、K	38	250/0.05	2200	0.250	600
ZHWI0603-47N	47	J、K	36	200/0.05	2000	0.280	600
ZHWI0603-82N	82	J、K	34	150/0.05	1700	0.550	400
ZHWI0603-R10	100	J、K	30	150/0.05	1400	0.630	400
ZHWI0603-R12	120	J、K	32	150/0.05	1300	0.730	300
ZHWI0603-R15	150	J、K	28	150/0.05	990	0.800	280
ZHWI0603-R18	180	J、K	25	100/0.05	990	1.350	240
ZHWI0603-R22	220	J、K	25	100/0.05	900	1.600	200
ZHWI0603-R27	270	J、K	24	100/0.05	520	1.400	170
ZHWI0603-R33	330	J、K	24	100/0.05	500	1.600	160
ZHWI0603-R39	390	J、K	24	100/0.05	400	2.200	150

● ZHWI0805 TYPE

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI0805-5N6	5.6	J、K	50	250/0.05	5500	0.065	600
ZHWI0805-6N8	6.8	J、K	50	250/0.05	5500	0.110	600
ZHWI0805-8N2	8.2	J、K	35	250/0.05	4700	0.200	600
ZHWI0805-10N	10	J、K	50	250/0.05	4200	0.150	600
ZHWI0805-12N	12	J、K	50	250/0.05	4000	0.150	600
ZHWI0805-15N	15	J、K	45	250/0.05	3400	0.170	600
ZHWI0805-18N	18	J、K	50	250/0.05	330	0.200	600



Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI0805-22N	22	J、K	55	250/0.05	2600	0.220	500
ZHWI0805-27N	27	J、K	55	250/0.05	2500	0.250	500
ZHWI0805-33N	33	J、K	55	250/0.05	2050	0.270	500
ZHWI0805-39N	39	J、K	55	250/0.05	2000	0.290	500
ZHWI0805-47N	47	J、K	55	200/0.05	1650	0.310	500
ZHWI0805-56N	56	J、K	55	200/0.05	1550	0.340	500
ZHWI0805-68N	68	J、K	55	200/0.05	1450	0.380	500
ZHWI0805-82N	82	J、K	55	150/0.05	1300	0.420	400
ZHWI0805-R10	100	J、K	50	150/0.05	1200	0.460	400
ZHWI0805-R12	120	J、K	45	150/0.05	1100	0.510	400
ZHWI0805-R15	150	J、K	45	100/0.05	920	0.560	400
ZHWI0805-R18	180	J、K	45	100/0.05	870	0.640	400
ZHWI0805-R22	220	J、K	40	100/0.05	850	1.050	400
ZHWI0805-R27	270	J、K	40	100/0.05	650	1.100	350
ZHWI0805-R33	330	J、K	40	100/0.05	600	1.400	310
ZHWI0805-R39	390	J、K	40	100/0.05	560	1.500	290
ZHWI0805-R47	470	J、K	33	50/0.05	375	2.000	250
ZHWI0805-R56	560	J、K	23	25/0.05	340	1.900	230
ZHWI0805-R68	680	J、K	23	25/0.05	300	2.100	190
ZHWI0805-R75	750	J、K	23	25/0.05	280	2.120	180
ZHWI0805-R78	780	J、K	23	25/0.05	280	2.130	180
ZHWI0805-R82	820	J、K	23	25/0.05	250	2.140	180
ZHWI0805-1R0	1000	J、K	20	25/0.05	200	2.400	170
ZHWI0805-1R2	1200	J、K	18	7.96/0.05	180	2.550	170
ZHWI0805-1R5	1500	J、K	18	7.96/0.05	170	2.800	160
ZHWI0805-1R8	1800	J、K	18	7.96/0.05	140	3.800	150
ZHWI0805-2R7	2700	J、K	18	7.96/0.05	130	4.200	120

