



深圳市宏业兴电子有限公司
SHENZHEN HONGYEX ELECTRONICS CO.,LTD

Multilayer High Frequency Ceramic Chip Inductors

積層式高頻陶瓷晶片電感

MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBL S series for high frequency

HBL S 系列適用於高頻率產品

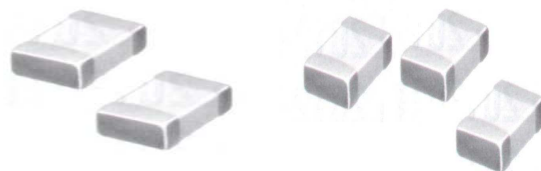
INTRODUCTION 產品介紹

Multilayer inductor HBL S series made of advanced ceramics and low resistance silver conductors provides excellent Q and SRF characteristics.

HBL S 積層式晶片電感系列是由瓷料和低阻抗的銀導體組成，提供優越之品質係數及共振頻率。

FEATURES 特色

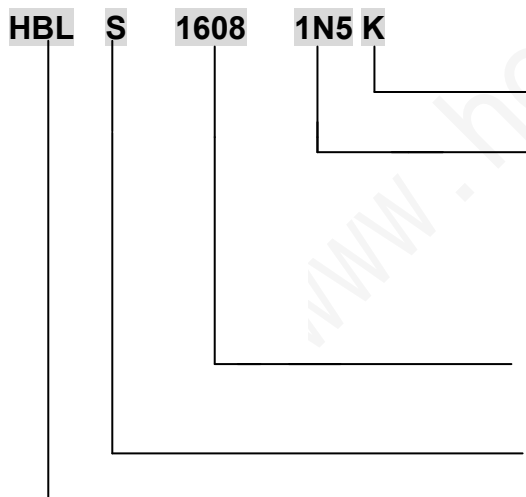
1. Supports operating frequency up to 10GHz.
操作頻率可達 10 GHz。
2. Provides high quality factor.
提供高的品質係數。
3. Monolithic structure for high reliability.
單石結構確保高可靠性。
4. Excellent solderability and high heat resistance for either flow or reflow soldering.
優良的焊錫性及耐熱性，適合 flow 及 reflow 兩種鐳錫方式。



APPLICATION 適用產品

1. RF circuit and module. 射頻電路及模組。
2. Tablet, notebook, desktop computers and peripheral equipments. 平板、筆記型、桌上型電腦及其週邊設備。
3. Blu-ray DVD recorder, DSC, DVC, LCD Television. 藍光錄放影機、數位相機、數位攝影機、液晶電視機。
4. Mobile phone, smart phone. 行動電話、智慧手機。

PART NUMBER SYSTEM 編碼系統



Inductance tolerance 電感值公差
S--±0.3nH D--±0.5nH J--±5% K--±10%

Inductance value code 電感值
Expressed in nH, 以 nH 表示

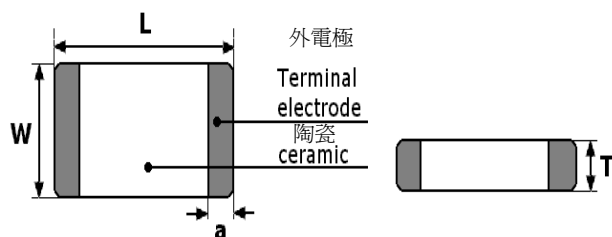
Example: 例如
1N0-----1.0 nH
1N5-----1.5 nH
R10-----100 nH

Size code 尺寸碼 Dimensions L×W, 尺寸 長×寬
1608 1.6×0.8(mm)

Lead Free 無鉛

Product series code 產品系列碼

SHAPES AND DIMENSIONS 形狀和尺寸



SHAPE 尺寸	L 長 mm	W 寬 mm	T 厚 mm	a 銀寬 mm
0603(0201)	0.6±0.03	0.3±0.03	0.3±0.03	0.1~0.2
1005(0402)	1.0±0.05	0.5±0.05	0.5±0.05	0.1~0.3
1608(0603)	1.6±0.15	0.8±0.15	0.8±0.15	0.2~0.6
2012(0805)	2.0±0.2	1.25±0.2	*	0.2~0.8

*Please refer to the detailed figures shown in the HBL S2012 series table
厚度請參考 HBL S2012 系列特性表

