

**Description:** Film Type High Q RF chip inductors

**PART NUMBER: BSPQ00040203 Series**

## DESCRIPTION

BSPQ Series supports miniaturized devices. Its low inductance deviation, high precision and higher Q enables easy impedance matching at both RF and IF circuits and compact high frequency circuit designing.

### BSPQ Series



### Features

- Size : 0.4 x 0.2 x 0.3 mm
- Excellent high frequency application
- Higher Q factor
- Miniaturization
- Tight tolerance

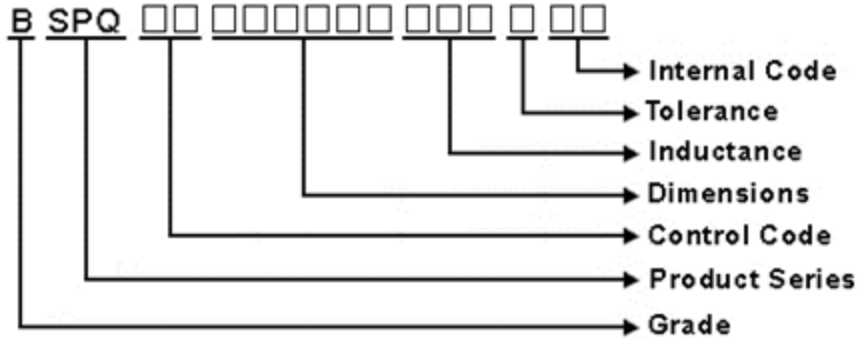
### Applications

- RF matching circuit requiring Q value
- Bluetooth, WLAN, UWB, digital TV tuners and high-frequency circuit and module

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### Part Numbering



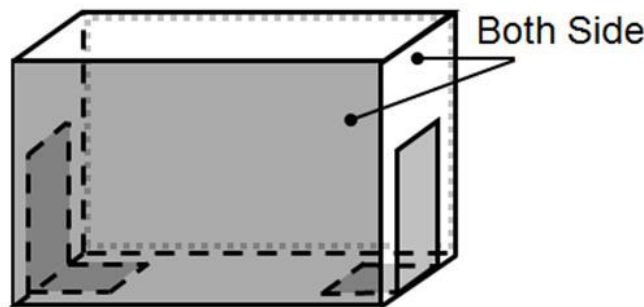
### Rating

Operating Temperature: - 5 5 °C ~ 1 2 5 °C(Including self - temperature rise)

Storage Temperature: - 5 5 °C ~ 1 2 5 °C(after PCB)

- 5 °C~4 0 °C,Humidity 4 0 %~7 0 %(before PCB)

### Marking



### Standard Testing Condition

	Unless otherwise specified	In case of doubt
Temperature	Ordinary Temperature(15 to 35°C)	20 to 30°C
Humidity	Ordinary Humidity(25 to 85% RH)	50 to 80 %RH

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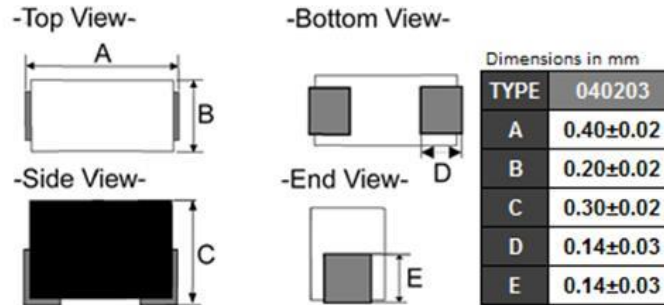
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Description: Film Type High Q RF chip inductors

PART NUMBER: BSPQ00040203 Series

Configuration and Dimensions



Electrical Characteristics

Part No.	Inductance (nH)	L,Q Test Freq.	Q Min.	SRF (MHz)Min.	RDC (Ω)Max.	Rated Current (mA)Max.	Tolerance
BSPQ000402030N2B00	0.2	500 MHz,500 mV	-	17000	0.01	1000	B=±0.1nH
BSPQ000402030N2C00	0.2	500 MHz,500 mV	-	17000	0.01	1000	C=±0.2nH
BSPQ000402030N3B00	0.3	500 MHz,500 mV	-	17000	0.02	1000	B=±0.1nH
BSPQ000402030N3C00	0.3	500 MHz,500 mV	-	17000	0.02	1000	C=±0.2nH
BSPQ000402030N4B00	0.4	500 MHz,500 mV	14	17000	0.03	1000	B=±0.1nH
BSPQ000402030N4C00	0.4	500 MHz,500 mV	14	17000	0.03	1000	C=±0.2nH
BSPQ000402030N5B00	0.5	500 MHz,500 mV	14	17000	0.04	1000	B=±0.1nH
BSPQ000402030N5C00	0.5	500 MHz,500 mV	14	17000	0.04	1000	C=±0.2nH
BSPQ000402030N6B00	0.6	500 MHz,500 mV	14	17000	0.05	950	B=±0.1nH
BSPQ000402030N6C00	0.6	500 MHz,500 mV	14	17000	0.05	950	C=±0.2nH
BSPQ000402030N7B00	0.7	500 MHz,500 mV	14	15500	0.05	900	B=±0.1nH
BSPQ000402030N7C00	0.7	500 MHz,500 mV	14	15500	0.05	900	C=±0.2nH
BSPQ000402030N8B00	0.8	500 MHz,500 mV	14	15500	0.05	900	B=±0.1nH
BSPQ000402030N8C00	0.8	500 MHz,500 mV	14	15500	0.05	900	C=±0.2nH
BSPQ000402030N9B00	0.9	500 MHz,500 mV	14	14600	0.05	900	B=±0.1nH
BSPQ000402030N9C00	0.9	500 MHz,500 mV	14	14600	0.05	900	C=±0.2nH
BSPQ000402031N0B00	1	500 MHz,500 mV	14	13200	0.05	900	B=±0.1nH
BSPQ000402031N0C00	1	500 MHz,500 mV	14	13200	0.05	900	C=±0.2nH
BSPQ000402031N1B00	1.1	500 MHz,500 mV	14	12800	0.06	850	B=±0.1nH
BSPQ000402031N1C00	1.1	500 MHz,500 mV	14	12800	0.06	850	C=±0.2nH

