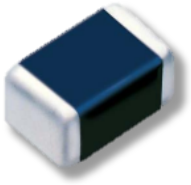


Feature

The BP series can be used on high current circuits due to its low DC resistance. It can meet power lines to the maximum at DC.

Ordering Code

BP	1005	100	T	T	S	5
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) PRODUCT CODE

BF : For General Signal Lines

(2) DIMENSION (L X W)

Code	Dimension	EIA
1005	1.0 X 0.5 mm	0402
1608	1.6 X 0.8 mm	0603
2012	2.0 X 1.2 mm	0805
3216	3.2 X 1.6 mm	1206

(3) IMPEDANCE CODE

Code	300	301	302
Impedance (Ω)	30	300	3000

(4) TOLERANCE CODE

T= ± 25%

(5) PACKAGING CODE

T = Paper Tape P =Plastic Tape

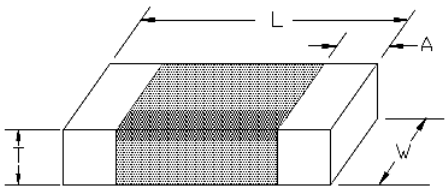
(6) TYPE CODE

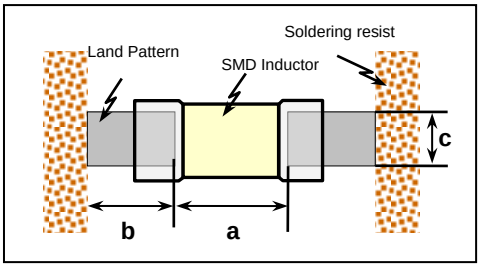
S=Standard Type R=Low DCR T= GHz Band

(7) THICKNESS CODE(mm)

5=0.5 8=0.8 9=0.9 B=1.1

External Dimension





Series mm/(inch)	L	W	A (Min/Max)	Recommended Pad Dimensions			
				L x W (mm)	a (mm)	b (mm)	c (mm)
1005 (0402)	1.00 ± 0.10 (0.040 ± 0.004)	0.50 ± 0.10 (0.020 ± 0.004)	0.25 ± 0.15 (0.010 ± 0.006)	1.0 x 0.5	0.3 to 0.5	0.35 to 0.45	0.4 to 0.5
1608 (0603)	1.60 ± 0.20 (0.063 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)	0.30 ± 0.20 (0.012 ± 0.008)	1.6 x 0.8	0.7 to 1.0	0.6 to 0.8	0.7 to 0.8
2012 (0805)	2.00 +/- 0.20 (0.079 +/- 0.008)	1.20 +/- 0.20 (0.047 +/- 0.008)	0.50 +/- 0.30 (0.020 +/- 0.012)	2.0 x 1.2	1.0 to 1.3	0.7 to 0.9	1.0 to 1.2
3216 (1206)	3.20 +/- 0.20 (0.126 +/- 0.008)	1.60 +/- 0.20 (0.063 +/- 0.008)	0.50 +/- 0.30 (0.020 +/- 0.012)	3.2 x 1.6	2.1 to 2.5	1.0 to 1.2	1.3 to 1.6

■ Part Numbers & Characteristic (General Purpose)

● BP1005 series(EIA 0402 size)

DARFON P/N	Size			Thickness(mm)		Impedance(Ω)		Impedance Tolerance %	DC Resistance mΩ(Max)	Rated Current mA(Max)	Measuring
	Length	Width	EIA	Max.	Tol.	Value	3-Digital				
BP1005100TTS5	1.00	0.50	0402	0.50	±0.03	10	100	±25%	30.0	2,000	100MHz/0.5V
BP1005300TTS5						30	300	±25%	35.0	2,200	100MHz/0.5V
BP1005600TTS5						60	600	±25%	60.0	1,700	100MHz/0.5V
BP1005700TTS5						70	700	±25%	90.0	1,200	100MHz/0.5V
BP1005800TTS5						80	800	±25%	70.0	1,500	100MHz/0.5V
BP1005101TTS5						100	101	±25%	90.0	1,200	100MHz/0.5V
BP1005181TTS5						180	181	±25%	90.0	1,200	100MHz/0.5V
BP1005121TTT5	1.00	0.50	0402	0.50	±0.03	120	121	±25%	55.0	2,000	100MHz/0.5V

※OPERATING TEMPERATURE RANGE: -55 ℃ TO +125 ℃

● BP1608 series(EIA 0603 size)

