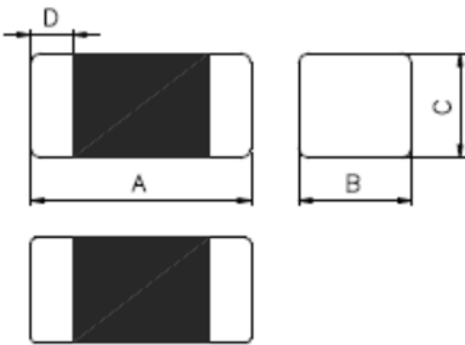


FEATRLRES

- 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)



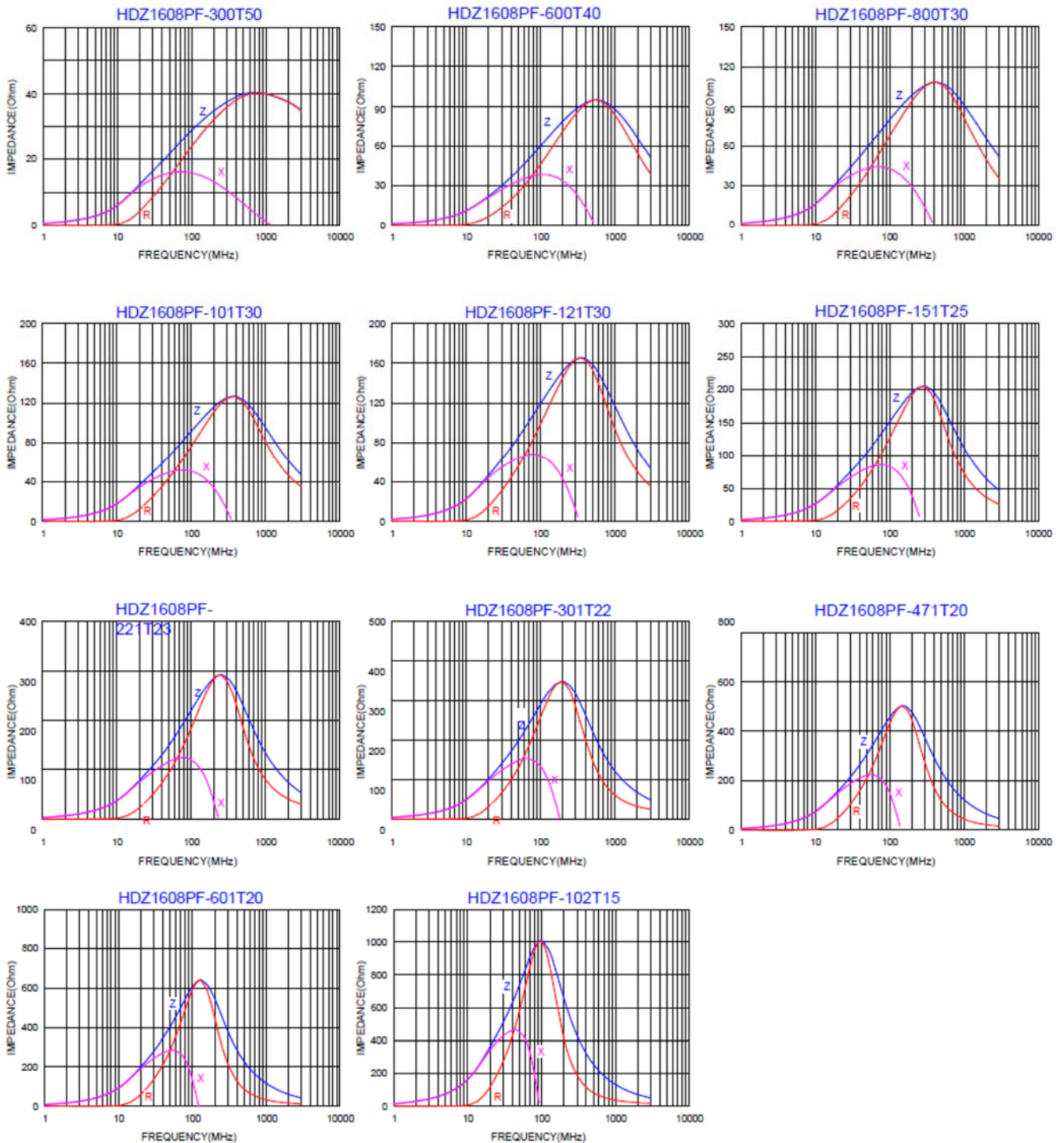
Size	A	B	C	D
HDZ1608	1.60±0.15	0.80±0.15	0.80±0.15	0.30±0.20