NOTE: tolerance B=±0.1nH/ C=±0.2nH/ H=±3% / J=±5%

- 1.Operating temperature range - 5 5 °C ~ 1 2 5 °C(Including self - temperature rise)
- 2.Rate Current : Applied the current to coils, the temperature rise shall not be more than 25°C
- 3.Residual impedance of short chip : 0.11nH

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BSPQ000402031N2B00	1.2	500 MHz,500 mV	14	12800	0.06	800	B=±0.1nH
BSPQ000402031N2C00	1.2	500 MHz,500 mV	14	12800	0.06	800	C=±0.2nH
BSPQ000402031N3B00	1.3	500 MHz,500 mV	14	12700	0.08	700	B=±0.1nH
BSPQ000402031N3C00	1.3	500 MHz,500 mV	14	12700	0.08	700	C=±0.2nH
BSPQ000402031N4B00	1.4	500 MHz,500 mV	14	12700	0.08	700	B=±0.1nH
BSPQ000402031N4C00	1.4	500 MHz,500 mV	14	12700	0.08	700	C=±0.2nH
BSPQ000402031N5B00	1.5	500 MHz,500 mV	14	12700	0.08	700	B=±0.1nH
BSPQ000402031N5C00	1.5	500 MHz,500 mV	14	12700	0.08	700	C=±0.2nH
BSPQ000402031N6B00	1.6	500 MHz,500 mV	14	10700	0.08	700	B=±0.1nH
BSPQ000402031N6C00	1.6	500 MHz,500 mV	14	10700	0.08	700	C=±0.2nH
BSPQ000402031N7B00	1.7	500 MHz,500 mV	14	10700	0.08	700	B=±0.1nH
BSPQ000402031N7C00	1.7	500 MHz,500 mV	14	10700	0.08	700	C=±0.2nH
BSPQ000402031N8B00	1.8	500 MHz,500 mV	14	10200	0.08	700	B=±0.1nH
BSPQ000402031N8C00	1.8	500 MHz,500 mV	14	10200	0.08	700	C=±0.2nH
BSPQ000402031N9B00	1.9	500 MHz,500 mV	14	10200	0.08	700	B=±0.1nH
BSPQ000402031N9C00	1.9	500 MHz,500 mV	14	10200	0.08	700	C=±0.2nH
BSPQ000402032N0B00	2	500 MHz,500 mV	14	10100	0.1	700	B=±0.1nH
BSPQ000402032N0C00	2	500 MHz,500 mV	14	10100	0.1	700	C=±0.2nH
BSPQ000402032N1B00	2.1	500 MHz,500 mV	14	10100	0.1	650	B=±0.1nH
BSPQ000402032N1C00	2.1	500 MHz,500 mV	14	10100	0.1	650	C=±0.2nH
BSPQ000402032N2B00	2.2	500 MHz,500 mV	14	9800	0.2	500	B=±0.1nH
BSPQ000402032N2C00	2.2	500 MHz,500 mV	14	9800	0.2	500	C=±0.2nH
BSPQ000402032N3B00	2.3	500 MHz,500 mV	14	9800	0.2	450	B=±0.1nH
BSPQ000402032N3C00	2.3	500 MHz,500 mV	14	9800	0.2	450	C=±0.2nH
BSPQ000402032N4B00	2.4	500 MHz,500 mV	14	9500	0.2	450	B=±0.1nH
BSPQ000402032N4C00	2.4	500 MHz,500 mV	14	9500	0.2	450	C=±0.2nH
BSPQ000402032N5B00	2.5	500 MHz,500 mV	14	9500	0.2	450	B=±0.1nH
BSPQ000402032N5C00	2.5	500 MHz,500 mV	14	9500	0.2	450	C=±0.2nH
BSPQ000402032N6B00	2.6	500 MHz,500 mV	14	9500	0.2	450	B=±0.1nH
BSPQ000402032N6C00	2.6	500 MHz,500 mV	14	9500	0.2	450	C=±0.2nH

NOTE: tolerance B=±0.1nH/ C=±0.2nH/ H=±3% / J=±5%

- 1.Operating temperature range - 5 5°C ~ 1 2 5°C(Including self - temperature rise)
- 2.Rate Current: Applied the current to coils, the temperature rise shall not be more than 25°C
- 3.Residual impedance of short chip : 0.11nH