DARFON P/N	Size			Thickness(mm)		Impedance(Ω)		Impedance Tolerance %	DC Resistance mΩ(Max)	Rated Current mA(Max)	Measuring
	Length	Width	EIA	Max.	Tol.	Value	3-Digital				
BP1608190TTS8	1.60	0.80	0603	0.80	±0.20	19	190	±25%	40.0	3,000	100MHz/0.5V
BP1608220TTS8						22	220	±25%	40.0	3,000	100MHz/0.5V
BP1608300TTS8						30	300	±25%	30.0	3,000	100MHz/0.5V
BP1608310TTS8						31	310	±25%	40.0	3,000	100MHz/0.5V
BP1608330TTS8						33	330	±25%	25.0	3,000	100MHz/0.5V
BP1608500TTS8						50	500	±25%	40.0	3,000	100MHz/0.5V
BP1608600TTS8						60	600	±25%	40.0	3,000	100MHz/0.5V
BP1608700TTS8						70	700	±25%	40.0	3,000	100MHz/0.5V
BP1608800TTS8						80	800	±25%	40.0	3,000	100MHz/0.5V
BP1608101TTS8						100	101	±25%	40.0	3,000	100MHz/0.5V
BP1608121TTS8						120	121	±25%	40.0	3,000	100MHz/0.5V
BP1608151TTS8						150	151	±25%	40.0	3,000	100MHz/0.5V
BP1608181TTS8						180	181	±25%	90.0	1,500	100MHz/0.5V
BP1608221TTS8						220	221	±25%	50.0	3,000	100MHz/0.5V
BP1608301TTS8						300	301	±25%	90.0	2,000	100MHz/0.5V
BP1608331TTS8						330	331	±25%	80	1,700	100MHz/0.5V
BP1608601TTS8						600	601	±25%	200.0	1,000	100MHz/0.5V
BP1608102TTS8						1000	102	±25%	200.0	1,000	100MHz/0.5V
BP1608070TTR8	1.60	0.80	0603	0.08	±0.15	7	070	±25%	25.0	4,000	100MHz/0.5V
BP1608220TTR8						22	220	±25%	8.0	6,000	100MHz/0.5V
BP1608260TTR8						26	260	±25%	7.0	6,000	100MHz/0.5V
BP1608300TTR8						30	300	±25%	10.0	5,000	100MHz/0.5V
BP1608330TTR8						33	330	±25%	8.0	6,000	100MHz/0.5V
BP1608600TTR8						60	600	±25%	20.0	3,500	100MHz/0.5V
BP1608101TTR8						100	101	±25%	10.0	6,000	100MHz/0.5V

※OPERATING TEMPERATURE RANGE: -55 ℃ TO +125 ℃

● BP2012 series(EIA 0805 size)

DARFON P/N	Size			Thickness(mm)		Impedance(Ω)		Impedance Tolerance %	DC Resistance mΩ(Max)	Rated Current mA(Max)	Measuring
	Length	Width	EIA	Max.	Tol.	Value	3-Digital				
BP2012070TTS9	2.00	1.20	0805	0.90	±0.20	7	070	±25%	8.0	6,000	100MHz/0.5V
BP2012110TTS9						11	110	±25%	8.0	6,000	100MHz/0.5V
BP2012220TTS9						22	220	±25%	8.0	6,000	100MHz/0.5V
BP2012300TTS9						30	300	±25%	8.0	6,000	100MHz/0.5V
BP2012500TTS9						50	500	±25%	20.0	4,000	100MHz/0.5V
BP2012600TTS9						60	600	±25%	15.0	5,000	100MHz/0.5V
BP2012800TTS9						80	800	±25%	10.0	5,000	100MHz/0.5V
BP2012101TTS9						100	800	±25%	40.0	3,000	100MHz/0.5V
BP2012121TTS9						120	121	±25%	20.0	4,000	100MHz/0.5V
BP2012181TTS9						180	181	±25%	50.0	3,000	100MHz/0.5V
BP2012221TTS9						220	221	±25%	50.0	3,000	100MHz/0.5V
BP2012301TTS9						300	301	±25%	40.0	3,000	100MHz/0.5V
BP2012331TTS9						330	331	±25%	50.0	3,000	100MHz/0.5V
BP2012471TTS9						470	471	±25%	100.0	2,000	100MHz/0.5V
BP2012601TTS9						600	601	±25%	100.0	2,000	100MHz/0.5V
BP2012751TTS9						750	751	±25%	300.0	1,000	100MHz/0.5V
BP2012102TTS9						1000	102	±25%	300.0	1,000	100MHz/0.5V
BP2012122TTS9						1200	122	±25%	300.0	1,000	100MHz/0.5V
BP2012152TTS9						1500	152	±25%	300.0	1,000	100MHz/0.5V