ELECTRICAL CHARACTERISTICS

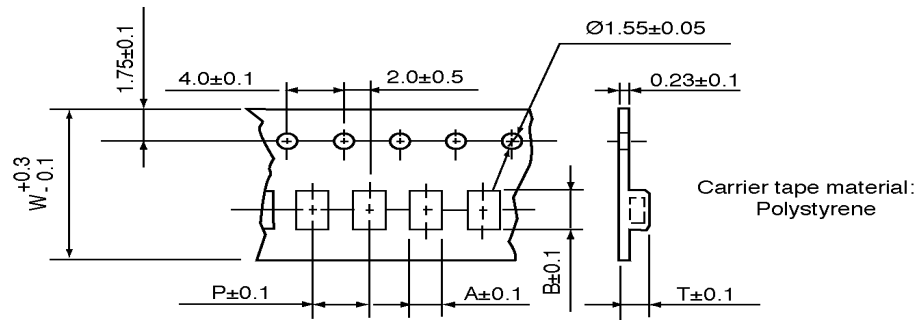
Part Number	Impedance (Ω)	Test Frequency	DC Resistance (Ω)	Rated Current (mA)
HDZ1608PF-300T50	30±25%	100	0.010	5000
HDZ1608PF-600T40	60±25%	100	0.020	4000
HDZ1608PF-800T30	80±25%	100	0.030	3000
HDZ1608PF-101T30	100±25%	100	0.030	3000
HDZ1608PF-121T30	120±25%	100	0.035	3000
HDZ1608PF-151T25	150±25%	100	0.040	2500
HDZ1608PF-221T23	220±25%	100	0.050	2300
HDZ1608PF-301T22	300±25%	100	0.070	2200
HDZ1608PF-471T20	470±25%	100	0.090	2000
HDZ1608PF-601T20	600±25%	100	0.095	2000
HDZ1608PF-102T15	1000±25%	100	0.150	1500

- Rated current: based on temperature rise test

Impedance Frequency Characteristics(Typical)



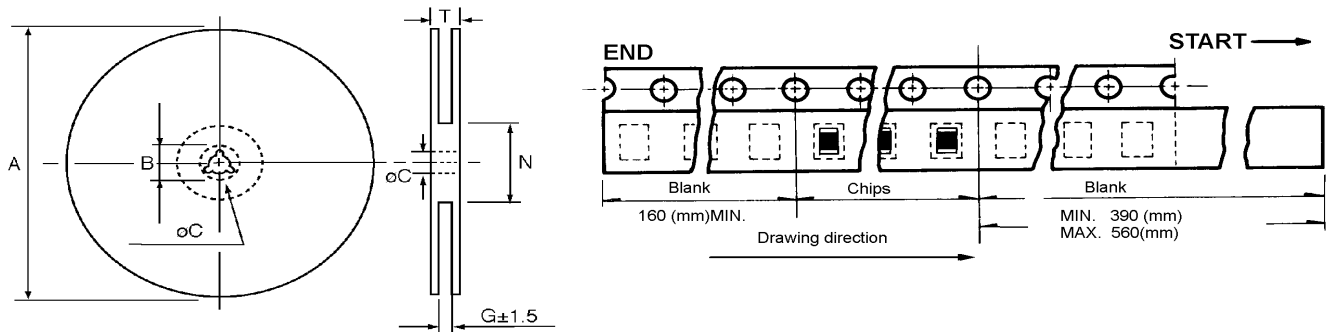
Tape Dimensions And Packaging Quantities



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

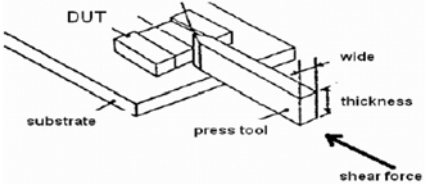


TYPE	8mm	12mm
A	178+/-2	178+/-2
B	21.1+/-0.8	21.0+/-0.8
C	13.0+/-0.8	13.0+/-0.8
G	10	14
N	75	75
T	12.5	16.5

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-020D Classification 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-020D Classification Reflow Profiles) Humidity : $85\pm 2 \times \text{R.H.}$, Temperature : $85^\circ\text{C} \pm 2^\circ\text{C}$ 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-020D Classification Reflow Profiles) 1. Baked at 50°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°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°C in 2.5hrs, keep at 25°C for 2 hrs then keep at -10°C for 3 hrs 4. Keep at 25°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-020D Classification Reflow Profiles) Condition for 1 cycle Step1 : $-40\pm 2^\circ\text{C}$ 30 \pm 5min Step2 : $25\pm 2^\circ\text{C}$ ≤ 0.5 min Step3 : $125\pm 2^\circ\text{C}$ 30 \pm 5min 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: $1.52\text{mm} \pm 10\%$ 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): $40 \times 100 \times 1.2\text{mm}$ < 0805 inch(2012mm): $40 \times 100 \times 0.8\text{mm}$ 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.	Preheat: 150°C , 60sec. Solder: Sn96.5% Ag3% Cu0.5% Temperature: $245\pm 5^\circ\text{C}$ <table border="1" data-bbox="1018 1854 1455 1989"> <thead> <tr> <th>Type</th> <th>Peak value (g's)</th> <th>Normal duration (D) (ms)</th> <th>Wave form</th> <th>Velocity change (Vi)ft/sec</th> </tr> </thead> <tbody> <tr> <td>SMD</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> <tr> <td>Lead</td> <td>50</td> <td>11</td> <td>Half-sine</td> <td>11.3</td> </tr> </tbody> </table>	Type	Peak value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec	SMD	50	11	Half-sine	11.3	Lead	50	11	Half-sine
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Lead	50	11	Half-sine	11.3													

		Flux for lead free: Rosin. 9.5% ° Dip time: 4±1sec ° Depth: completely cover the termination Depth: completely cover the termination								
Resistance to Soldering Heat		<table border="1" data-bbox="1023 293 1453 407"> <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-020DClassification 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.