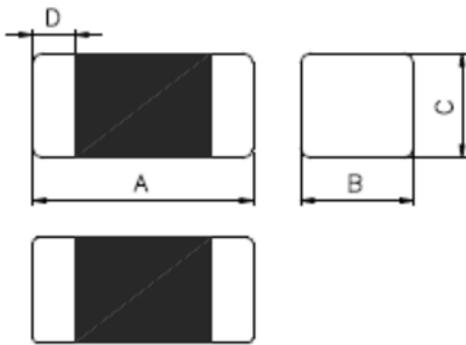


FEATRLRES

- Monolithic inorganic material construction.
- Closed magnetic circuit avoids crosstalk.
- Suitable for reflow soldering.
- Shapes and dimensions follow E.I.A. spec.
- High Current Bead Low RDC.
- Excellent solder ability and heat resistance.
- High reliability.
- 100% Lead(Pb) & Halogen-Free and RoHS compliant.
- Low DC resistance structure of electrode to prevent wasteful electric power consumption.
- Operating Temperature : -55~+125°C (Including self-temperature rise)

CONFIGLRATIONS & DIMENSIONS (unit in mm)



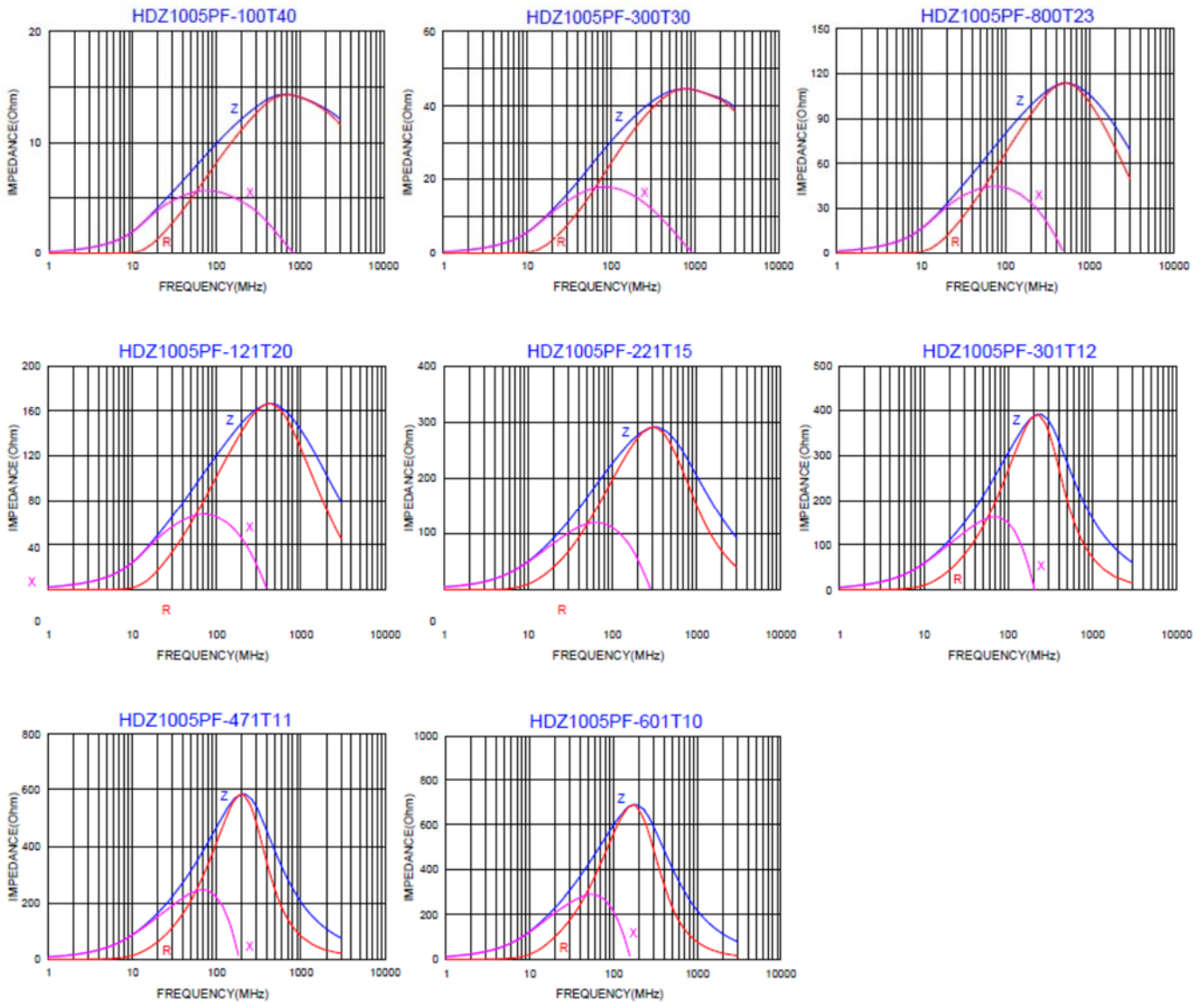
Size	A	B	C	D
HDZ1005	1.00±0.10	0.50±0.10	0.50±0.10	0.25±0.10