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Part No.	Inductance (nH)	L,Q Test Freq.	Q Min.	SRF (MHz)Min.	RDC (Ω)Max.	Rated Current (mA)Max.	Tolerance
BSPQ000402032N7B00	2.7	500 MHz,500 mV	14	8800	0.2	450	B=±0.1nH
BSPQ000402032N7C00	2.7	500 MHz,500 mV	14	8800	0.2	450	C=±0.2nH
BSPQ000402032N8B00	2.8	500 MHz,500 mV	14	8800	0.2	450	B=±0.1nH
BSPQ000402032N8C00	2.8	500 MHz,500 mV	14	8800	0.2	450	C=±0.2nH
BSPQ000402032N9B00	2.9	500 MHz,500 mV	14	8800	0.2	450	B=±0.1nH
BSPQ000402032N9C00	2.9	500 MHz,500 mV	14	8800	0.2	450	C=±0.2nH
BSPQ000402033N0B00	3	500 MHz,500 mV	14	8500	0.2	450	B=±0.1nH
BSPQ000402033N0C00	3	500 MHz,500 mV	14	8500	0.2	450	C=±0.2nH
BSPQ000402033N1B00	3.1	500 MHz,500 mV	14	8500	0.25	400	B=±0.1nH
BSPQ000402033N1C00	3.1	500 MHz,500 mV	14	8500	0.25	400	C=±0.2nH
BSPQ000402033N2B00	3.2	500 MHz,500 mV	14	8500	0.25	400	B=±0.1nH
BSPQ000402033N2C00	3.2	500 MHz,500 mV	14	8500	0.25	400	C=±0.2nH
BSPQ000402033N3B00	3.3	500 MHz,500 mV	14	8200	0.25	400	B=±0.1nH
BSPQ000402033N3C00	3.3	500 MHz,500 mV	14	8200	0.25	400	C=±0.2nH
BSPQ000402033N4B00	3.4	500 MHz,500 mV	14	8200	0.3	400	B=±0.1nH
BSPQ000402033N4C00	3.4	500 MHz,500 mV	14	8200	0.3	400	C=±0.2nH
BSPQ000402033N5B00	3.5	500 MHz,500 mV	14	8200	0.3	350	B=±0.1nH
BSPQ000402033N5C00	3.5	500 MHz,500 mV	14	8200	0.3	350	C=±0.2nH
BSPQ000402033N6B00	3.6	500 MHz,500 mV	14	8200	0.3	350	B=±0.1nH
BSPQ000402033N6C00	3.6	500 MHz,500 mV	14	8200	0.3	350	C=±0.2nH
BSPQ000402033N7B00	3.7	500 MHz,500 mV	14	8200	0.35	350	B=±0.1nH
BSPQ000402033N7C00	3.7	500 MHz,500 mV	14	8200	0.35	350	C=±0.2nH
BSPQ000402033N8B00	3.8	500 MHz,500 mV	14	8200	0.35	350	B=±0.1nH
BSPQ000402033N8C00	3.8	500 MHz,500 mV	14	8200	0.35	350	C=±0.2nH
BSPQ000402033N9B00	3.9	500 MHz,500 mV	14	7700	0.35	350	B=±0.1nH
BSPQ000402033N9C00	3.9	500 MHz,500 mV	14	7700	0.35	350	C=±0.2nH
BSPQ000402034N0B00	4	500 MHz,500 mV	14	6900	0.35	350	B=±0.1nH
BSPQ000402034N0C00	4	500 MHz,500 mV	14	6900	0.35	350	C=±0.2nH
BSPQ000402034N1B00	4.1	500 MHz,500 mV	14	6900	0.35	350	B=±0.1nH
BSPQ000402034N1C00	4.1	500 MHz,500 mV	14	6900	0.35	350	C=±0.2nH

NOTE: tolerance B=±0.1nH/ C=±0.2nH/ H=±3% / J=±5%

- 1.Operating temperature range - 5 5°C ~ 1 2 5°C(Including self - temperature rise)
- 2.Rate Current : Applied the current to coils, the temperature rise shall not be more than 25°C
- 3.Residual impedance of short chip : 0.11nH

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PART NUMBER: BSPQ00040203 Series

