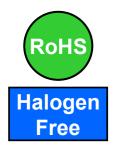
SMD Power Inductor CDH53

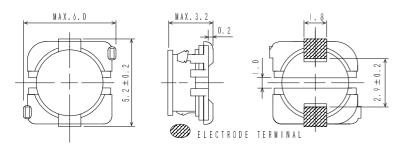




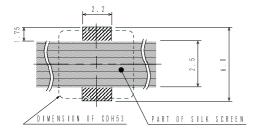


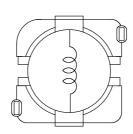


Dimension - [mm]



Land pattern and Schematics - [mm]





Description

- Ferrite drum core construction.
- Magnetically unshielded.
- L × W × H: 6.0 × 5.4 × 3.2 mm Max.
- Product weight: 0.18g(Ref.)
- Moisture Sensitivity Level: 1
- RoHS compliance.
- Halogen Free available.

Environmental Data

- Operating temperature range: -40°C ~+100°C (including coil's self temperature rise)
- Storage temperature range: -40°C~+100°C
- Solder reflow temperature: 260 °C peak.

Packaging

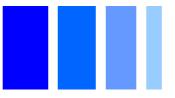
- · Carrier tape and reel packaging.
- 13"diameter reel
- 1500pcs per reel

Applications

 Ideally used in PDA,DVD,HDD, DVC, Game machine, Notebook PC, etc as DC-DC converter

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SMD Power Inductor CDH53





Electrical Characteristics

Part Name	Stamp	Inductance (μH) [within]※1	D.C.R. (Ω) Max. (Typ.) (at 20℃)	Rated Current (A) ※2
CDH53NP-2R2MC	2R2	2.2±20%	66m (51m)	2.03
CDH53NP-3R3MC	3R3	3.3±20%	88m (68m)	1.88
CDH53NP-4R7MC	4R7	4.7±20%	96m (74m)	1.68
CDH53NP-100LC	100	10±15%	0.16(0.13)	1.23
CDH53NP-120LC	120	12±15%	0.18(0.14)	1.12
CDH53NP-150KC	150	15±10%	0.25(0.20)	1.00
CDH53NP-180KC	180	18±10%	0.28(0.21)	0.88
CDH53NP-220KC	220	22±10%	0.39(0.30)	0.80
CDH53NP-270KC	270	27 ± 10%	0.42(0.32)	0.72
CDH53NP-330KC	330	33±10%	0.49(0.38)	0.67
CDH53NP-390KC	390	39±10%	0.55(0.43)	0.64
CDH53NP-470KC	470	47 ± 10%	0.77(0.59)	0.53
CDH53NP-560KC	560	56±10%	0.87(0.67)	0.50
CDH53NP-680JC	680	68±5%	1.21(0.96)	0.45
CDH53NP-820JC	820	82±5%	1.34(1.07)	0.39
CDH53NP-101JC	101	100±5%	1.57(1.25)	0.37
CDH53NP-121JC	121	120±5%	1.80(1.44)	0.34
CDH53NP-151JC	151	150±5%	2.40(1.92)	0.31
CDH53NP-181JC	181	180±5%	2.66(2.13)	0.30
CDH53NP-221JC	221	220±5%	3.73(2.99)	0.26

^{%1.} Inductance measuring frequency: 2.2 μ H \sim 4.7 μ H $\,$ at 7.96 MHz; 10 μ H $\,\sim$ 220 μ H $\,$ at 1kHz.

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[%]2. Rated current: The DC current at which the inductance decreases to 90% of it's initial value or when \triangle t=40 $^{\circ}$ C, whichever is lower (Ta=20 $^{\circ}$ C).

SMD Power Inductor CDH53

DC (A)





DC (A)