※OPERATING TEMPERATURE RANGE: -55 ℃ TO +125 ℃

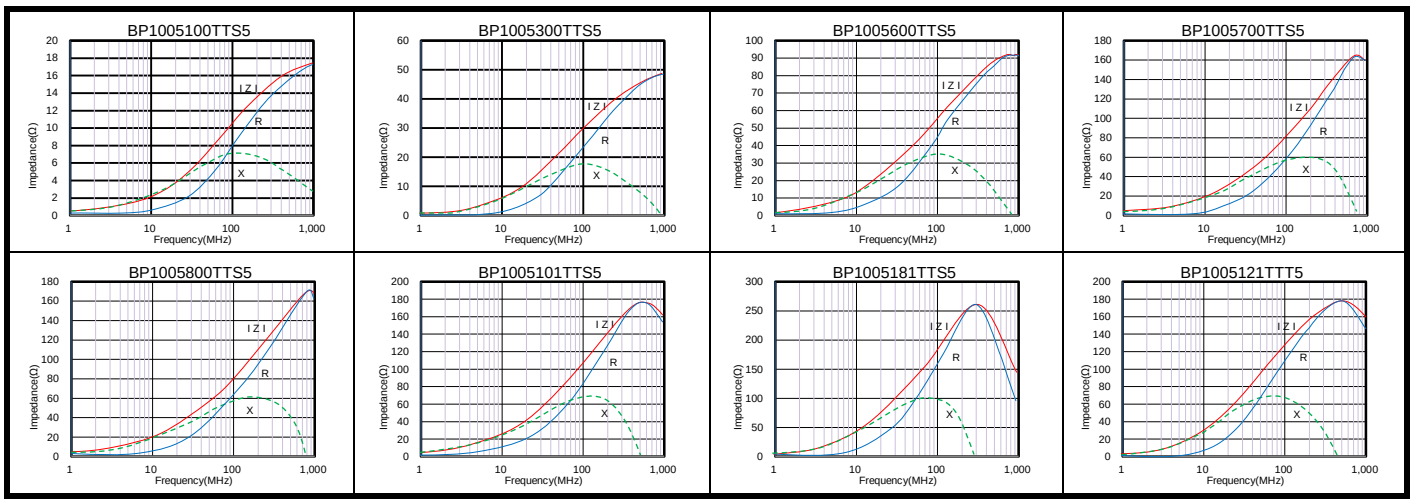
● BP3216 series(EIA 1206 size)

DARFON P/N	Size			Thickness(mm)		Impedance(Ω)		Impedance Tolerance %	DC Resistance mΩ(Max)	Rated Current mA(Max)	Measuring
	Length	Width	EIA	Max.	Tol.	Value	3-Digital				
BP3216190TTSB	3.20	1.60	1206	1.10	±0.20	7	070	±25%	8.0	6,000	100MHz/0.5V
BP3216260TTSB						11	110	±25%	8.0	6,000	100MHz/0.5V
BP3216300TTSB						22	220	±25%	8.0	6,000	100MHz/0.5V
BP3216310TTSB						30	300	±25%	8.0	6,000	100MHz/0.5V
BP3216330TTSB						50	500	±25%	20.0	4,000	100MHz/0.5V
BP3216520TTSB						60	600	±25%	15.0	5,000	100MHz/0.5V
BP3216600TTSB						80	800	±25%	10.0	5,000	100MHz/0.5V
BP3216800TTSB						100	800	±25%	40.0	3,000	100MHz/0.5V
BP3216121TTSB						120	121	±25%	20.0	4,000	100MHz/0.5V
BP3216151TTSB						180	181	±25%	50.0	3,000	100MHz/0.5V
BP3216181TTSB						220	221	±25%	50.0	3,000	100MHz/0.5V
BP3216201TTSB						300	301	±25%	40.0	3,000	100MHz/0.5V
BP3216221TTSB						470	471	±25%	100.0	2,000	100MHz/0.5V
BP3216301TTSB						600	601	±25%	100.0	2,000	100MHz/0.5V
BP3216501TTSB						750	751	±25%	300.0	1,000	100MHz/0.5V
BP3216601TTSB						1000	102	±25%	300.0	1,000	100MHz/0.5V
BP3216102TTSB						1200	122	±25%	300.0	1,000	100MHz/0.5V