● ZHWI1008 TYPE

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI1008-5N6	5.6	G、J、K	30	250/0.05	6000	0.180	1000
ZHWI1008-8N2	8.2	G、J、K	35	250/0.05	5000	0.050	1000
ZHWI1008-10N	10	G、J、K	65	250/0.05	4100	0.080	1000
ZHWI1008-12N	12	G、J、K	65	250/0.05	3300	0.090	1000
ZHWI1008-15N	15	G、J、K	60	250/0.05	2500	0.150	1000
ZHWI1008-18N	18	G、J、K	60	250/0.05	2500	0.110	1000
ZHWI1008-22N	22	G、J、K	60	250/0.05	2400	0.120	1000
ZHWI1008-27N	27	G、J、K	60	250/0.05	1600	0.130	1000
ZHWI1008-33N	33	G、J、K	60	250/0.05	1600	0.140	1000
ZHWI1008-39N	39	G、J、K	60	50/0.05	1500	0.150	1000
ZHWI1008-47N	47	G、J、K	45	50/0.05	1500	0.160	1000
ZHWI1008-56N	56	G、J、K	45	50/0.05	1100	0.1180	1000
ZHWI1008-68N	68	G、J、K	45	50/0.05	1000	0.200	1000
ZHWI1008-82N	82	G、J、K	45	50/0.05	1000	0.220	1000
ZHWI1008-R10	100	G、J、K	45	25/0.05	1000	0.560	650
ZHWI1008-R12	120	G、J、K	45	25/0.05	950	0.630	650
ZHWI1008-R15	150	G、J、K	45	25/0.05	800	0.700	580
ZHWI1008-R18	180	G、J、K	45	25/0.05	640	0.770	620
ZHWI1008-R22	220	G、J、K	45	25/0.05	620	0.840	500
ZHWI1008-R27	270	G、J、K	35	25/0.05	600	0.910	500
ZHWI1008-R33	330	G、J、K	35	25/0.05	500	1.050	450
ZHWI1008-R39	390	G、J、K	45	25/0.05	480	1.120	470
ZHWI1008-R47	470	G、J、K	45	25/0.05	450	1.190	470
ZHWI1008-R56	560	G、J、K	45	25/0.05	415	1.330	400
ZHWI1008-R68	680	G、J、K	45	25/0.05	375	1.470	400
ZHWI1008-R75	750	G、J、K	45	25/0.05	300	1.540	400
ZHWI1008-R82	820	G、J、K	45	25/0.05	250	1.610	400
ZHWI1008-1R0	1000	G、J、K	35	25/0.05	210	1.750	370
ZHWI1008-1R2	1200	J、K	30	7.9/0.05	200	2.000	310
ZHWI1008-1R5	1500	J、K	20	7.9/0.05	180	2.300	330
ZHWI1008-1R8	1800	J、K	20	7.9/0.05	160	2.600	300

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI1008-2R2	2200	J、K	20	7.9/0.05	90	2.800	280
ZHWI1008-2R7	2700	J、K	22	7.9/0.05	80	3.200	290
ZHWI1008-3R3	3300	J、K	22	7.9/0.05	70	3.400	290
ZHWI1008-3R9	3900	J、K	23	7.9/0.05	60	3.600	260
ZHWI1008-4R7	4700	J、K	23	7.9/0.05	60	4.000	260
ZHWI1008-5R6	5600	J、K	24	7.9/0.05	55	7.600	240
ZHWI1008-6R8	6800	J、K	24	7.9/0.05	50	8.200	200

● ZHWI1210 TYPE

Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
ZHWI1210-12N	12	G、J、K	40	100/0.05	3200	0.080	1000
ZHWI1210-15N	15	G、J、K	50	100/0.05	3200	0.100	1000
ZHWI1210-18N	18	G、J、K	50	100/0.05	2800	0.100	1000
ZHWI1210-22N	22	G、J、K	50	100/0.05	2200	0.100	1000
ZHWI1210-27N	27	G、J、K	55	100/0.05	1800	0.110	1000
ZHWI1210-33N	33	G、J、K	55	100/0.05	1800	0.110	1000
ZHWI1210-39N	39	G、J、K	55	100/0.05	1800	0.120	1000
ZHWI1210-47N	47	G、J、K	55	100/0.05	1500	0.130	1000
ZHWI1210-56N	56	G、J、K	55	100/0.05	1450	0.140	1000
ZHWI1210-68N	68	G、J、K	55	100/0.05	1200	0.150	900
ZHWI1210-82N	82	G、J、K	55	100/0.05	1000	0.200	900
ZHWI1210-R10	100	G、J、K	55	100/0.05	900	0.210	850
ZHWI1210-R12	120	G、J、K	60	100/0.05	800	0.210	800
ZHWI1210-R15	150	G、J、K	60	100/0.05	780	0.250	750
ZHWI1210-R18	180	G、J、K	60	100/0.05	760	0.300	700
ZHWI1210-R22	220	G、J、K	60	100/0.05	650	0.320	670
ZHWI1210-R27	270	G、J、K	55	100/0.05	620	0.340	630
ZHWI1210-R33	330	G、J、K	45	100/0.05	600	0.380	590
ZHWI1210-R39	390	G、J、K	45	100/0.05	510	0.580	530
ZHWI1210-R47	470	G、J、K	45	100/0.05	500	0.800	490