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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBLS series for high frequency

HBLS 系列適用於高頻率產品

Electrical characteristics 電氣特性



Shape(尺寸): 0603(0201)

Part Number 產品料號	Inductance 感值 (nH) Tolerance 公差	Q Min 品質 係數	Test Frequency (MHz) 測試頻率	Self-resonant Frequency (GHz) Min 共振頻率	DC Resistance (Ω) Max 直流電阻	Rated Current (mA)max 額定電流	Thickness (mm) 厚度
HBLS0603-1N0S	1.0±0.3nH	4	100	10	0.15	550	0.3±0.03
HBLS0603-1N2S	1.2±0.3nH	4	100	10	0.16	550	0.3±0.03
HBLS0603-1N5S	1.5±0.3nH	4.5	100	10	0.20	550	0.3±0.03
HBLS0603-1N8S	1.8±0.3nH	4.5	100	10	0.25	420	0.3±0.03
HBLS0603-2N2S	2.2±0.3nH	4.5	100	8.8	0.26	400	0.3±0.03
HBLS0603-2N7S	2.7±0.3nH	4.5	100	7.7	0.28	350	0.3±0.03
HBLS0603-3N3S	3.3±0.3nH	4.5	100	6.7	0.35	300	0.3±0.03
HBLS0603-3N9S	3.9±0.3nH	4.5	100	6.0	0.40	280	0.3±0.03
HBLS0603-4N7S	4.7±0.3nH	4.5	100	5.3	0.45	250	0.3±0.03
HBLS0603-5N1S	5.1±0.3nH	5	100	4.7	0.45	250	0.3±0.03
HBLS0603-5N6S	5.6±0.3nH	5	100	4.2	0.48	250	0.3±0.03
HBLS0603-6N8J	6.8±5%	5	100	3.5	0.55	250	0.3±0.03
HBLS0603-8N2J	8.2±5%	5	100	3.2	0.70	200	0.3±0.03
HBLS0603-10NJ	10±5%	5	100	2.8	0.85	180	0.3±0.03
HBLS0603-12NJ	12±5%	5	100	2.4	1.00	180	0.3±0.03
HBLS0603-15NJ	15±5%	5	100	2.2	1.30	160	0.3±0.03
HBLS0603-18NJ	18±5%	6	100	2.1	1.40	150	0.3±0.03
HBLS0603-22NJ	22±5%	6	100	1.8	1.50	140	0.3±0.03
HBLS0603-27NJ	27±5%	6	100	1.8	1.60	120	0.3±0.03
HBLS0603-33NJ	33±5%	6	100	1.7	2.20	80	0.3±0.03
HBLS0603-39NJ	39±5%	6	100	1.5	2.30	80	0.3±0.03
HBLS0603-47NJ	47±5%	6	100	1.3	2.60	80	0.3±0.03
HBLS0603-56NJ	56±5%	6	100	1.1	3.00	50	0.3±0.03
HBLS0603-68NJ	68±5%	6	100	1.1	3.20	50	0.3±0.03
HBLS0603-82NJ	82±5%	6	100	1.0	3.50	50	0.3±0.03
HBLS0603-R10J	100±5%	6	100	0.9	4.30	50	0.3±0.03

* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER

量測儀器：E4991A 阻抗分析儀

*Tolerance: S=±0.3nH, J=±5%, K=±10%

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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBLS series for high frequency

HBLS 系列適用於高頻率產品

Electrical characteristics 電氣特性



Shape(尺寸): 1005(0402)