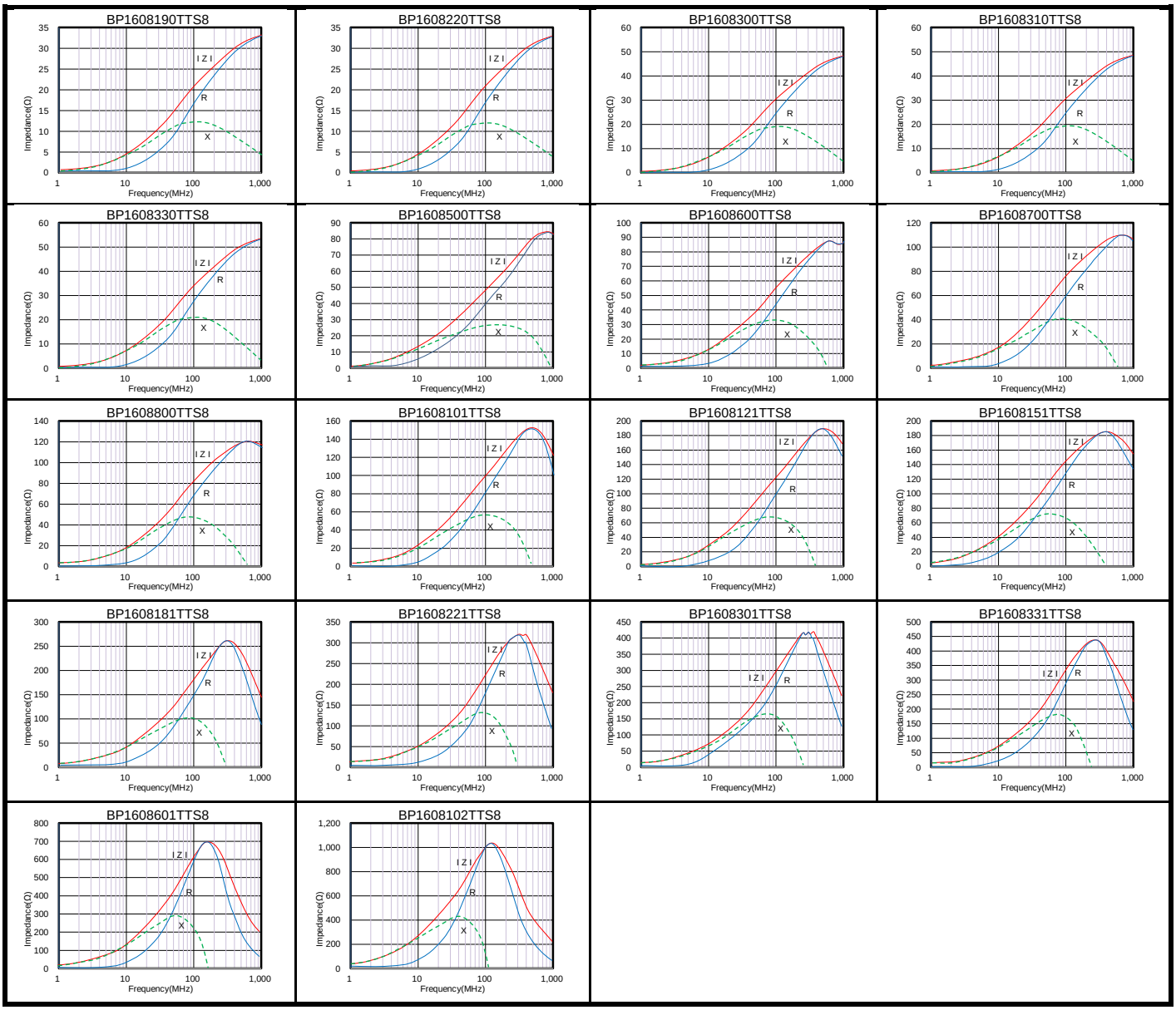
※OPERATING TEMPERATURE RANGE: -55 ℃ TO +125 ℃

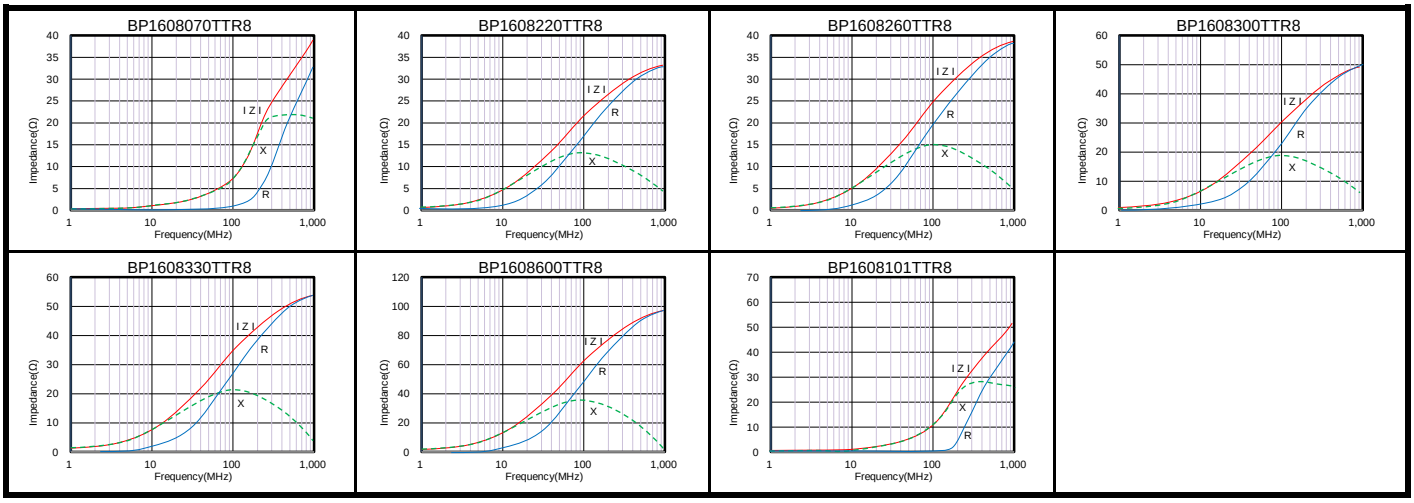
Typical Electrical Characteristics (Impedance Vs Frequency)

- BP1005 series(EIA 0402 size)