Electrical Characteristics

Part No.	Inductance (nH)	L,Q Test Freq.	Q Min.	SRF (MHz)Min.	RDC (Ω)Max.	Rated Current (mA)Max.	Tolerance
BSPQ000402034N2B00	4.2	500 MHz,500 mV	14	6900	0.35	350	B=±0.1nH
BSPQ000402034N2C00	4.2	500 MHz,500 mV	14	6900	0.35	350	C=±0.2nH
BSPQ000402034N3H00	4.3	500 MHz,500 mV	13	6900	0.35	350	H=±3%
BSPQ000402034N3J00	4.3	500 MHz,500 mV	13	6900	0.35	350	J=±5%
BSPQ000402034N7H00	4.7	500 MHz,500 mV	13	6700	0.35	350	H=±3%
BSPQ000402034N7J00	4.7	500 MHz,500 mV	13	6700	0.35	350	J=±5%
BSPQ000402035N1H00	5.1	500 MHz,500 mV	13	6600	0.35	350	H=±3%
BSPQ000402035N1J00	5.1	500 MHz,500 mV	13	6600	0.35	350	J=±5%
BSPQ000402035N6H00	5.6	500 MHz,500 mV	13	6100	0.4	300	H=±3%
BSPQ000402035N6J00	5.6	500 MHz,500 mV	13	6100	0.4	300	J=±5%
BSPQ000402036N2H00	6.2	500 MHz,500 mV	13	6000	0.4	300	H=±3%
BSPQ000402036N2J00	6.2	500 MHz,500 mV	13	6000	0.4	300	J=±5%
BSPQ000402036N8H00	6.8	500 MHz,500 mV	13	5700	0.4	300	H=±3%
BSPQ000402036N8J00	6.8	500 MHz,500 mV	13	5700	0.4	300	J=±5%
BSPQ000402037N5H00	7.5	500 MHz,500 mV	13	5600	0.5	300	H=±3%
BSPQ000402037N5J00	7.5	500 MHz,500 mV	13	5600	0.5	300	J=±5%
BSPQ000402038N2H00	8.2	500 MHz,500 mV	13	5100	0.5	300	H=±3%
BSPQ000402038N2J00	8.2	500 MHz,500 mV	13	5100	0.5	300	J=±5%
BSPQ000402039N1H00	9.1	500 MHz,500 mV	13	4900	0.5	300	H=±3%
BSPQ000402039N1J00	9.1	500 MHz,500 mV	13	4900	0.5	300	J=±5%
BSPQ0004020310NH00	10	500 MHz,500 mV	13	4900	0.6	250	H=±3%
BSPQ0004020310NJ00	10	500 MHz,500 mV	13	4900	0.6	250	J=±5%
BSPQ0004020311NH00	11	500 MHz,500 mV	13	4000	0.8	250	H=±3%
BSPQ0004020311NJ00	11	500 MHz,500 mV	13	4000	0.8	250	J=±5%
BSPQ0004020312NH00	12	500 MHz,500 mV	13	4000	0.82	230	H=±3%
BSPQ0004020312NJ00	12	500 MHz,500 mV	13	4000	0.82	230	J=±5%
BSPQ0004020313NH00	13	500 MHz,500 mV	13	4000	0.99	210	H=±3%
BSPQ0004020313NJ00	13	500 MHz,500 mV	13	4000	0.99	210	J=±5%
BSPQ0004020314NH00	14	500 MHz,500 mV	13	4000	1.26	190	H=±3%
BSPQ0004020314NJ00	14	500 MHz,500 mV	13	4000	1.26	190	J=±5%
BSPQ0004020315NH00	15	500 MHz,500 mV	13	4000	1.53	170	H=±3%
BSPQ0004020315NJ00	15	500 MHz,500 mV	13	4000	1.53	170	J=±5%

NOTE: tolerance B=±0.1nH/ C=±0.2nH/ H=±3% / J=±5%

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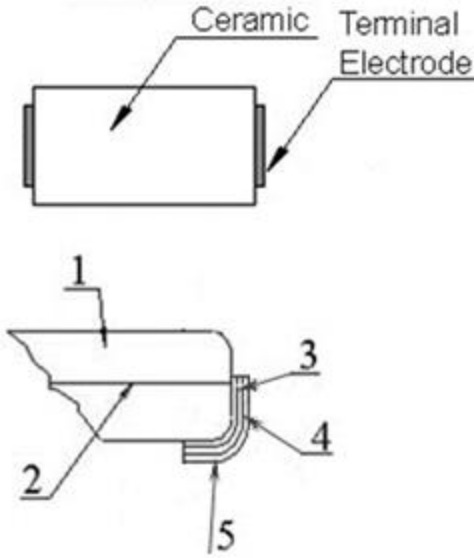
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**Construction & Material List**



No	Part	Material
1	Main Substance	Al <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub>
2	Silver electrode	Ag
3	Silver electrode	Ag
4	Ni plating	Ni
5	Sn plating	Sn