Part Number 產品料號	Inductance 感值 (nH) Tolerance 公差	Q Min 品質 係數	Test Frequency (MHz) 測試頻率	Self-resonant Frequency (GHz) Min 共振頻率	DC Resistance (Ω) Max 直流電阻	Rated Current (mA) Max 額定電流	Thickness (mm) 厚度
HBLS1005-1N0S	1.0±0.3nH	8	100	10	0.08	300	0.5±0.05
HBLS1005-1N2S	1.2±0.3nH	8	100	10	0.09	300	0.5±0.05
HBLS1005-1N5S	1.5±0.3nH	8	100	6	0.10	300	0.5±0.05
HBLS1005-1N8S	1.8±0.3nH	8	100	6	0.12	300	0.5±0.05
HBLS1005-2N0S	2.0±0.3nH	8	100	6	0.12	300	0.5±0.05
HBLS1005-2N2S	2.2±0.3nH	8	100	6	0.13	300	0.5±0.05
HBLS1005-2N4S	2.4±0.3nH	8	100	6	0.13	300	0.5±0.05
HBLS1005-2N7S	2.7±0.3nH	8	100	6	0.13	300	0.5±0.05
HBLS1005-3N0S	3.0±0.3nH	8	100	6	0.16	300	0.5±0.05
HBLS1005-3N3S	3.3±0.3nH	8	100	6	0.16	300	0.5±0.05
HBLS1005-3N9S	3.9±0.3nH	8	100	4	0.21	300	0.5±0.05
HBLS1005-4N7S	4.7±0.3nH	8	100	4	0.21	300	0.5±0.05
HBLS1005-5N6S	5.6±0.3nH	8	100	4	0.23	300	0.5±0.05
HBLS1005-6N8J	6.8±5%	8	100	3.9	0.25	300	0.5±0.05
HBLS1005-8N2J	8.2±5%	8	100	3.6	0.28	300	0.5±0.05
HBLS1005-10NJ	10±5%	8	100	3.2	0.31	300	0.5±0.05
HBLS1005-12NJ	12±5%	8	100	2.7	0.40	300	0.5±0.05
HBLS1005-15NJ	15±5%	8	100	2.3	0.46	300	0.5±0.05
HBLS1005-18NJ	18±5%	8	100	2.1	0.55	300	0.5±0.05
HBLS1005-22NJ	22±5%	8	100	1.9	0.60	300	0.5±0.05
HBLS1005-27NJ	27±5%	8	100	1.6	0.70	300	0.5±0.05
HBLS1005-33NJ	33±5%	8	100	1.3	0.80	200	0.5±0.05
HBLS1005-39NJ	39±5%	8	100	1.2	0.90	200	0.5±0.05
HBLS1005-47NJ	47±5%	8	100	1.0	1.00	200	0.5±0.05
HBLS1005-56NJ	56±5%	8	100	0.75	1.00	200	0.5±0.05
HBLS1005-68NJ	68±5%	8	100	0.75	1.20	180	0.5±0.05
HBLS1005-82NJ	82±5%	8	100	0.60	1.30	150	0.5±0.05
HBLS1005-R10J	100±5%	8	100	0.60	1.50	150	0.5±0.05
HBLS1005-R12J	120±5%	8	100	0.60	1.60	150	0.5±0.05

* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER

量測儀器：E4991A 阻抗分析儀

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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBLS series for high frequency

HBLS 系列適用於高頻率產品

Electrical characteristics 電氣特性



Shape(尺寸): 1608(0603)

