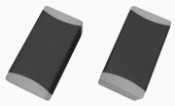
COIL SPECIFICATION

Brand	ZenithTek
Product Series Code	ZFB - Series
File Version	V1.7
Description	Multilayer Ferrite Chip Bead



Features

- Complete Series of Multilayer Ferrite Chip Bead
- Monolithic Construction for High Reliability
- Effectively Filtering Capability with Wide Range Frequency
- Halogen Free, Lead Free, RoHS and REACH Compliance

Applications

- Filtering Between Analog and Digital Circuit
- I/O Interconnect
- Power Supply Filtering to Prevent Conducted RF Energy
- High Frequency EMI Prevention

Product Identification

ZFB	-	0603	N/S/H	-	121	N
1		2	3		4	5

1.Product Code:
ZFB = ZenithTek Code.

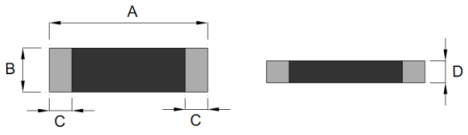
2.Dimension Code:
0603 = 1.6 * 0.8 * 0.8 mm.

3.Type Code:
N = Normal Curve.
S = Sharp Curve.
H = High Current.

4.Impedance Code:
121 = 120Ω.

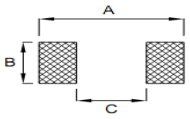
5.Tolerance Code:
N = 25%.

Dimension (Unit: mm)



Type	A	B	C	D
ZFB-0402	1.00±0.10	0.50±0.10	0.25±0.15	0.50±0.10
ZFB-0603	1.60±0.20	0.80±0.20	0.30±0.20	0.80±0.20
ZFB-0805	2.00±0.20	1.20±0.20	0.50±0.30	0.90±0.20
ZFB-1206	3.20±0.20	1.60±0.20	0.50±0.30	1.10±0.20
ZFB-1210	3.20±0.20	2.50±0.20	0.50±0.30	1.30±0.20
ZFB-1806	4.50±0.20	1.60±0.20	0.50±0.30	1.60±0.20
ZFB-1812	4.50±0.20	3.20±0.20	0.50±0.30	1.50±0.20

Land Pattern (Unit: mm)

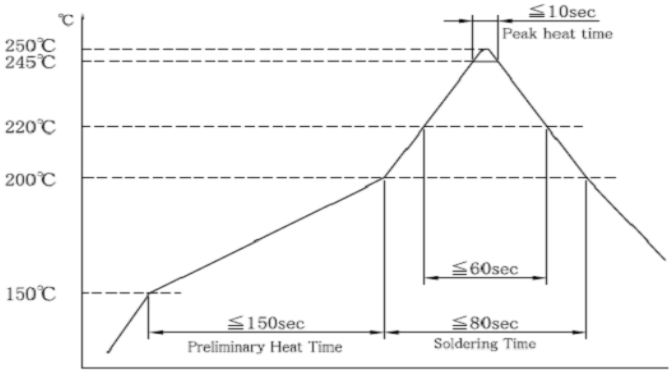


Type	A(Ref.)	B(Ref.)	C(Ref.)
ZFB-0402	2.20	0.70	0.40
ZFB-0603	2.80	1.00	0.60
ZFB-0805	3.20	1.50	0.60
ZFB-1206	4.40	1.80	1.20
ZFB-1210	4.40	2.70	1.20
ZFB-1806	5.80	1.80	2.00
ZFB-1812	5.80	3.40	2.00

Product Structure

Schematic

Reflow Heat Endurance



Operating & Storage Conditions

Operating Temp. : -55°C ~+125°C (including self-temp. rise)
Storage Temp. : -55°C ~+125°C (for PCBA)

Standard & Atmospheric Conditions

Ambient Temp. : 20°C±15°C / Relative Humidity : 65±20%.
If there may be any doubt on the result, measurement shall be made within the following limits :
Ambient Temp. : 25°C±5°C / Relative Humidity : 75±10%.

Test Equipment

HP4284A, HOKIO3532-50 - IDC, L.
HP4291B - RF IMPEDANCE.
HP4338A MILLIOHMMETER - RDC.