ELECTRICAL CHARACTERISTICS

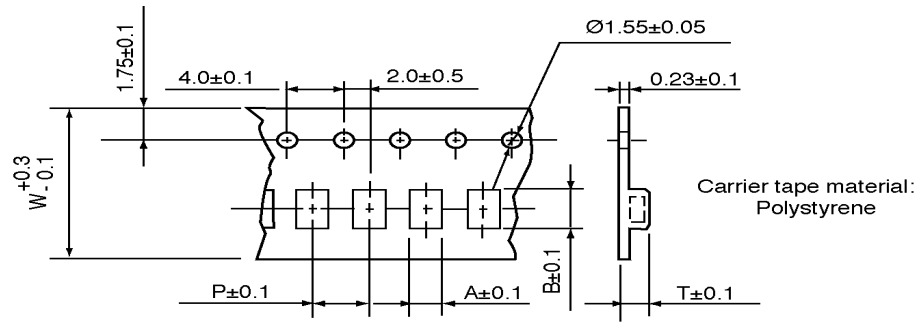
Part Number	Impedance (Ω)	Test Frequency	DC Resistance (Ω)	Rated Current (mA)
HFZ1005PF-100T40	10±25%	100	0.018	4000
HFZ1005PF-300T30	30±25%	100	0.022	3000
HFZ1005PF-800T23	80±25%	100	0.038	2300
HFZ1005PF-121T20	120±25%	100	0.050	2000
HFZ1005PF-221T15	220±25%	100	0.095	1500
HFZ1005PF-301T12	300±25%	100	0.150	1200
HFZ1005PF-471T11	470±25%	100	0.180	1100
HFZ1005PF-601T10	600±25%	100	0.200	1000

- Rated current: based on temperature rise test

Impedance Frequency Characteristics(Typical)



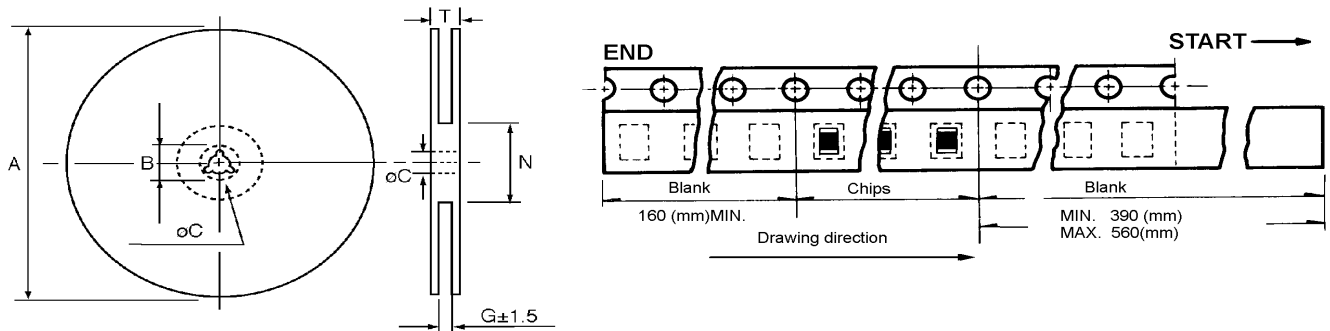
Tape Dimensions And Packaging Quantities



TYPE	A	B	W	P	T	CHIPS/REEL
100505	0.6	1.15	8	2	0.6	10000
160808	0.94	1.82	8	4	0.92	4000
201209	1.42	2.25	8	4	1.04	4000
321611	1.88	3.42	8	4	1.26	3000

Reel Dimensions

Material: Paper, Plastic

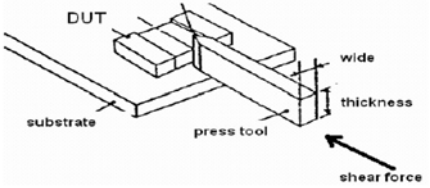


TYPE	8mm	12mm
A	178+/-2	178+/-2
B	21.1+/-0.8	21.0+/-0.8
C	13.0+/-0.8	13.0+/-0.8
G	10	14
N	75	75
T	12.5	16.5

