

### Features:

- High current, low DCR, high efficiency.
- Very low acoustic noise and very low leakage flux noise.
- Shielded construction reduces EMI
- Low profile, high current power supplies
- Soft saturation.
- AEC-Q200 Grade 1 qualified (-40°C to +125°C ambient)

### Applications:

- Motor control
- DC/DC converters in distributed power systems
- DC/DC converter for Field programmable gate Array
- Battery powered device

### Parts code:

**ECS-HCMPI**

Type

**0502Q**

Dimension

**1R2**

Inductance code

**M**

Tolerance: M : ± 20%

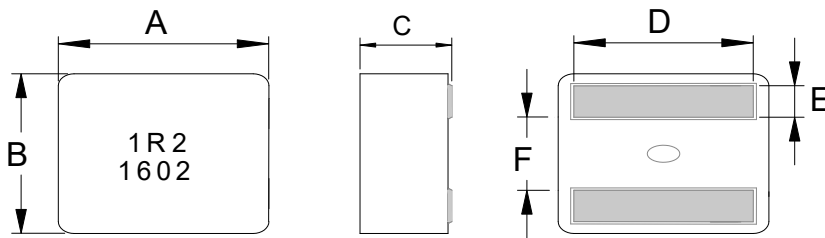
**D**

Date Code

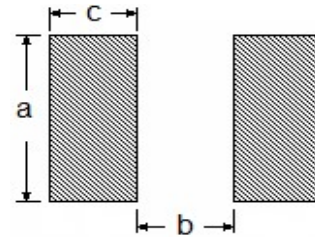
N : ± 30%

PS: Marking: Black.2R2 and 1602(16 YY, 02 WW, follow production date)

### Outline Dimension:



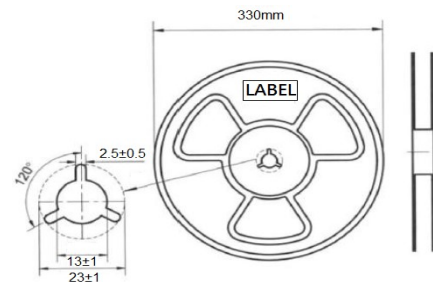
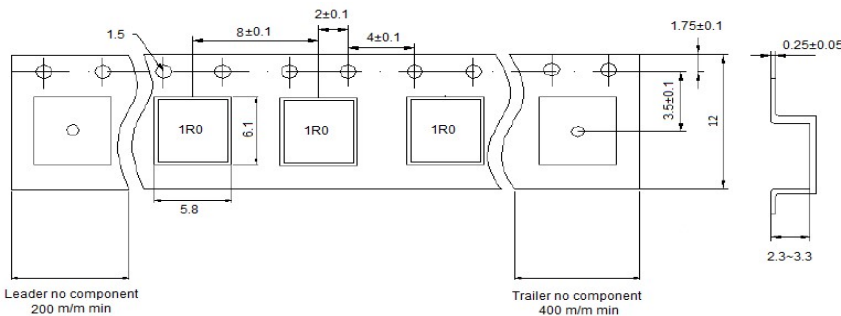
### Recommended Land Pattern:



TYPE	A	B	C	D	E	F
ECS-HCMPI-0502Q	5.5±0.2	5.3±0.2	1.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25
ECS-HCMPI-0503Q	5.5±0.2	5.3±0.2	2.9±0.2	4.3±0.3	1.1±0.2	2.3±0.25

### Dimensions in mm

a	b	c
4.7 Typ	2.0 Typ	1.25 Typ
4.7 Typ	2.0 Typ	1.25 Typ



### Package: Q'TY / Reel

ECS-HCMPI-0502Q--3K/pcs

ECS-HCMPI-0503Q--2K/pcs



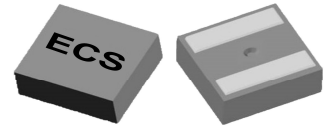
Phone: 913-782-7787

www.ecsxtal.com

Fax: 913-782-6991

email: sales@ecsxtal.com

# Hi-Current Power Inductor ECS-HCMPI-0502Q



5.5x5.3x1.9

## ■ Specifications

ECS-HCMPI-0502Q						
P/N	L	DCR (mΩ)	Isat (A)		I <sub>rms</sub> (A)	
	( μH )	Max	Typ.	Max.	20°C Rise	40°C Rise
ECS-HCMPI-0502Q-R15M	0.15	4.6	30.0	27.0	13.9	18.8
ECS-HCMPI-0502Q-R33M	0.33	7.0	26.0	24.0	10.5	14.4
ECS-HCMPI-0502Q-R47M	0.47	8.05	22.0	20.0	10.1	14.1
ECS-HCMPI-0502Q-R56M	0.56	9.54	19.0	16.0	9.9	13.9
ECS-HCMPI-0502Q-R68M	0.68	10.2	16.0	14.0	9.6	13.4
ECS-HCMPI-0502Q-R80M	0.80	11.8	15.5	13.5	9.4	13.0
ECS-HCMPI-0502Q-R82M	0.82	12.7	15.0	13.0	8.5	12.0
ECS-HCMPI-0502Q-1R0M	1.00	13.8	14.5	12.8	7.5	10.5
ECS-HCMPI-0502Q-1R2M	1.20	16.3	14.0	12.2	6.8	9.4
ECS-HCMPI-0502Q-1R5M	1.50	18.7	13.3	11.7	6.4	8.8