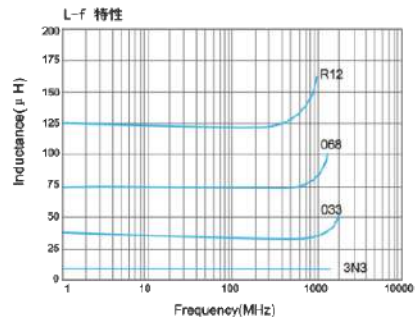
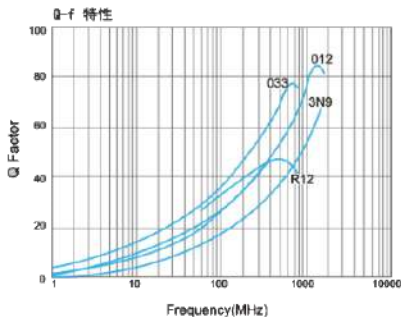
Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
HWI1210-R56	560	J、K	45	100/0.05	420	1.100	460
HWI1210-R68	680	J、K	45	100/0.05	400	1.200	430
HWI1210-R82	820	J、K	45	100/0.05	370	1.820	400
HWI1210-1R0	1000	J、K	45	100/0.05	340	1.850	320
HWI1210-1R2	1200	J、K	35	100/0.05	220	1.870	300
HWI1210-1R5	1500	J、K	30	100/0.05	160	1.950	310
HWI1210-1R8	1800	J、K	30	100/0.05	160	2.250	310
HWI1210-2R2	2200	J、K	30	100/0.05	160	2.410	310
HWI1210-2R7	2700	J、K	28	100/0.05	140	2.850	300
HWI1210-3R3	3300	J、K	25	100/0.05	110	3.120	300
HWI1210-3R9	3900	J、K	25	100/0.05	100	3.600	290
HWI1210-4R7	4700	J、K	20	100/0.05	60	4.000	280
HWI1210-5R6	5600	J、K	20	100/0.05	60	5.000	250
HWI1210-6R8	6800	J、K	20	100/0.05	55	8.000	230

● ZHWI1812 TYPE

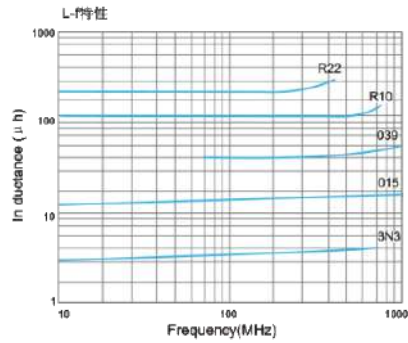
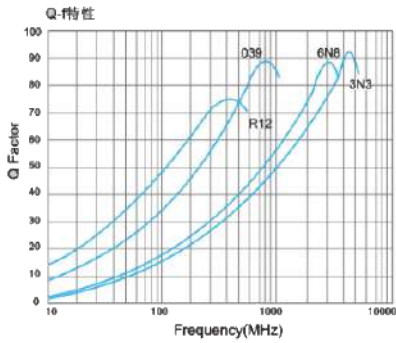
Part Number	Inductance (nH)	Tolerance	Qmin	L Q Test condition (MHz/V)	SRFmin(MHz)	DCR Max(Ω)	Rated Current Max (mA)
HWI1812-1R8	1800	J、K	50	7.9/0.05	150	1.80	270
HWI1812-2R2	2200	J、K	15	7.9/0.05	150	1.80	200
HWI1812-100	10000	J、K	10	7.9/0.05	50	8.00	150
HWI1812-270	27000	J、K	30	7.9/0.05	20	16.0	100