Part Number 產品料號	Inductance 感值 (nH) Tolerance 公差	Q Min 品質 係數	Test Frequency (MHz) 測試頻率	Self-resonant Frequency (GHz) Min 共振頻率	DC Resistance (Ω) Max 直流電阻	Rated Current (mA) Max 額定電流	Thickness (mm) 厚度
HBLS1608-1N0S	1.0±0.3nH	8	100	10	0.05	300	0.8±0.15
HBLS1608-1N2S	1.2±0.3nH	8	100	10	0.05	300	0.8±0.15
HBLS1608-1N5S	1.5±0.3nH	8	100	6.0	0.10	300	0.8±0.15
HBLS1608-1N8S	1.8±0.3nH	8	100	6.0	0.10	300	0.8±0.15
HBLS1608-2N2S	2.2±0.3nH	8	100	6.0	0.10	300	0.8±0.15
HBLS1608-2N7S	2.7±0.3nH	10	100	6.0	0.10	300	0.8±0.15
HBLS1608-3N3S	3.3±0.3nH	10	100	6.0	0.12	300	0.8±0.15
HBLS1608-3N9S	3.9±0.3nH	10	100	6.0	0.14	300	0.8±0.15
HBLS1608-4N7S	4.7±0.3nH	10	100	4.0	0.16	300	0.8±0.15
HBLS1608-5N6S	5.6±0.3nH	10	100	4.0	0.18	300	0.8±0.15
HBLS1608-6N8J	6.8±5%	10	100	4.0	0.22	300	0.8±0.15
HBLS1608-8N2J	8.2±5%	10	100	3.5	0.24	300	0.8±0.15
HBLS1608-10NJ	10±5%	12	100	3.4	0.26	300	0.8±0.15
HBLS1608-12NJ	12±5%	12	100	2.6	0.28	300	0.8±0.15
HBLS1608-15NJ	15±5%	12	100	2.3	0.32	300	0.8±0.15
HBLS1608-18NJ	18±5%	12	100	2.0	0.35	300	0.8±0.15
HBLS1608-22NJ	22±5%	12	100	1.6	0.40	300	0.8±0.15
HBLS1608-27NJ	27±5%	12	100	1.4	0.45	300	0.8±0.15
HBLS1608-33NJ	33±5%	12	100	1.2	0.55	300	0.8±0.15
HBLS1608-39NJ	39±5%	12	100	1.1	0.60	300	0.8±0.15
HBLS1608-47NJ	47±5%	12	100	0.9	0.70	300	0.8±0.15
HBLS1608-56NJ	56±5%	12	100	0.9	0.75	300	0.8±0.15
HBLS1608-68NJ	68±5%	12	100	0.7	0.85	300	0.8±0.15
HBLS1608-82NJ	82±5%	12	100	0.6	0.95	300	0.8±0.15
HBLS1608-R10J	100±5%	12	100	0.6	1.00	300	0.8±0.15
HBLS1608-R12J	120±5%	8	50	0.5	1.20	300	0.8±0.15
HBLS1608-R15J	150±5%	8	50	0.5	1.20	300	0.8±0.15
HBLS1608-R18J	180±5%	8	50	0.4	1.30	300	0.8±0.15
HBLS1608-R22J	220±5%	8	50	0.4	1.50	300	0.8±0.15

* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER

量測儀器：E4991A 阻抗分析儀

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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBL5 series for high frequency

HBL5 系列適用於高頻率產品

Electrical characteristics 電氣特性



Shape(尺寸): 2012(0805)

Part Number 產品料號	Inductance 感值 (nH) Tolerance 公差	Q Min 品質 係數	Test Frequency (MHz) 測試頻率	Self-resonant Frequency (GHz) Min 共振頻率	DC Resistance (Ω) Max 直流電阻	Rated Current (mA) Max 額定電流	Thickness (mm) 厚度
HBLS2012-1N0S	1.0±0.3nH	10	100	10	0.10	300	0.85±0.2
HBLS2012-1N2S	1.2±0.3nH	10	100	10	0.10	300	0.85±0.2
HBLS2012-1N5S	1.5±0.3nH	10	100	4.0	0.10	300	0.85±0.2
HBLS2012-1N8S	1.8±0.3nH	10	100	4.0	0.10	300	0.85±0.2
HBLS2012-2N2S	2.2±0.3nH	10	100	4.0	0.10	300	0.85±0.2
HBLS2012-2N7S	2.7±0.3nH	12	100	4.0	0.10	300	0.85±0.2
HBLS2012-3N3S	3.3±0.3nH	12	100	4.0	0.13	300	0.85±0.2
HBLS2012-3N9S	3.9±0.3nH	12	100	4.0	0.15	300	0.85±0.2
HBLS2012-4N7S	4.7±0.3nH	12	100	3.5	0.20	300	0.85±0.2
HBLS2012-5N6S	5.6±0.3nH	15	100	3.2	0.23	300	0.85±0.2
HBLS2012-6N8J	6.8±5%	15	100	2.8	0.25	300	0.85±0.2
HBLS2012-8N2J	8.2±5%	15	100	2.4	0.28	300	0.85±0.2
HBLS2012-10NJ	10±5%	15	100	2.1	0.30	300	0.85±0.2
HBLS2012-12NJ	12±5%	15	100	1.9	0.35	300	0.85±0.2
HBLS2012-15NJ	15±5%	15	100	1.6	0.40	300	0.85±0.2
HBLS2012-18NJ	18±5%	15	100	1.5	0.45	300	0.85±0.2
HBLS2012-22NJ	22±5%	18	100	1.4	0.50	300	0.85±0.2
HBLS2012-27NJ	27±5%	18	100	1.3	0.55	300	0.85±0.2
HBLS2012-33NJ	33±5%	18	100	1.2	0.60	300	0.85±0.2
HBLS2012-39NJ	39±5%	18	100	1.0	0.65	300	0.85±0.2
HBLS2012-47NJ	47±5%	18	100	0.9	0.70	300	0.85±0.2
HBLS2012-56NJ	56±5%	18	100	0.8	0.75	300	0.85±0.2
HBLS2012-68NJ	68±5%	18	100	0.7	0.80	300	0.85±0.2
HBLS2012-82NJ	82±5%	18	100	0.6	0.90	300	0.85±0.2
HBLS2012-R10J	100±5%	18	100	0.6	0.90	300	0.85±0.2
HBLS2012-R12J	120±5%	13	50	0.5	0.95	300	0.85±0.2
HBLS2012-R15J	150±5%	13	50	0.5	1.00	300	1.25±0.2
HBLS2012-R18J	180±5%	13	50	0.4	1.10	300	1.25±0.2
HBLS2012-R22J	220±5%	12	50	0.35	1.20	300	1.25±0.2
HBLS2012-R27J	270±5%	12	50	0.3	1.30	300	1.25±0.2
HBLS2012-R33J	330±5%	12	50	0.25	1.40	300	1.25±0.2
HBLS2012-R39J	390±5%	10	50	0.25	1.40	300	1.25±0.2
HBLS2012-R47J RDC4.0	470±5%	10	50	0.20	4.00	200	1.25±0.2
HBLS2012-R56J	560±5%	10	25	0.18	5.00	50	1.25±0.2
HBLS2012-R68J	680±5%	10	25	0.16	5.50	50	1.25±0.2