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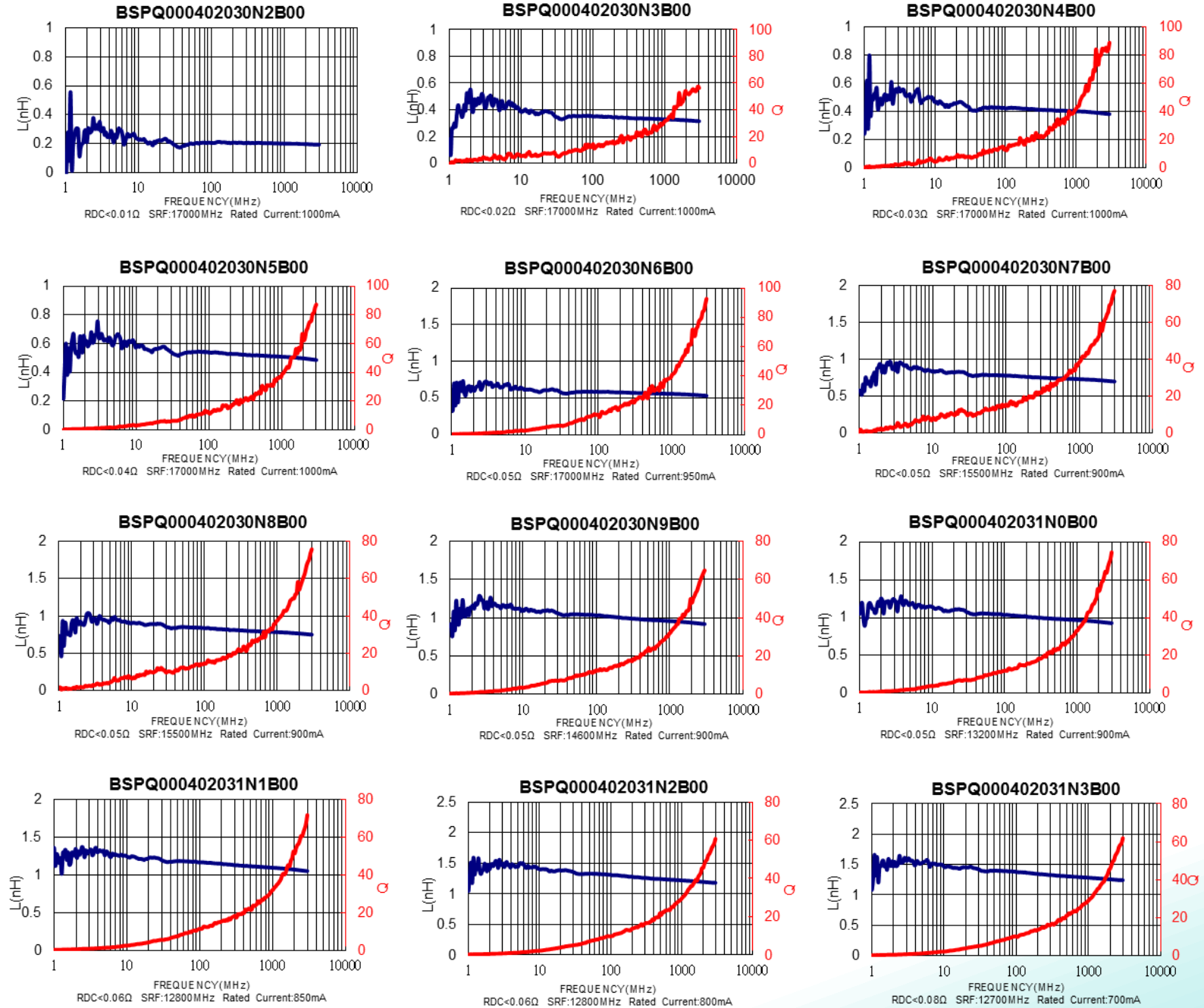
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Graph