DETAIL ELECTRICAL CHARACTERISTICS

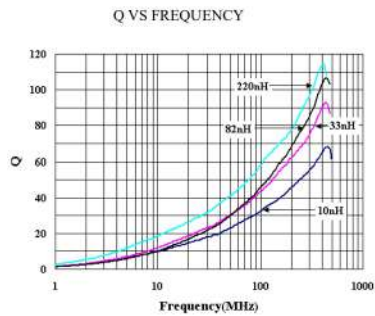
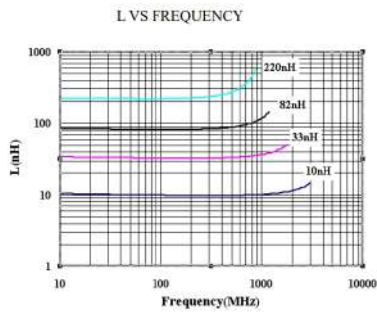
● ZHWI0603



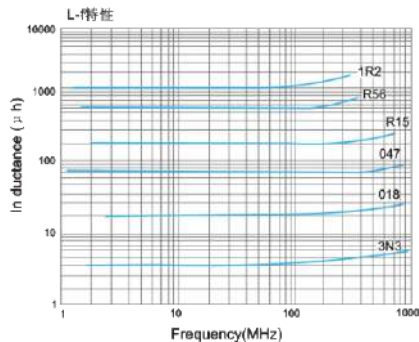
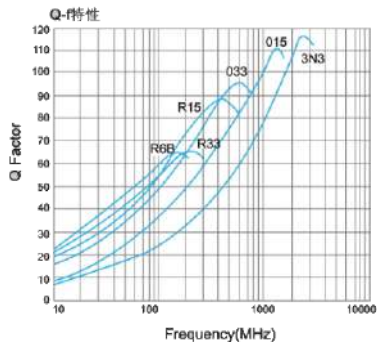
● ZHWI0805



● ZHWI1008



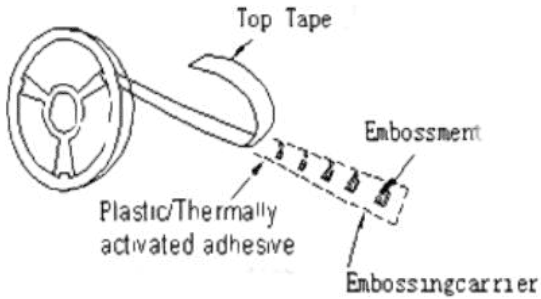
● ZHWI1210



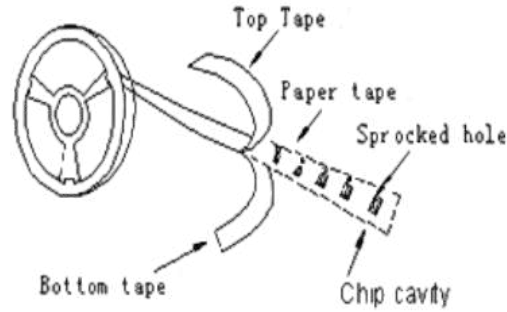
PACKAGING STYLE

• Taping Material

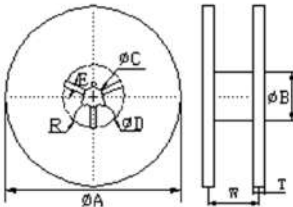
Embossing Tape



Paper Tape



• Reel Dimensions(mm)



Tape Width	A	B	C	D	E	W	T	R
8mm	178±2	60±1	13±0.5	21±0.8	2±0.5	10±1	1.5±0.5	1
12mm	178±2	60±1	13±0.5	21±0.8	2±0.5	14±1	1.5±0.5	1

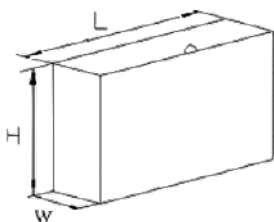
STORAGE

• Quantity

Type	PCS/REEL	PCS/INNERBOX	PCS/OUTERBOX
0402	10000	50000	250000
0603	10000	50000	250000
1008	4000	50000	100000
1210	4000	20000	100000
1812	500	2000	10000

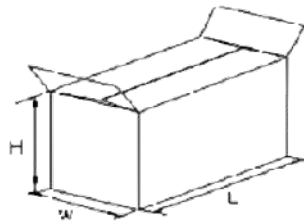
• Packing Dimensions(mm)

Inner Box Dimensions



L	W	H	THICK
180±3	70±3	190±3	2±0.8

Outer Box Dimensions



L	W	H	THICK
370±3	200±3	210±3	2±0.8

• Storage

Please be sure to the parts at 40°C, or less, 70%RH or less, and isolate the parts from sulphic and chloric atmosphere.