* TEST EQUIPMENT: E4991A IMPEDANCE ANALYZER 量測儀器：E4991A 阻抗分析儀

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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBSL series for high frequency
Electrical characteristics 電氣特性

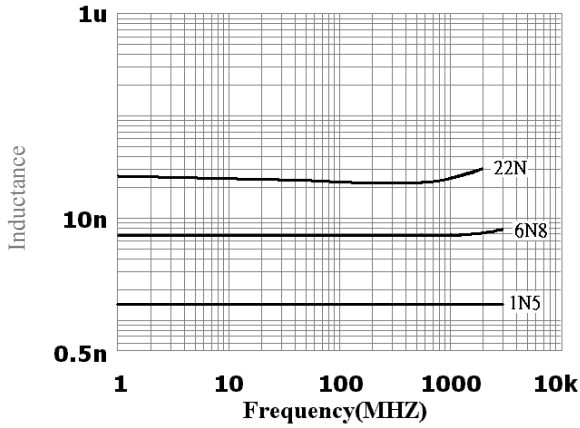
HBSL 列適用於高頻率產品



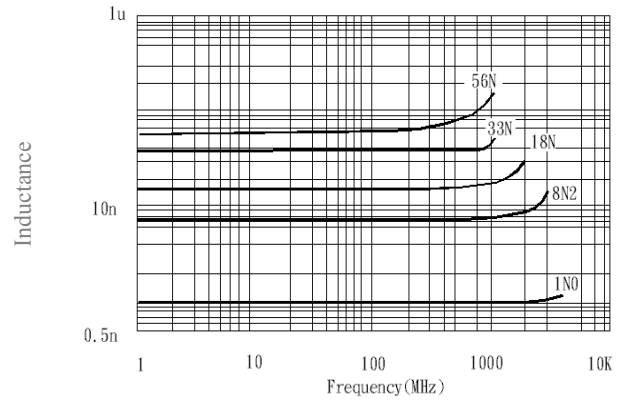
Shape(尺寸): 0603(0201)

Shape(尺寸): 1005(0402)