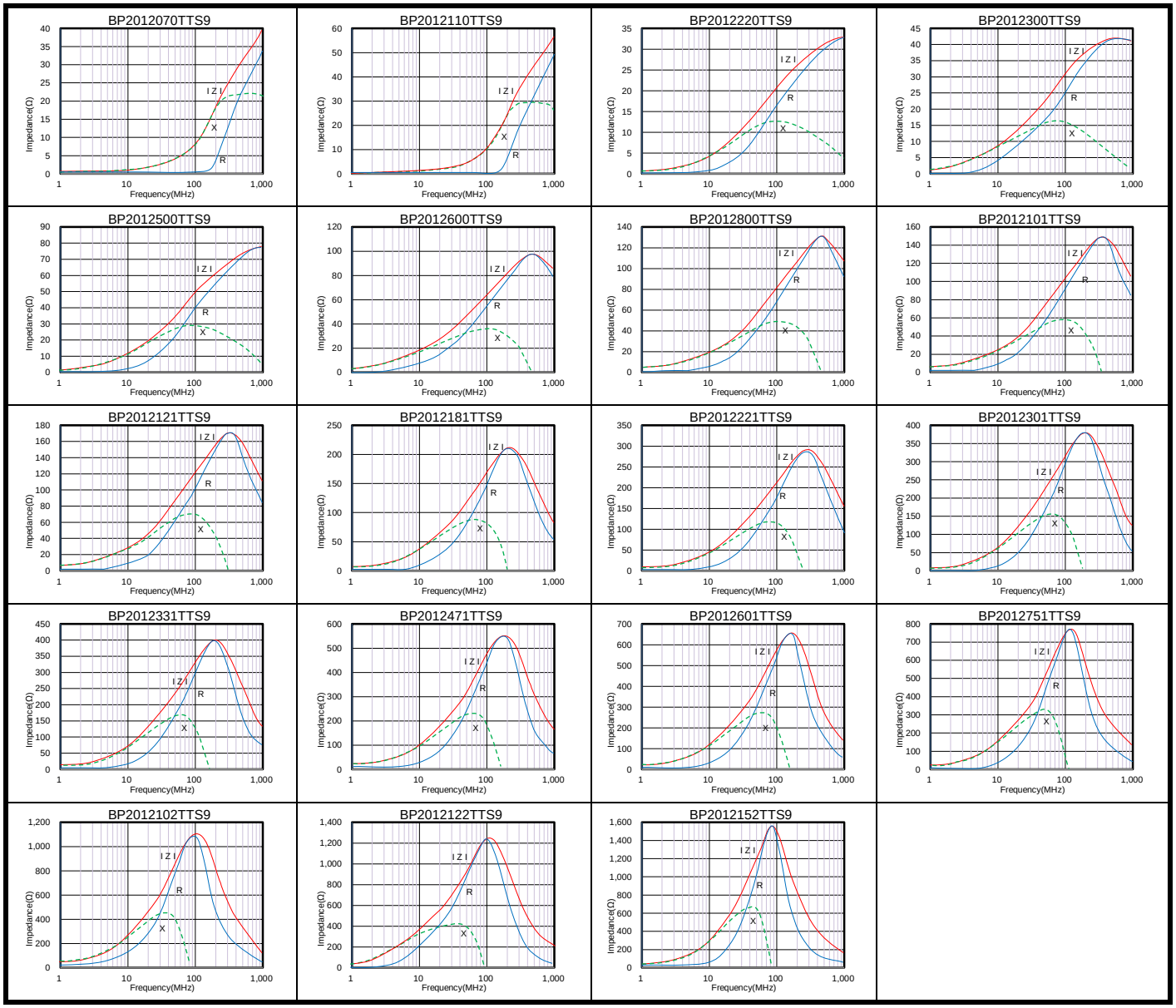


- BP1608 series(EIA 0603 size)

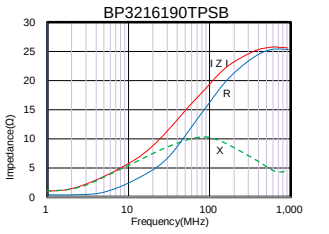


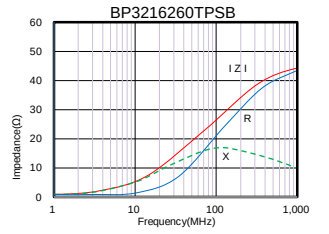


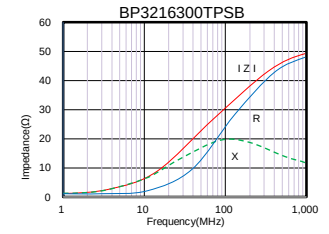
- BP2012 series(EIA 0805 size)

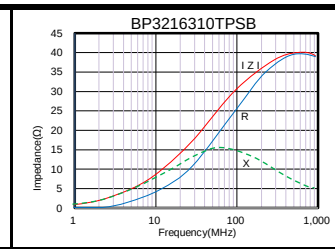


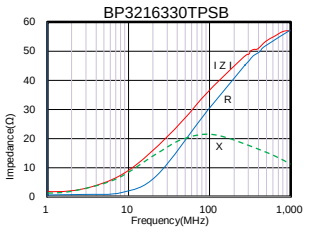
- BP3216 series(EIA 1206 size)