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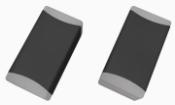

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0402N-100☐	10	25	100	0.050	500
ZFB-0402N-300☐	30	25	100	0.300	500
ZFB-0402N-600☐	60	25	100	0.400	200
ZFB-0402N-750☐	75	25	100	0.400	300
ZFB-0402N-800☐	80	25	100	0.200	650
ZFB-0402N-101☐	100	25	100	0.400	500
ZFB-0402N-121☐	120	25	100	0.300	500
ZFB-0402N-221☐	220	25	100	0.700	100
ZFB-0402N-301☐	300	25	100	0.800	100
ZFB-0402N-471☐	470	25	100	0.900	200
ZFB-0402N-601☐	600	25	100	1.000	100
ZFB-0402N-801☐	800	25	100	1.500	50
ZFB-0402N-102☐	1000	25	100	1.000	300
ZFB-0402N-182☐	1800	25	100	2.200	200

Note : Tolerance : N = ±25%.

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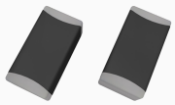

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0603N-100☐	10	25	100	0.200	900
ZFB-0603N-220☐	22	25	100	0.200	400
ZFB-0603N-400☐	40	25	100	0.200	300
ZFB-0603N-470☐	47	25	100	0.200	300
ZFB-0603N-600☐	60	25	100	0.200	300
ZFB-0603N-800☐	80	25	100	0.200	500
ZFB-0603N-101☐	100	25	100	0.200	200
ZFB-0603N-121☐	120	25	100	0.200	400
ZFB-0603N-151☐	150	25	100	0.200	200
ZFB-0603N-221☐	220	25	100	0.200	300
ZFB-0603N-301☐	300	25	100	0.250	500
ZFB-0603N-471☐	470	25	100	0.450	200
ZFB-0603N-601☐	600	25	100	0.450	200
ZFB-0603N-751☐	750	25	100	0.600	200
ZFB-0603N-102☐	1000	25	100	0.600	300

Note : Tolerance : N = ±25%.

COIL SPECIFICATION

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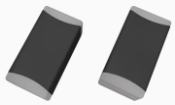

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0805N-070□	7.0	25	100	0.150	600
ZFB-0805N-600□	60	25	100	0.100	900
ZFB-0805N-800□	80	25	100	0.150	500
ZFB-0805N-101□	100	25	100	0.250	300
ZFB-0805N-301□	300	25	100	0.250	300
ZFB-0805N-471□	470	25	100	0.300	700
ZFB-0805N-601□	600	25	100	0.350	200
ZFB-0805N-122□	1200	25	100	0.450	200
ZFB-0805N-202□	2000	25	100	0.550	400

Note : Tolerance : N = ±25%.

COIL SPECIFICATION

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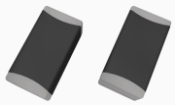

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-1206N-121□	120	25	100	0.150	500
ZFB-1206N-151□	150	25	100	0.150	800

Note : Tolerance : N = ±25%.

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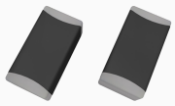

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0402S-152□	1500	25	100	1.500	50

Note : Tolerance : N = ±25%.

COIL SPECIFICATION

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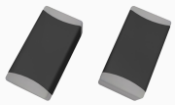
Product Series Code	ZFB - Series
File Version	V1.7
Description	Multilayer Ferrite Chip Bead



Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0603S-300□	30	25	100	0.250	600
ZFB-0603S-121□	120	25	100	0.300	300

Note : Tolerance : N = ±25%.

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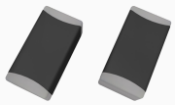

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0402H-100☐	10	25	100	0.050	1000
ZFB-0402H-300☐	30	25	100	0.150	2000
ZFB-0402H-600☐	60	25	100	0.200	1000
ZFB-0402H-800☐	80	25	100	0.200	1000
ZFB-0402H-221☐	220	25	100	0.350	800
ZFB-0402H-601☐	600	25	100	0.800	500
ZFB-0402H-751☐	750	25	100	0.850	500
ZFB-0402H-102☐	1000	25	100	0.850	500

Note : Tolerance : N = ±25%.