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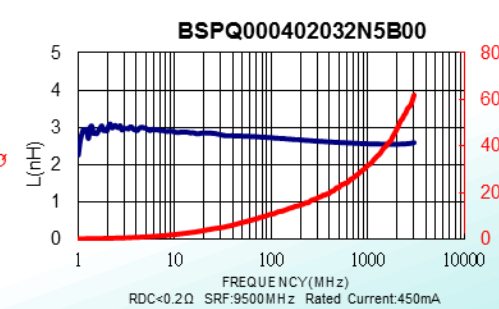
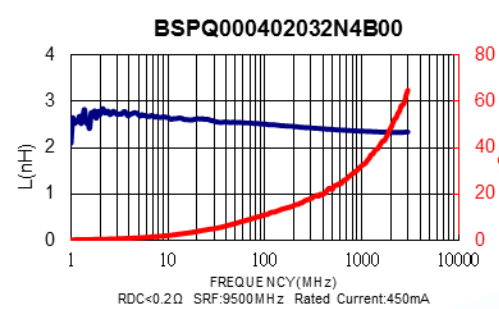
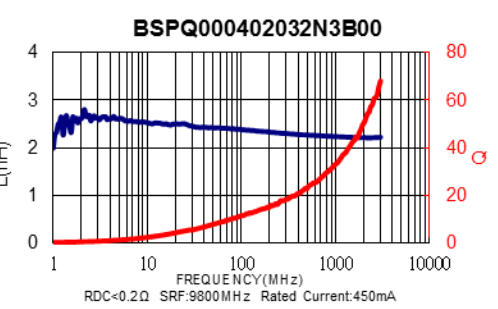
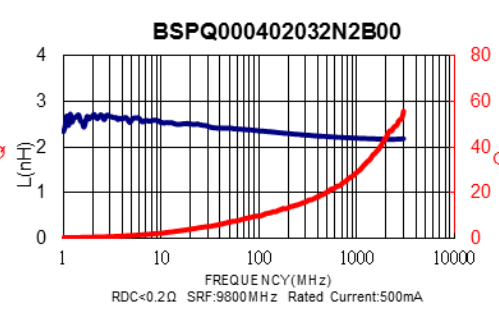
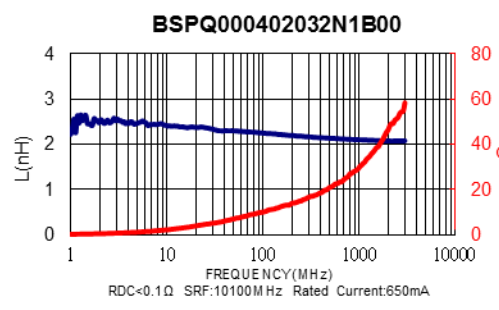
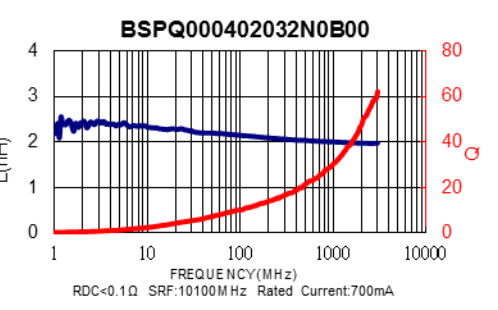
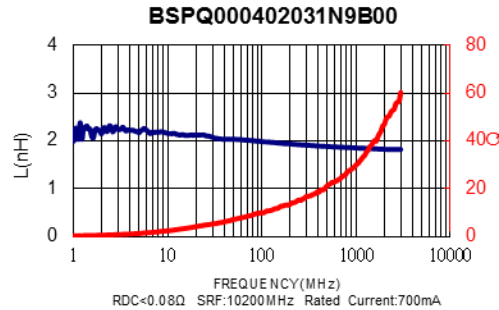
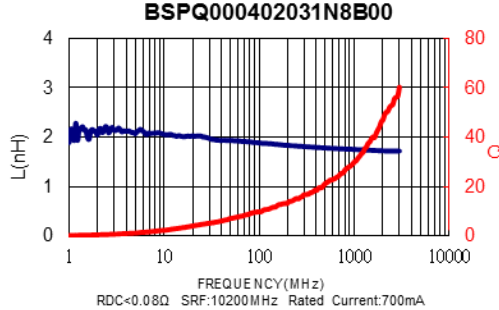
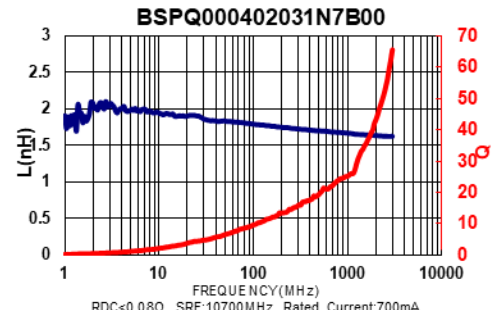
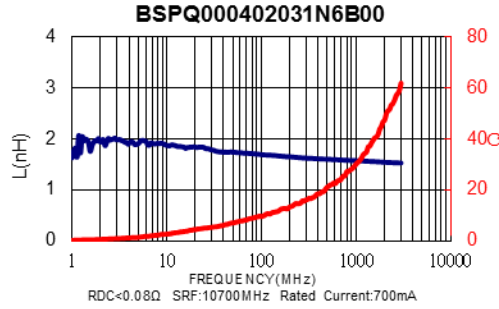
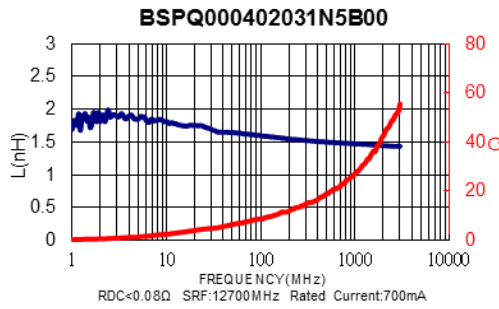
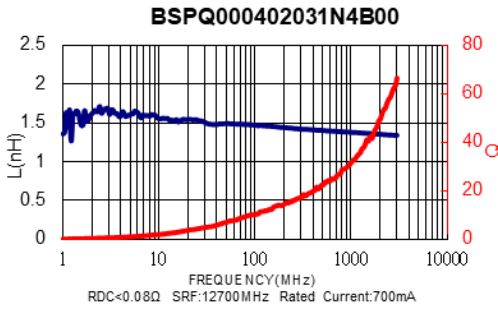