■ Notes: Tolerance: M (± 20%) , N (± 30%)

■ Test Frequency: 100 KHz / 0.1V

Isat: Based on Inductance decrease 30%

I<sub>rms</sub>: Based on Temperature increase 40°C

Operating temperature range: -40°C ~ +125°C

Storage Temp: -40°C ~ +125°C



**ECS Inc.**  
**International**

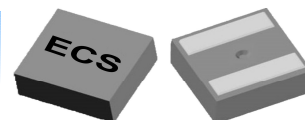
Phone: 913-782-7787

[www.ecsxtal.com](http://www.ecsxtal.com)

Fax: 913-782-6991

email: [sales@ecsxtal.com](mailto:sales@ecsxtal.com)

# Hi-Current Power Inductor ECS-HCMPI-0503Q



5.5x5.3x2.9

## ■ Specifications

ECS-HCMPI-0503Q						
P/N	L	DCR (mΩ)	Isat (A)		Irms (A)	
	( uH )	Max	Typ.	Max.	20°C Rise	40°C Rise
ECS-HCMPI-0503Q-R15M	0.15	2.31	36.0	32.5	14.3	22.2
ECS-HCMPI-0503Q-R16M	0.16	2.33	35.0	32.0	14.2	22.2
ECS-HCMPI-0503Q-R33M	0.33	3.52	28.0	26.0	13.8	19.2
ECS-HCMPI-0503Q-R56M	0.56	4.52	22.2	20.2	13.6	17.7
ECS-HCMPI-0503Q-R60M	0.60	4.52	22.0	20.0	13.6	17.7
ECS-HCMPI-0503Q-R80M	0.80	5.65	20.0	18.0	10.1	13.1
ECS-HCMPI-0503Q-R82M	0.82	5.78	19.7	17.6	9.9	12.9
ECS-HCMPI-0503Q-1R0M	1.00	7.60	16.5	14.3	9.0	12.2
ECS-HCMPI-0503Q-1R2M	1.20	9.70	15.0	13.5	8.5	11.0
ECS-HCMPI-0503Q-1R5M	1.50	11.20	14.0	12.5	8.0	10.5
ECS-HCMPI-0503Q-1R8M	1.80	12.70	12.3	11.3	7.6	10.1
ECS-HCMPI-0503Q-2R2M	2.20	14.50	10.0	9.0	7.2	9.7
ECS-HCMPI-0503Q-3R3M	3.30	23.10	9.5	8.7	5.9	8.1
ECS-HCMPI-0503Q-4R7M	4.70	36.30	8.2	7.0	4.3	5.9

■ Notes: Tolerance: M ( $\pm 20\%$ ), N ( $\pm 30\%$ )