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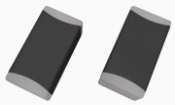

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0603H-100☐	10	25	100	0.030	3000
ZFB-0603H-250☐	25	25	100	0.030	3000
ZFB-0603H-330☐	33	25	100	0.030	3000
ZFB-0603H-400☐	40	25	100	0.030	3000
ZFB-0603H-600☐	60	25	100	0.040	3000
ZFB-0603H-800☐	80	25	100	0.100	3000
ZFB-0603H-101☐	100	25	100	0.100	2500
ZFB-0603H-121☐	120	25	100	0.080	2500
ZFB-0603H-151☐	150	25	100	0.080	2000
ZFB-0603H-181☐	180	25	100	0.150	2000
ZFB-0603H-201☐	200	25	100	0.150	2000
ZFB-0603H-221☐	220	25	100	0.100	2000
ZFB-0603H-301☐	300	25	100	0.150	2000
ZFB-0603H-331☐	330	25	100	0.150	2000
ZFB-0603H-471☐	470	25	100	0.200	1500
ZFB-0603H-501☐	500	25	100	0.200	1000
ZFB-0603H-601☐	600	25	100	0.200	1000
ZFB-0603H-102☐	1000	25	100	0.450	800

Note : Tolerance : N = ±25%.

COIL SPECIFICATION

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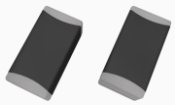

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-0805H-110☐	11	25	100	0.010	6000
ZFB-0805H-300☐	30	25	100	0.015	6000
ZFB-0805H-310☐	31	25	100	0.010	6000
ZFB-0805H-400☐	40	25	100	0.050	3000
ZFB-0805H-420☐	42	25	100	0.025	4000
ZFB-0805H-470☐	47	25	100	0.100	1000
ZFB-0805H-500☐	50	25	100	0.025	3000
ZFB-0805H-600☐	60	25	100	0.030	3000
ZFB-0805H-800☐	80	25	100	0.030	3000
ZFB-0805H-101☐	100	25	100	0.060	3000
ZFB-0805H-121☐	120	25	100	0.060	3000
ZFB-0805H-201☐	200	25	100	0.050	3000
ZFB-0805H-221☐	220	25	100	0.050	2500
ZFB-0805H-301☐	300	25	100	0.080	3000
ZFB-0805H-331☐	330	25	100	0.080	2500
ZFB-0805H-471☐	470	25	100	0.100	2000
ZFB-0805H-601☐	600	25	100	0.150	2000
ZFB-0805H-102☐	1000	25	100	0.300	1000

Note : Tolerance : N = ±25%.

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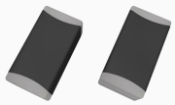

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-1206H-190☐	19	25	100	0.015	6000
ZFB-1206H-260☐	26	25	100	0.010	6000
ZFB-1206H-300☐	30	25	100	0.010	6000
ZFB-1206H-600☐	60	25	100	0.020	4000
ZFB-1206H-800☐	80	25	100	0.040	3000
ZFB-1206H-101☐	100	25	100	0.040	3000
ZFB-1206H-121☐	120	25	100	0.040	3000
ZFB-1206H-151☐	150	25	100	0.060	2000
ZFB-1206H-161☐	160	25	100	0.018	6000
ZFB-1206H-221☐	220	25	100	0.060	2000
ZFB-1206H-301☐	300	25	100	0.050	2500
ZFB-1206H-391☐	390	25	100	0.100	2000
ZFB-1206H-601☐	600	25	100	0.100	2000

Note : Tolerance : N = ±25%.

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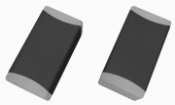

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-1210H-600□	60	25	100	0.030	4000

Note : Tolerance : N = ±25%.

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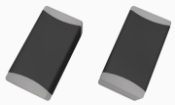

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-1806H-600□	60	25	100	0.010	6000
ZFB-1806H-910□	91	25	100	0.030	3000

Note : Tolerance : N = ±25%.

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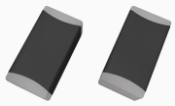

Electrical Characteristic

Part Number	Impedance (Ω)	Tolerance (%)	Test Frequency (MHz) / (100mV)	DCR(Ω) (Max.)	Rated Current (mA)/(Max.)
ZFB-1812H-700□	70	25	100	0.030	6000
ZFB-1812H-121□	120	25	100	0.015	6000

Note : Tolerance : N = ±25%.