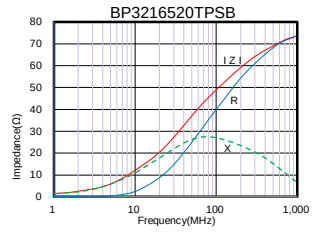


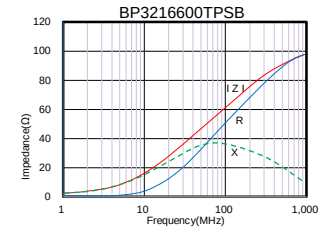


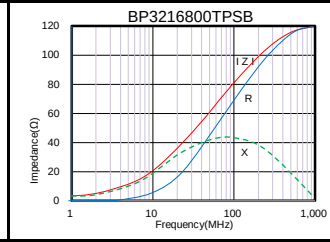


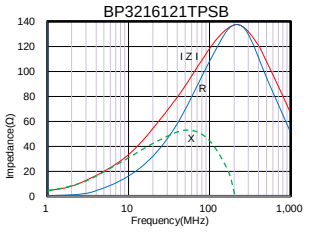


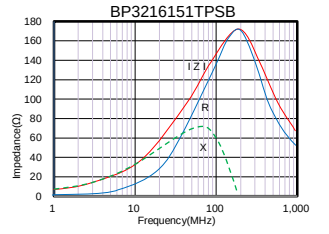


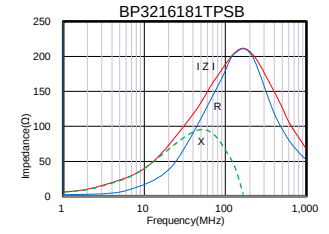


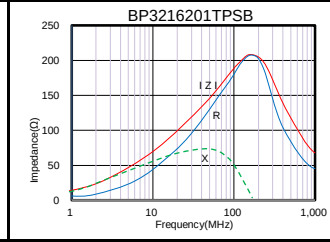


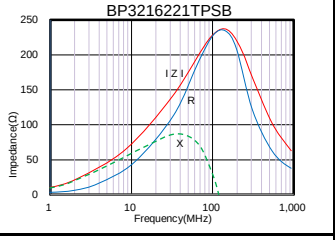


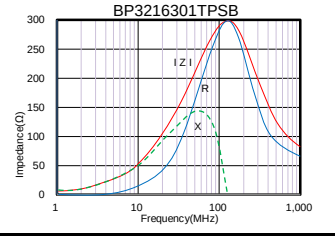


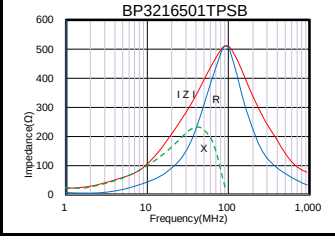


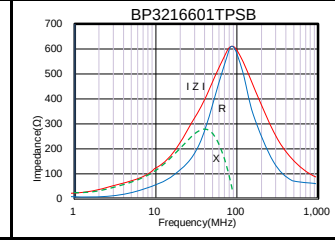


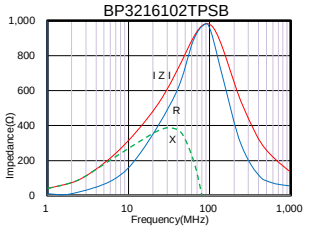




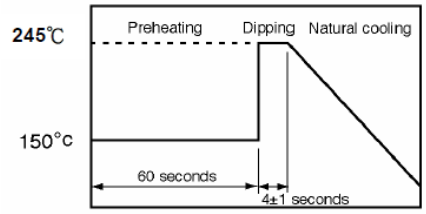
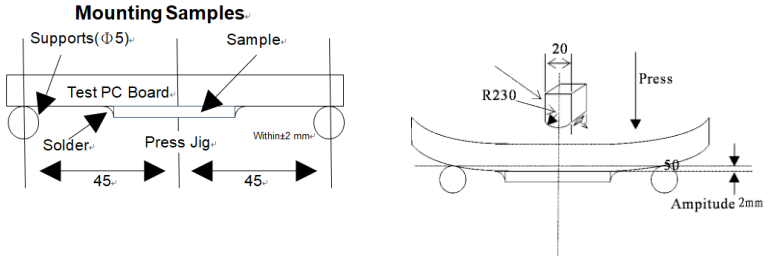
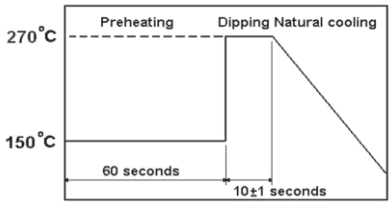
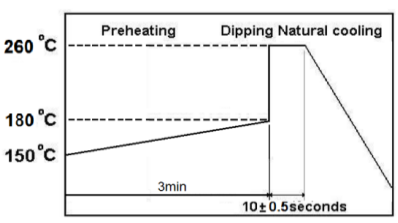


