



### Features

- ◆ Monolithic structure for high reliability
- ◆ Excellent solderability and high heat resistance
- ◆ No cross coupling due to magnetic shield
- ◆ High DC bias current due to developed material
- ◆ Low DC resistance

### Applications

- ◆ Choke circuits in DC power line of consumer electronics such as personal computers, mobile phones, digital cameras, digital video cameras, and music players

### Description Of Part Name

**HPCL** = **C** **S** **1608** **T** **1R0** **M** **F** **XX**  
 A B C D E F G H I

A

Type	
HPCL	Chip Inductor for Choke

B

Material code
C=Ceramic

C

Feature code	
S	Standard
H	Ir Improved

D

External Dimensions (L×W)	
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.25

E

Packing	
T	Tape & Reel

F

Nominal Inductance	
Example	Nominal Value
1R0	1.0μH
※R=Point	

G

Inductance Tolerance	
M	±20%
N	±30%

H

Hazardous Substance Free Products
F

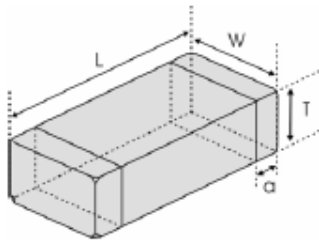
I

Internal code
XX

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**SHAPE AND DIMENSIONS**



Unit: mm [inch]

Type	L	W	T	a
HPCL-CS1608 [0603]	1.6±0.15 [.063±006]	0.8±0.15 [.031±006]	0.8±0.15 [.031±006]	0.3±0.2 [.012±008]
HPCL-CS2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±008]	0.85±0.2 [.033±008]	0.5±0.3 [.020±012]
			1.25±0.2 [.049±008]	

**SPECIFICATIONS**

**HPCL-CS1608TYPE**

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	I <sub>r</sub> *	T
HPCL-CS1608TR10□FXX	0.1	1	240	0.14±30%	700	0.8±0.15 [.031±006]
HPCL-CS1608TR22□FXX	0.22	1	150	0.27±30%	550	
HPCL-CS1608TR47□FXX	0.47	1	105	0.42±30%	400	
HPCL-CS1608T1R0□FXX	1.0	1	75	0.20±30%	190	
HPCL-CS1608T2R2□FXX	2.2	1	50	0.40±30%	140	
HPCL-CS1608T4R7□FXX	4.7	1	35	0.60±30%	100	
HPCL-CS1608T100□FXX	10	1	20	0.90±30%	50	

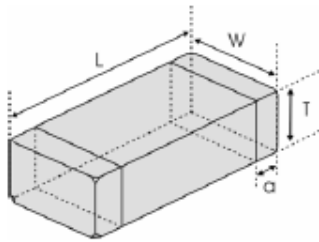
※□: Please specify the inductance tolerance code (M=±20%, N=±30%);

※□: The rated current is the value of DC current at which the inductance value is dropped within 50% with the application of DC bias.

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**SHAPE AND DIMENSIONS**



Unit: mm [inch]

Type	L	W	T	a
HPCL-CS1608 [0603]	1.6±0.15 [.063±006]	0.8±0.15 [.031±006]	0.8±0.15 [.031±006]	0.3±0.2 [.012±008]
HPCL-CS2012 [0805]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±008]	0.85±0.2 [.033±008]	0.5±0.3 [.020±012]
			1.25±0.2 [.049±008]	

**SPECIFICATIONS**

HPCL-CS2012 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Max. Rated Current	Thickness
Units	μH	MHz	MHz	Ω	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	I <sub>r</sub> *	T
HPCL-CS2012TR10□FXX	0.1	1	235	0.07±30%	1000	0.85±0.2 [.033±008]
HPCL-CS2012TR22□FXX	0.22	1	170	0.13±30%	800	
HPCL-CS2012TR47□FXX	0.47	1	125	0.18±30%	550	
HPCL-CS2012T1R0□FXX	1.0	1	75	0.20±30%	300	
HPCL-CS2012T2R2□FXX	2.2	1	50	0.28±30%	220	
HPCL-CS2012T4R7□FXX	4.7	1	25	0.30±30%	180	
HPCL-CS2012T100□FXX	10	1	15	0.50±30%	60	1.25±0.2 [.049±008]
HPCL-CH2012T100□FXX	10	1	20	0.50±30%	100	

※□: Please specify the inductance tolerance code (M=±20%, N=±30%);

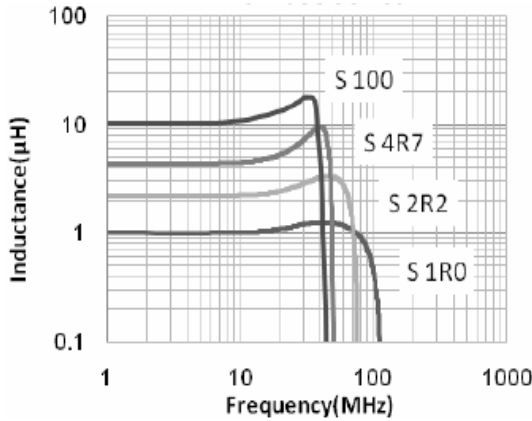
※□: The rated current is the value of DC current at which the inductance value is dropped within 50% with the application of DC bias.