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Saturation Current & Temperature Rise Graph - L (20°C) — L (100°C) L (μ H) 1. CDH53NP-2R2MC L (μ H) 3. CDH53NP-4R7MC L (μ H)². CDH53NP-3R3MC $\triangle T (\mathcal{C})$ $\triangle T$ (°C) $\triangle T (^{\circ}C)$ 3.0 60 4.8 60 6 60 2.5 50 4.0 50 5 50 3. 2 40 2.0 40 40 4 30 2.4 30 3 30 1.5 1.0 20 20 2 1.6 20 0.5 0.8 10 10 10 1 0 0.0 0.0 0.0 0.6 1.2 1.8 2 DC (A) 1. 0 1. 5 DC (A) DC (A) 2.4 3.0 3.6 3.2 2.0 2.5 3.0 L (μH)^{4.} CDH53NP-100LC L (μ H) 5. CDH53NP-120LC $L (\mu H)$ 6. CDH53NP-150KC $\triangle \mathsf{T}$ (°C) △T (°C) $\triangle T$ (°C) 18 12 60 60 18 60 15 50 10 50 15 50 8 40 12 12 40 40 9 30 9 30 6 30 20 20 4 6 6 20 2 10 3 10 3 10 0 0 0 0 0 0.0 0.4 0.8 1.2 1.6 2.0 $0. \ 0 \ \ 0.3 \ \ 0.6 \ \ 0.9 \ \ 1.2 \ \ 1.5 \ \ 1.8$ 0.0 0.4 0.8 1.2 1.6 DC (A) DC (A) DC (A) 7. CDH53NP-180KC L (μ H) 8. CDH53NP-220KC 9. CDH53NP-270KC △T (°C) △T (°C) $\triangle T$ (°C) 24 60 24 60 60 50 20 20 50 25 50 16 40 16 40 20 40 12 30 12 30 15 30 8 20 8 20 10 20 5 10 4 10 4 10 Λ Λ 0 0 0 0.9 0.0 0.2 0.4 0.6 0.8 1.0 1.2 0.0 0.4 0.8 1.2 1.6 0.0 0.3 0.6 1.2 1.5 DC (A) DC (A) DC (A) L (μH) 10. CDH53NP-330KC L (μ H) 11. CDH53NP-390KC L (μH) 12. CDH53NP-470KC $\triangle T$ (°C) $\triangle T$ (°C) $\triangle T (\mathcal{C})$ 36 60 48 60 60 60 50 50 30 50 40 50 24 40 32 40 40 40 18 30 24 30 30 30 12 2.0 20 16 20 20 6 10 8 10 10 10 0 0 0 n 0 Ω 0.0 0.2 0.4 0.6 0.8 1.0 1.2 0.0 0.2 0.4 0.6 0.8 1.0 0.0 0.2 0.4 0.6 0.8

DC (A)

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SMD Power Inductor CDH53

0.2 0.3

DC (A)

0.4

0.5

0.0

0.1

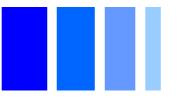
0.2

DC (A)

0.3

0.4

0.0 0.1





60

50

40

30

20

10

0

60

50

40

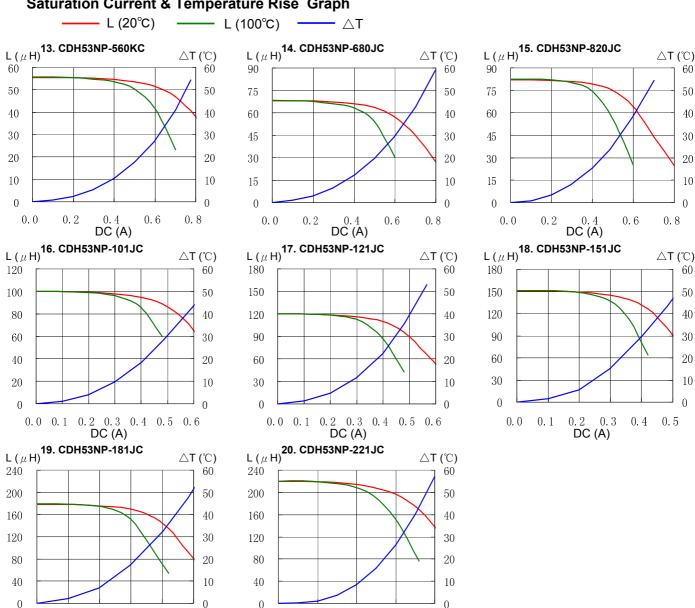
30

20

10

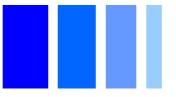
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Saturation Current & Temperature Rise Graph



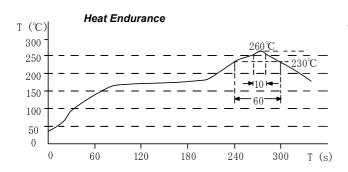
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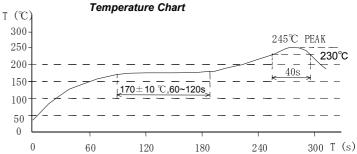
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Solder Reflow Condition





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Hong Kong Tel.+852-2880-6781

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Chicago

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Seoul

Tel.+82-2-6237-0777 FAX.+82-2-6237-0778 sales@kr.sumida.com

Obernzell

Tel.+49-8591-937-0 FAX. +49-8591-937-103 contact@eu.sumida.com Shenzhen

Tel.+86-755-8291-0228 FAX.+86-755-8291-0338

shenzhen.sales@cn.sumida.com

Singapore Tel.+65-6296-3388

FAX.+65-6841-4426 sales@sg.sumida.com

Neumarkt

Tel.+49-9181-4509-110 FAX. +49-9181-4509-310 infocomp@eu.sumida.com

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Taipei

Tel.+886-2-8751-2737 FAX.+886-2-8751-2738

sales@tw.sumida.com

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CDH53NP-330MC

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CDH53NP-220KC
CDH53NP-390KC
CDH53NP-180KC
CDH53NP-3R3MC

CDH53NP-221JC
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