■ Test Frequency: 100 KHz / 0.1V

Isat: Based on Inductance decrease 30%

Irms: Based on Temperature increase 40°C

Operating temperature range: -40°C ~ +125°C

Storage Temp: -40°C ~ +125°C



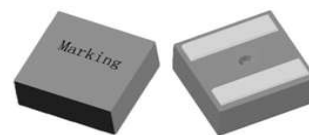
**ECS Inc.**  
**International**

Phone: 913-782-7787

www.ecsxtal.com

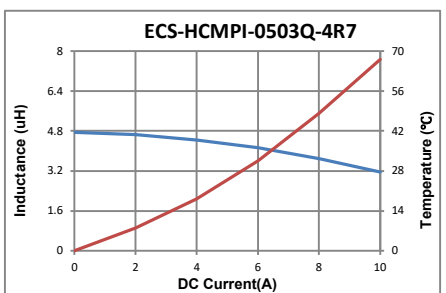
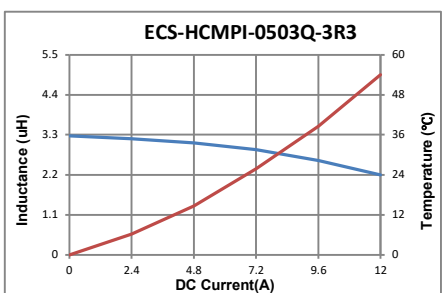
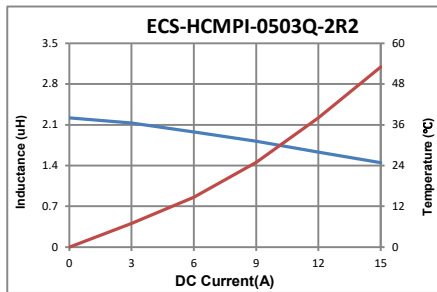
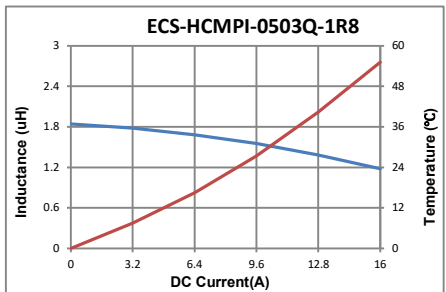
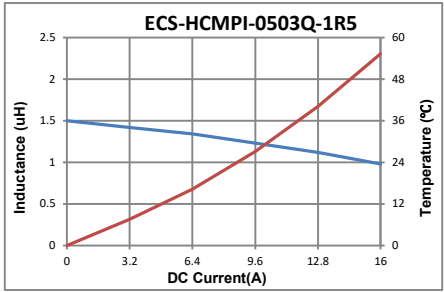
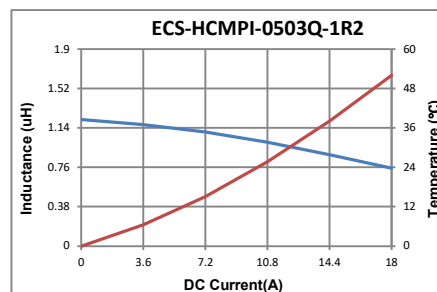
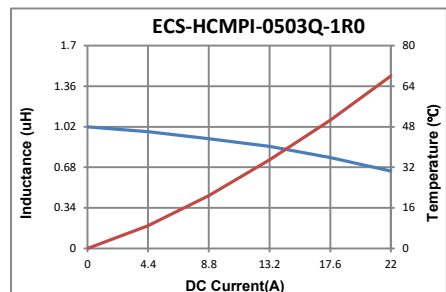
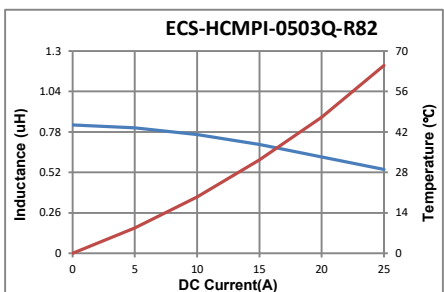
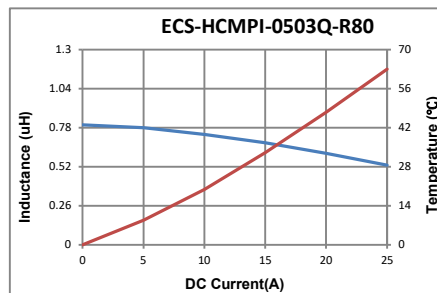
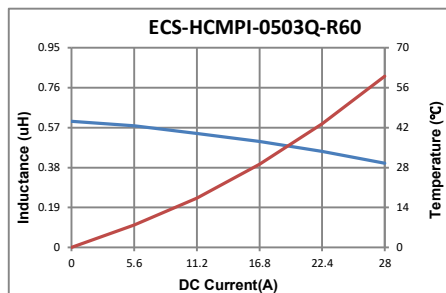
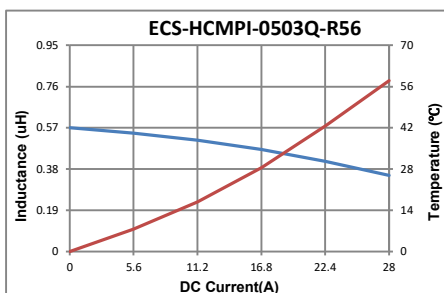
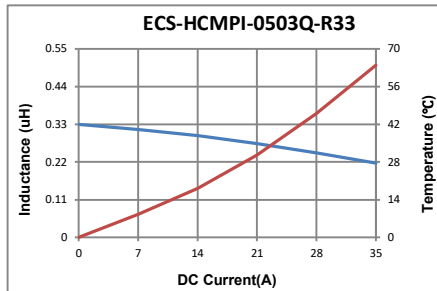
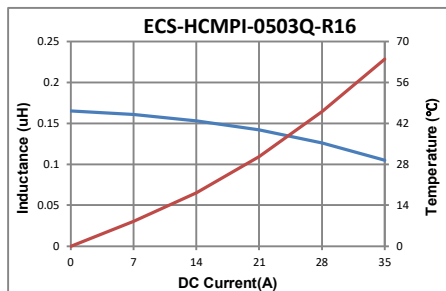
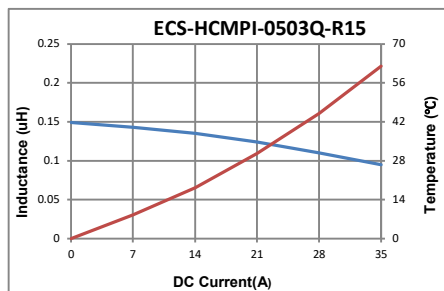
Fax: 913-782-6991

email: sales@ecsxtal.com



5.5x5.3x2.9

PERFORMANCE CURVES



ECS Inc.  
International

Phone: 913-782-7787

Fax: 913-782-6991

www.ecsxtal.com

email: sales@ecsxtal.com

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