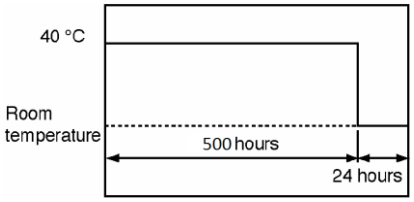
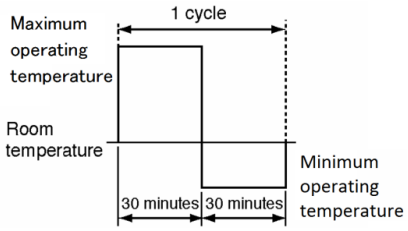
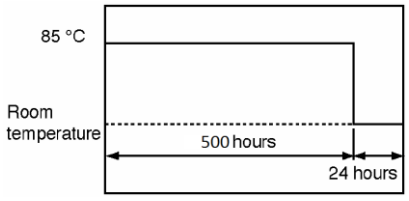






Testing Condition & Requirements

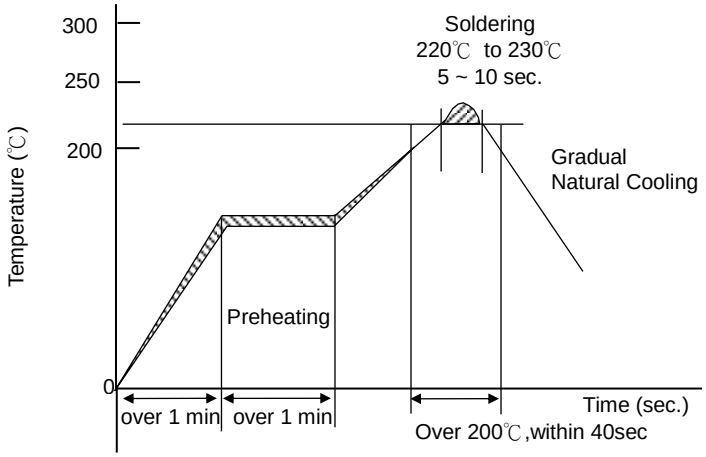
No.	Item	Test Condition	Requirements
1	Appearance	Ferrite Beads shall be visually inspected for visible evidence of defect.	In accordance with specification.
2	Impedance	Measuring frequency：100±1MHz Applied Voltage： 500 mV Measuring equipment and fixture: 1005： HP4291B + 16193A 1608： HP4291B + 16192A 2012： HP4291A + 16092A 3216： HP4291A + 16092A	Within specified tolerance.
3	DC Resistance	a. Temperature： 25±3℃ b. Relative Humidity： 45~75%RH c. Measuring equipment：HP 4338	In accordance with electrical specification.
4	Dimension	Dimension shall be measured with caliper or micrometer	In accordance with dimension specification.
5	Solder-ability	Preheat：150℃,60 seconds Solder temperature：245±5℃ Flu： Rosin Dip time： 4±1 seconds 	More than 75% of the terminal electrode part shall be covered with new solder.
6	Bending Strength	Solder the chip to test jig then apply a force in the direction shown in below. The soldering shall be done with the reflow method and shall be conducted with care so that the soldering is uniform and free of defects such as heat shock. 	No mechanical damage shall be observed.
7	Resistance to Soldering Heat	BF、BP Series Preheat：150℃,60 seconds Solder temperature：270±5℃ Flux：Rosin Dip time：10 ± 1 seconds  BH、BS Series Preheating temperature： 150 to 180℃ Preheating time：3 min. Preheat：150℃,60 seconds Solder temperature:：260±5℃ Flux：Rosin Dip time：10 ± 0.5 seconds 	The chip shall not be cracks. More than 75% of terminal electrode shall be covered with solder.

No.	Item	Test Condition	Requirements
8	High Humidity Load Life Test	Humidity：90 to 95% RH. Temperature：40±2℃ BF、BP Series Testing time：500±12 hours 	No visible damage. Impedance：Within ± 30% of the initial value.
		Humidity： 90 to 95% RH. Temperature：40±2℃ BH Series Testing time：500+24/-0 hours 	
		Recovery：2 to 3 hrs of recovery under the standard condition after the removal from test chamber. BF、BP Series Measurement:：After placing for 24±2 hours min. BH Series Measurement：After placing for 48±2 hours min.	
9	Thermal Shock	Temperature： Maximum and Minimum , kept stabilized for 30 ± 3 minutes each Cycle：5 cycles 	No visible damage Impedance：Within ± 30% of the initial value.
		BF、BP Series Measurement：After placing for 24 ± 2 hours min. BH Series Measurement：After placing for 48 ± 2 hours min.	
10	High Temperature Load	BF、BP Series Temperature： 85±3℃ (BP_0603 Series) 125±3℃ Testing time:：500±12 hours 	No visible damage. Impedance：Within ± 30% of the initial value.
		BH Series Temperature：125±3℃ Testing time：500+24/-0 hours 	
		Recovery：2 to 3 hrs of recovery under the standard condition after the removal from test chamber. BF、BP Series Measurement：After placing for 24 ± 2 hours min. BH Series Measurement：After placing for 48 ± 2 hours min.	

Soldering Profile For SMT Process With SNPB Solder Paste

The rate of preheat should not exceed 4℃/sec and a target of 2℃/sec is preferred.