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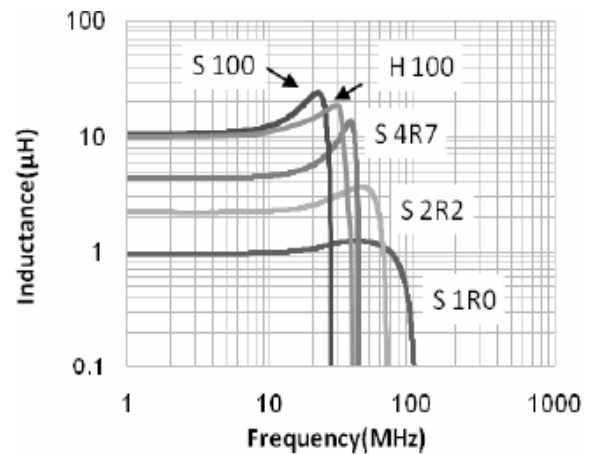


**TYPICAL ELECTRICAL CHARACTERISTICS**

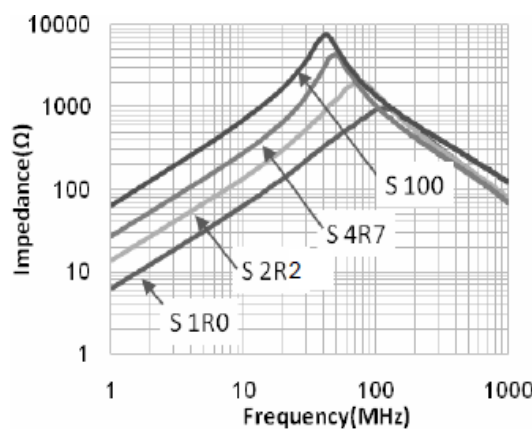
Inductance vs. Frequency Characteristics  
HPCL-CS1608 Series



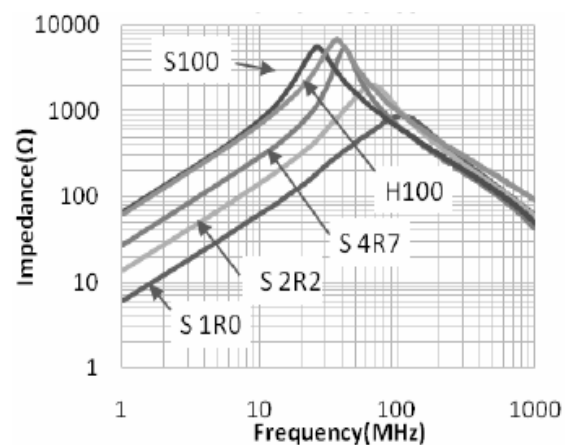
HPCL-CS2012 Series



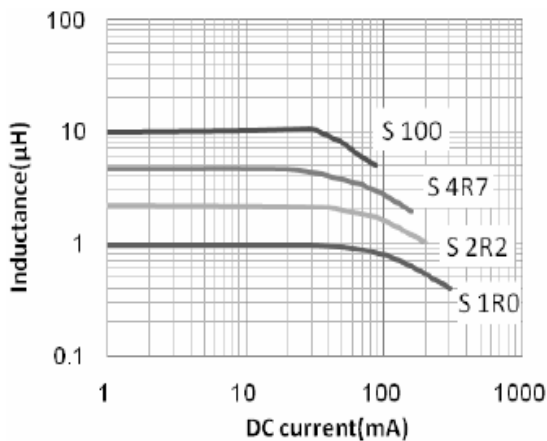
Inductance vs. Frequency Characteristics  
HPCL-CS1608 Series



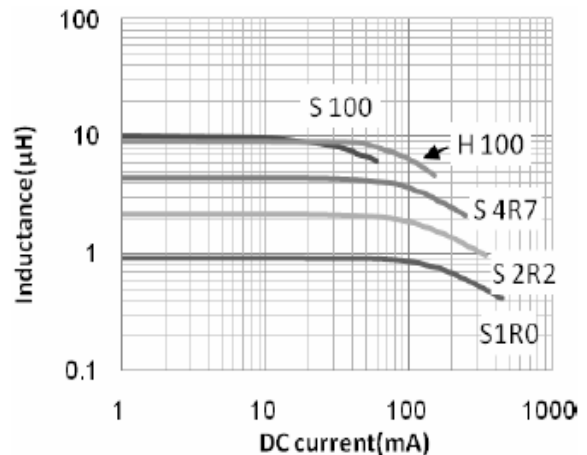
HPCL-CS2012 Series



Inductance vs. DC Current Characteristics  
HPCL-CS1608 Series



HPCL-CS2012 Series



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