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Graph



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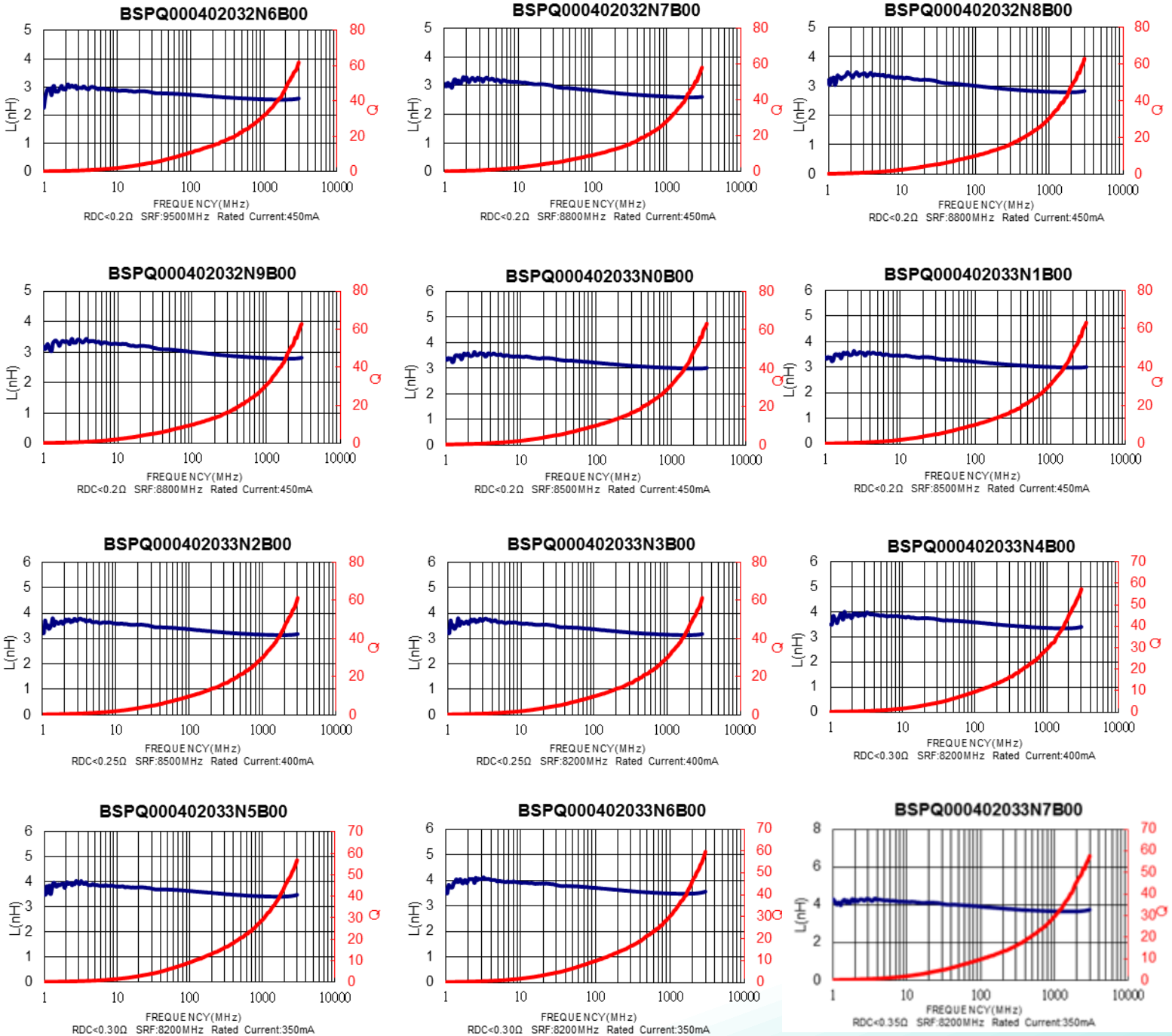
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Description: Film Type High Q RF chip inductors