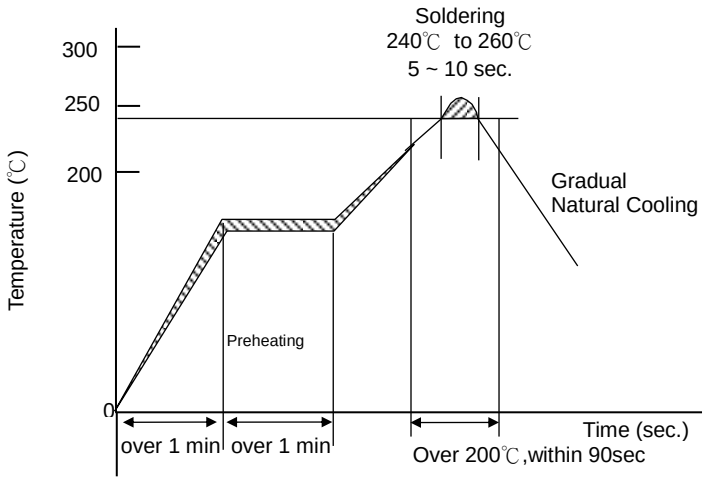
Ceramic chip components should be preheated to within 100 to 130 ℃ of the soldering.



Soldering Profile for SMT Process with Lead Free Solder Paste.

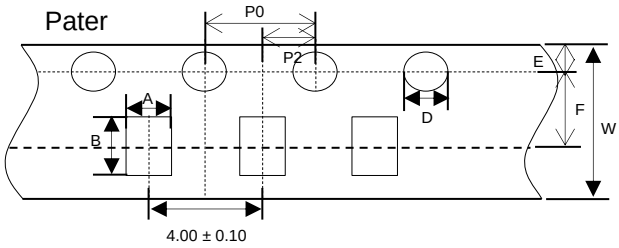
The rate of preheat should not exceed 4℃/sec and a target of 2℃/sec is preferred.

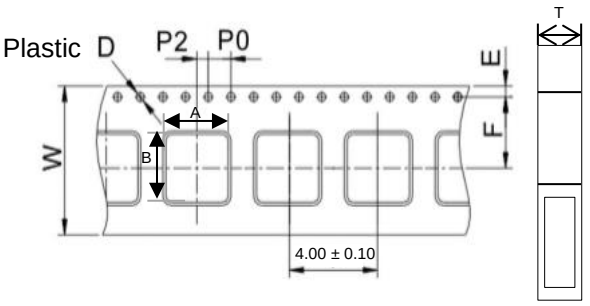
Ceramic chip components should be preheated to within 100 to 130 ℃ of the soldering.



Packaging Specification

- Paper / Plastic Tape



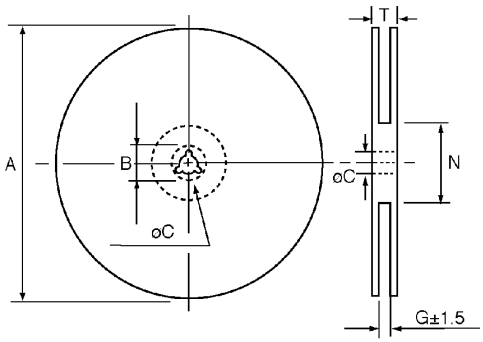


Material：Paper (Dimensions In mm)										
TYPE	A	B	W	P0	P2	D	E	F	T	Q'ty
1005	0.62 ± 0.03	1.12 ± 0.03	8.00 ± 0.10	2.00 ± 0.05	2.00 ±0.05	1.55 ± 0.05	1.75 ± 0.05	3.50 ± 0.05	0.60 ± 0.03	10,000
1608	1.05 ± 0.05	1.85 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ±0.10	1.56 ± 0.10	1.75 ± 0.10	3.50 ± 0.10	0.95 ± 0.05	4,000
2012	1.50 ± 0.05	2.30 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ±0.10	1.56 ± 0.10	1.75 ± 0.10	3.50 ± 0.10	0.95 ± 0.05	4,000

Material：Plastic (Dimensions In mm)										
TYPE	A	B	W	P0	P2	D	E	F	T	Q'ty
3216	1.85 ± 0.10	3.43 ± 0.10	7.90~8.30	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	1.75 ± 0.10	3.50 ± 0.10	1.22 ± 0.10	3,000

- Reel Dimensions

Material:Paper, Plastic



Dimensions In mm

TYPE	Paper	Plastic
A	178±2	178±2
B	21.0±0.8	21.0±0.8
C	13.0±0.8	13.0±0.8
G	5.0	10.0
N	75	75
T	8	12.5

- Storage

1. The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to high humidity. Packages must be stored at 40℃or less and 70％RH or less.
2. The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to dust or harmful gas (hydrogen chloride,sulfurous acid gas or hydrogen sulfide)
3. Packaging material may be deformed if packages are stored where they are exposed to heat or direct sun－light.
4. Minimum packages, such as polyvinyl heat－seal packages shall not be opened until just before they are used. If opened, use the reels as soon as possible.
5. Solderability specified in component specification shall be for 12 months from the date of delivery on condition that they are stored at the environment specified clause 1 & 2.
6. For those parts which passed more than 12 months shall be checked solderability before it is used.