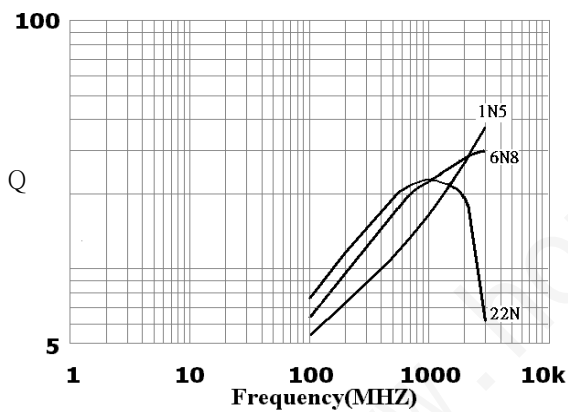
INDUCTANCE vs. FREQUENCY



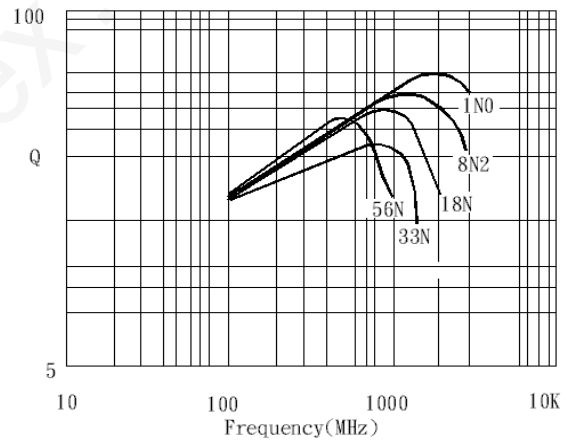
INDUCTANCE vs. FREQUENCY



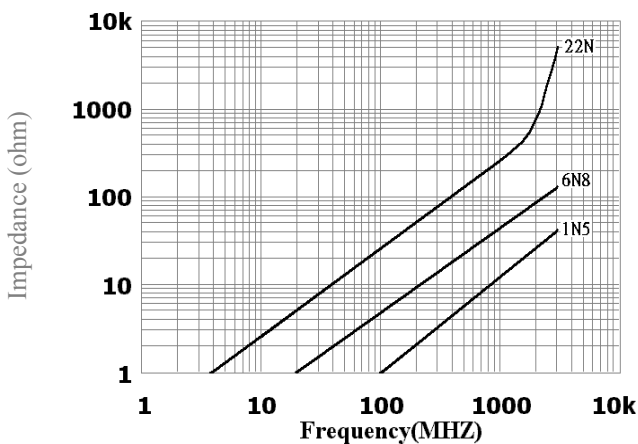
Q vs. FREQUENCY



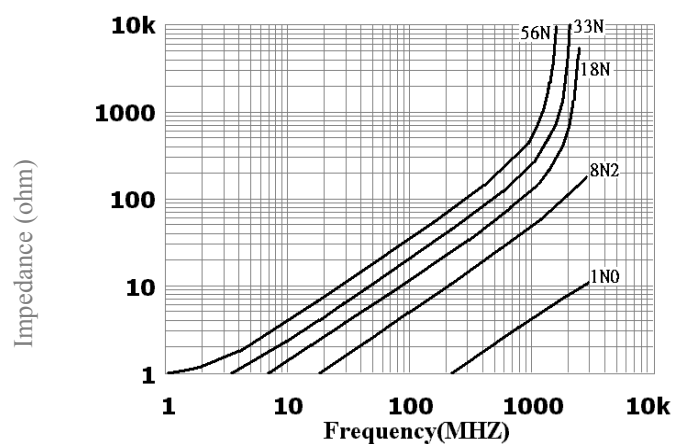
Q vs. FREQUENCY



IMPEDANCE vs. FREQUENCY



IMPEDANCE vs. FREQUENCY



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MULTILAYER CERAMIC CHIP INDUCTORS 積層式陶瓷晶片電感