PART NUMBER: BSPQ00040203 Series

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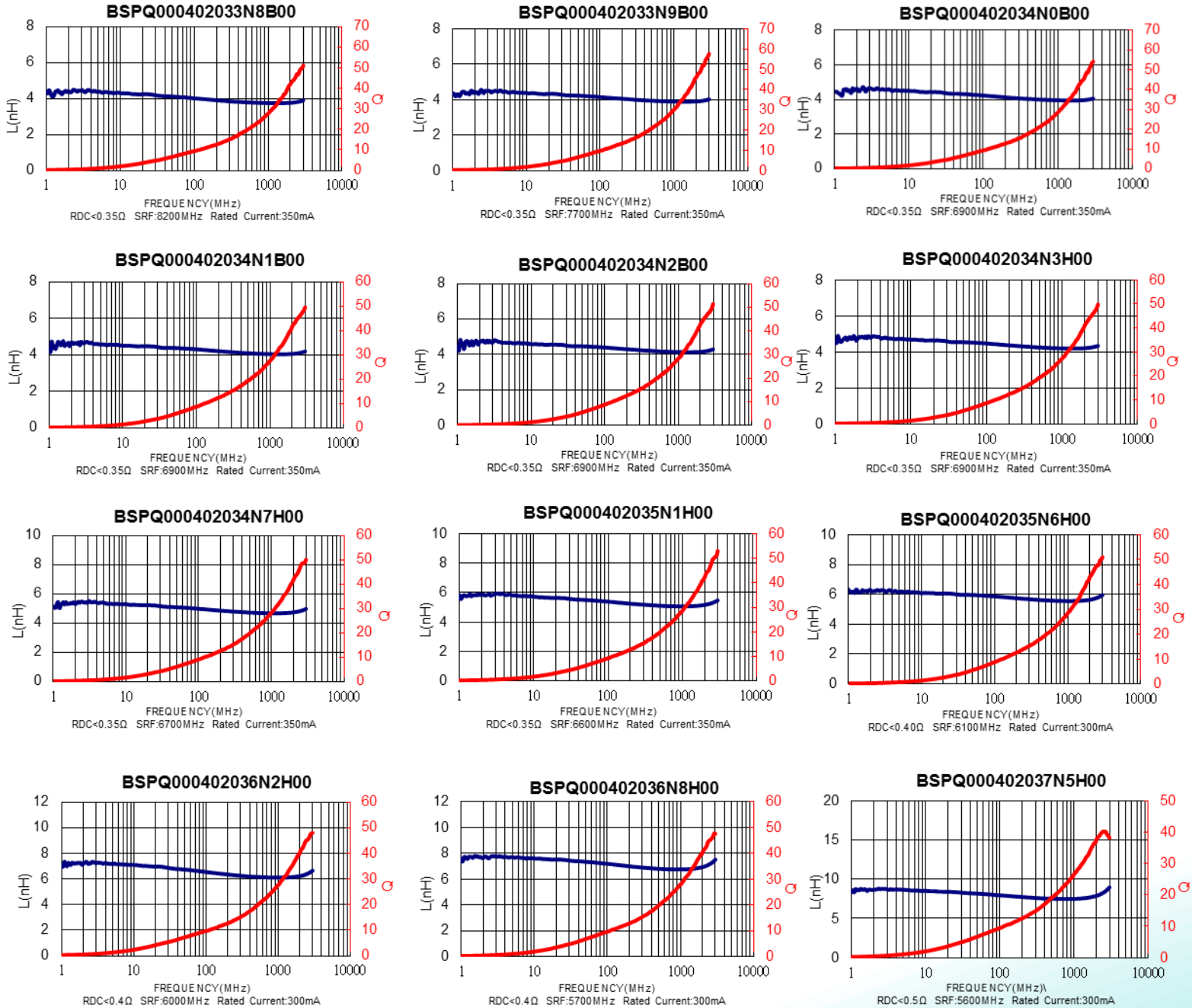
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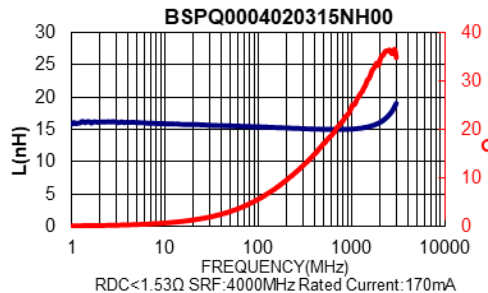
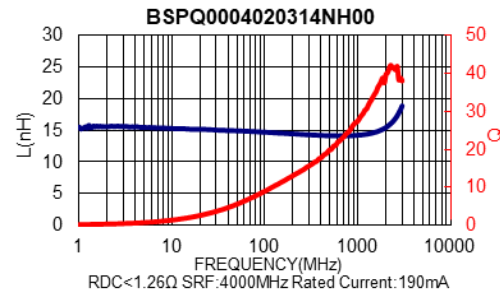
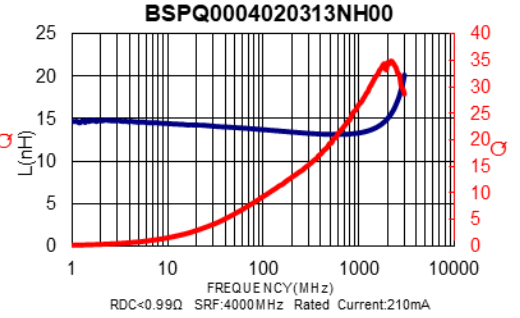
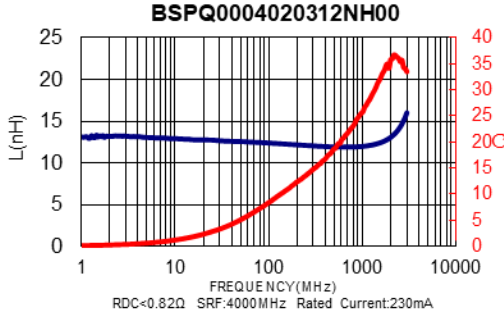
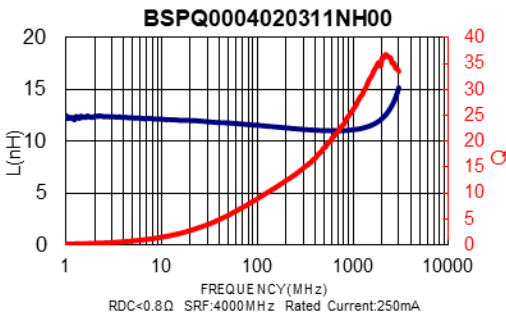
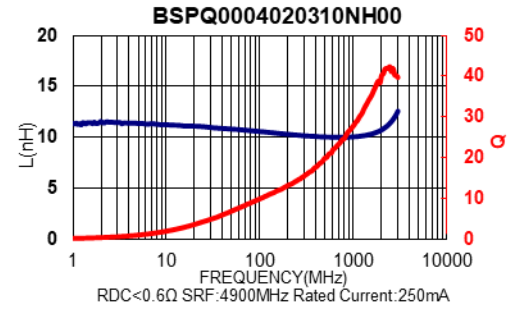
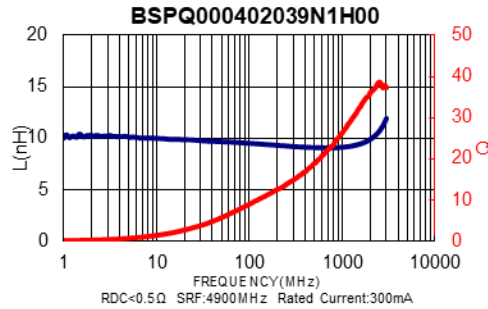
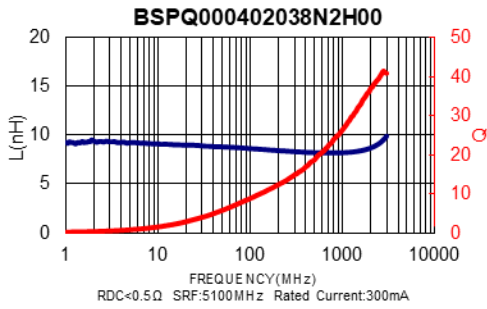
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**Description:** Film Type High Q RF chip inductors**PART NUMBER: BSPQ00040203 Series****REVISION HISTORY**

<u>Revision</u>	<u>Date</u>	<u>Description</u>
Version 1	Apr. 01, 2022	- New issue
Version 2	Apr. 28, 2022	- Added Inductance 0N3,5N6
Version 3	Aug.10, 2022	- Added Inductance 1N7,1N8,8N2~15N