Note

Reliability and Test Condition

Item	Performance	Test Condition
Operating temperature	-40~+125°C (Including self - temperature rise)	
Storage temperature	1. -10~+40°C,50~60%RH (Product with taping) 2. -40~+125°C (on board)	
Electrical Performance Test		
Inductance	Refer to standard electrical characteristics list.	HP4284A,CH11025,CH3302,CH1320,CH1320S LCR Meter.
DCR		CH16502,Agilent33420A Micro-Ohm Meter.
Saturation Current (Isat)	Approximately $\Delta L30\%$	Saturation DC Current (Isat) will cause L0 to drop $\Delta L(\%)$
Heat Rated Current (Irms)	Approximately $\Delta T40^\circ\text{C}$	Heat Rated Current (Irms) will cause the coil temperature rise $\Delta T(^\circ\text{C})$. 1.Applied the allowed DC current 2.Temperature measured by digital surface thermometer
Reliability Test		
Life Test	Appearance : No damage. Inductance : within $\pm 10\%$ of initial value Q : Shall not exceed the specification value. RDC : within $\pm 15\%$ of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) Temperature : 125 $\pm 2^\circ\text{C}$ (Inductor) Applied current : rated current Duration : 1000 ± 12 hrs Measured at room temperature after placing for 24 ± 2 hrs
Load Humidity		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) Humidity : 85 ± 2 % R.H, Temperature : 85 $\pm 2^\circ\text{C}$ Duration : 1000hrs Min. with 100% rated current Measured at room temperature after placing for 24 ± 2 hrs
Moisture Resistance		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) 1. Baked at 50 $^\circ\text{C}$ for 25hrs, measured at room temperature after placing for 4 hrs. 2. Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25 $^\circ\text{C}$ in 2.5hrs. 3. Raise temperature to 65 $\pm 2^\circ\text{C}$ 90-100%RH in 2.5hrs, and keep 3 hours, cool down to 25 $^\circ\text{C}$ in 2.5hrs,keep at 25 $^\circ\text{C}$ for 2 hrs then keep at -10 $^\circ\text{C}$ for 3 hrs 4. Keep at 25 $^\circ\text{C}$ 80-100%RH for 15min and vibrate at the frequency of 10 to 55 Hz to 10 Hz, measure at room temperature after placing for 1~2 hrs.
Thermal shock		Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020DClassification Reflow Profiles) Condition for 1 cycle Step1 : -40 $\pm 2^\circ\text{C}$ 30 ± 5 min Step2 : 25 $\pm 2^\circ\text{C}$ ≤ 0.5 min Step3 : 125 $\pm 2^\circ\text{C}$ 30 ± 5 min Number of cycles : 500 Measured at room temperature after placing for 24 ± 2 hrs
Vibration		Oscillation Frequency: 10 ~ 2K ~ 10Hz for 20 minutes Equipment : Vibration checker Total Amplitude:1.52mm $\pm 10\%$ Testing Time : 12 hours(20 minutes, 12 cycles each of 3 orientations).
Bending		Shall be mounted on a FR4 substrate of the following dimensions: ≥ 0805 inch(2012mm):40x100x1.2mm < 0805 inch(2012mm):40x100x0.8mm Bending depth: ≥ 0805 inch(2012mm):1.2mm < 0805 inch(2012mm):0.8mm duration of 10 sec.
Shock		Appearance : No damage. Impedance : within $\pm 15\%$ of initial value Inductance : within $\pm 10\%$ of initial value Q : Shall not exceed the specification value. RDC : within $\pm 15\%$ of initial value and shall not exceed the specification value
Solder ability		More than 95% of the terminal electrode should be covered with solder.

		Depth: completely cover the termination								
Resistance to Soldering Heat		Depth: completely cover the termination <table border="1" data-bbox="1023 277 1453 394"> <thead> <tr> <th>Temperature(°C)</th> <th>Time(s)</th> <th>Temperature ramp/immersion and emersion rate</th> <th>Number of heat cycles</th> </tr> </thead> <tbody> <tr> <td>260 ±5 (solder temp)</td> <td>10 ±1</td> <td>25mm/s ±6 mm/s</td> <td>1</td> </tr> </tbody> </table>	Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles	260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1
Temperature(°C)	Time(s)	Temperature ramp/immersion and emersion rate	Number of heat cycles							
260 ±5 (solder temp)	10 ±1	25mm/s ±6 mm/s	1							
Terminal Strength	Appearance : No damage. Impedance : within±15% of initial value Inductance : within±10% of initial value Q : Shall not exceed the specification value. RDC : within ±15% of initial value and shall not exceed the specification value e	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020Classification Reflow Profiles With the component mounted on a PCB with the device to be tested, apply a force(>0805:1kg , <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. 								

Note : When there are questions concerning measurement result : measurement shall be made after 48 ± 2 hours of recovery under the standard condition.