HBSL series for high frequency

HBSL 列適用於高頻率產品

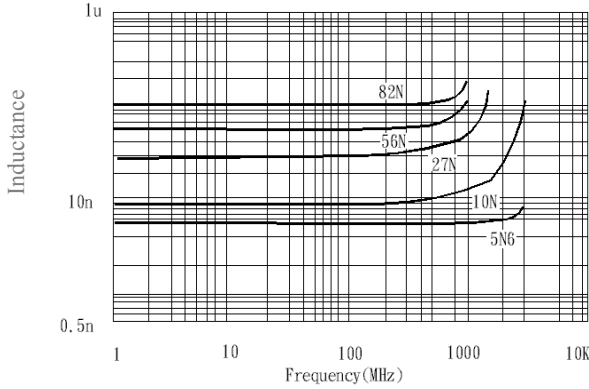
Electrical characteristics 電氣特性



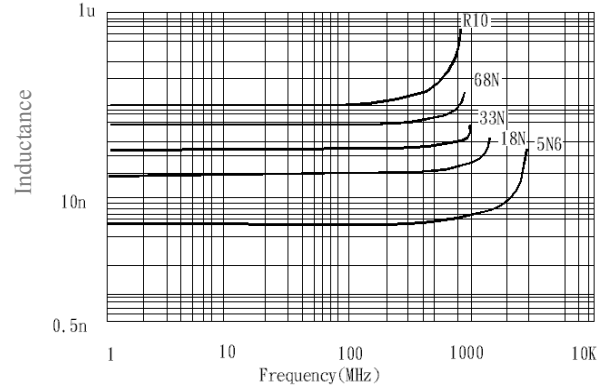
Shape(尺寸): 1608(0603)

Shape(尺寸): 2012(0805)

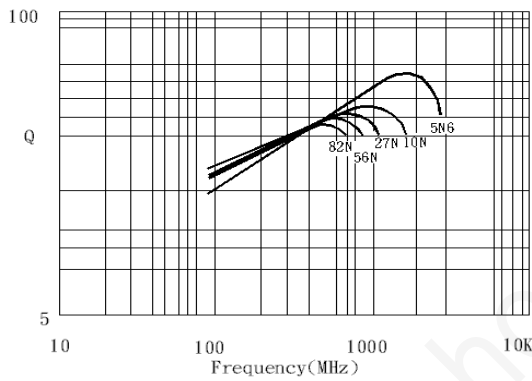
INDUCTANCE vs. FREQUENCY



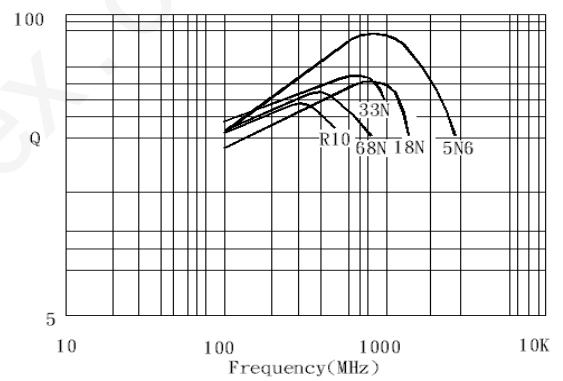
INDUCTANCE vs. FREQUENCY



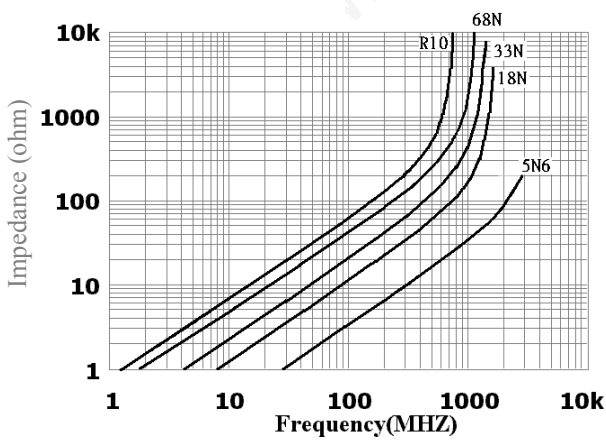
Q vs. FREQUENCY



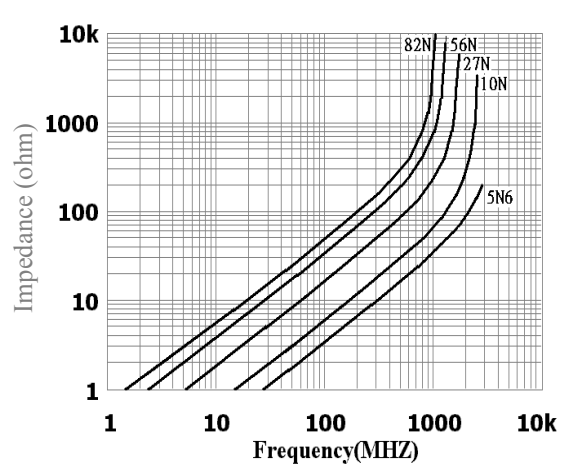
Q vs. FREQUENCY



IMPEDANCE vs. FREQUENCY



IMPEDANCE vs. FREQUENCY



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