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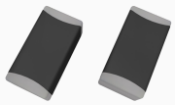

Reliability Test

No.	Item	Specification	Test Method
1	Temperature Shock.	Appearance: No damage. Impedance: within ±10% of initial.	Temperature: -55±2℃~+125±2℃ Kept for 30 minutes. Transition time : 5 minutes. 100 Cycles.
2	Humidity Resistance.	Appearance: No damage. Impedance: within ±10% of initial.	Temperature: 40±2℃. Relative Humidity: 90%. Duration: 1000 +4/-0 hours.
3	High Temperature Resistance.	Appearance: No damage. Impedance: within ±10% of initial.	Temperature: 125±2℃. Duration: 1000 +4/-0 hours.
4	Low Temperature Resistance.	Appearance: No damage. Impedance: within ±10% of initial.	Temperature: -55±2℃. Duration: 1000 +4/-0 hours.
5	Vibration test.	Appearance: No damage. Impedance: within ±10% of initial.	Oscillation Frequency: 10Hz to 55Hz to 10Hz in 60 seconds as a period. Total amplitude: 1.5mm. Testing Time: a period of 2 hours in each 3 mutually perpendicular directions (total of 6 hours).
6	Solderability Heat test.	Appearance: No damage. Impedance: within ±10% of initial.	Solder temperature: 260±3℃. Duration: 5 sec. Allowed reflow time: 2 times.
7	Solderability test.	90% or more of electrode area shall be coated by new solder.	Preheating: 160℃,60sec. Solder temperature: 240±2℃. Duration : 3 sec.
8	Flexure Strength.	No visible mechanical damage.	Flexure: 2mm. Pressurizing Speed: 0.5mm/sec. Keep time: 30±1sec.
9	Terminal Strength.	No visible mechanical damage.	Force: 2N for 0402 series Force: 5N for 0603 series Force: 10N for 0805 series above Keep time: 5 sec，X,Y directs.
10	Dropping.	No visible mechanical damage. Impedance: within ±10% of initial.	Drop component 10 times on a concrete floor from a height of 100cm.

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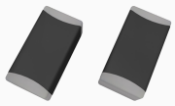
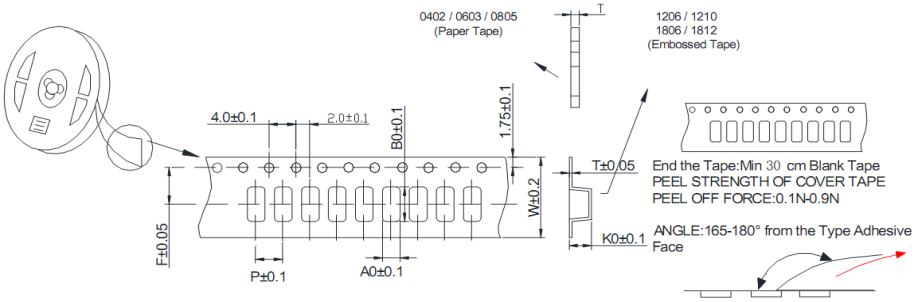


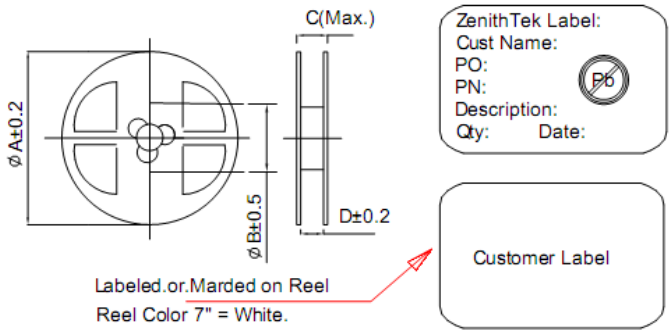
Package

Taping Dimension (mm)



Size(mm)	W	P	A0	B0	K0	T	F
ZFB-0402	8.00	2.00	0.62	1.12	-	0.60	3.5
ZFB-0603	8.00	4.00	1.10	1.90	-	0.95	3.5
ZFB-0805	8.00	4.00	1.50	2.30	-	0.95	3.5
ZFB-1206	8.00	4.00	1.88	3.50	1.27	0.23	3.5
ZFB-1210	8.00	4.00	2.77	3.42	1.55	0.23	3.5
ZFB-1806	12.00	4.00	1.93	4.95	1.93	0.23	5.5
ZFB-1812	12.00	8.00	3.66	4.95	1.85	0.23	5.5

Reel Dimension (mm)



Size(mm)	A	B	C	D	Reel/Size	Qty./Size
ZFB-0402	178	75	12.5	10	7”	10000 Pcs
ZFB-0603	178	75	12.5	10	7”	4000 Pcs
ZFB-0805	178	75	12.5	10	7”	4000 Pcs
ZFB-1206	178	75	12.5	10	7”	3000 Pcs
ZFB-1210	178	75	12.5	10	7”	2000 Pcs
ZFB-1806	178	75	12.5	10	7”	2000 Pcs
ZFB-1812	178	75	12.5	10	7”	1000 Pcs

Box Dimension (mm)