# SMD TYPE
# Inductors for High Temperature Applications

## OUTLINE

The operating temperature range is a maximum of 125 degree, and the inductance range is 2.4~560µH.
It matches as power inductor for DC/DC converters corresponding high temperature.

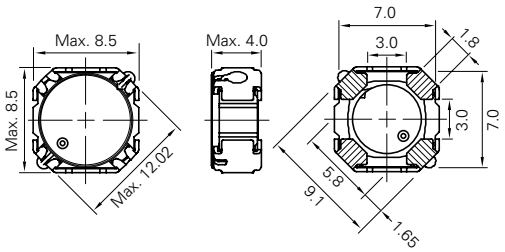
## CDCH8D38/A

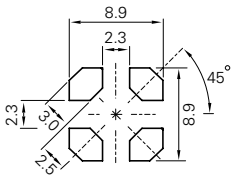
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

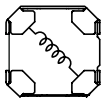
***NEW***

( 10µH - 120µH )

***PROVISIONAL***



BOTTOM VIEW

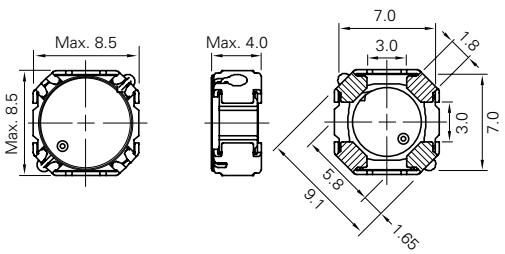
## CDRH8D38/A

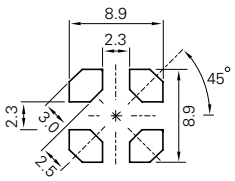
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

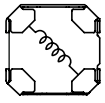
***NEW***

( 10µH - 120µH )

***PROVISIONAL***



BOTTOM VIEW

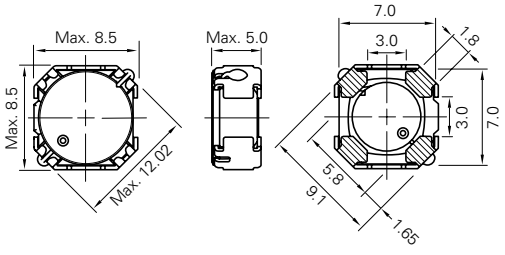
## CDRH8D48/A

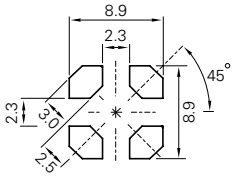
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

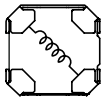
***NEW***

( 10µH - 150µH )

***PROVISIONAL***



BOTTOM VIEW

## TYPE : CDCH8D38/A, CDRH8D38/A, CDRH8D48/A

| Parts No. | L (H) | CDCH8D38/A | | CDRH8D38/A | | CDRH8D48/A | |
|---|---|---|---|---|---|---|---|
| | | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *A | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *B | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *B |
| 100 | 10µ | 71.3m(57m) | 1.67 | 42.5m(34m) | 1.72 | 38m(30m) | 2.26 |
| 120 | 12µ | 87.5m(70m) | 1.48 | 55.0m(44m) | 1.57 | 50m(40m) | 1.87 |
| 150 | 15µ | 116m(93m) | 1.22 | 70.0m(56m) | 1.41 | 63m(50m) | 1.62 |
| 180 | 18µ | 144m(115m) | 1.07 | 83.8m(67m) | 1.33 | 75m(60m) | 1.58 |
| 220 | 22µ | 163m(130m) | 1.00 | 110m(88m) | 1.24 | 88m(70m) | 1.45 |
| 270 | 27µ | 205m(164m) | 870m | 125m(100m) | 1.11 | 106m(85m) | 1.33 |
| 330 | 33µ | 239m(191m) | 840m | 141m(113m) | 980m | 125m(100m) | 1.20 |
| 390 | 39µ | 301m(241m) | 730m | 171m(137m) | 890m | 156m(125m) | 1.06 |
| 470 | 47µ | 326m(261m) | 690m | 225m(180m) | 780m | 188m(150m) | 1.00 |
| 560 | 56µ | 426m(341m) | 610m | 290m(232m) | 680m | 238m(190m) | 890m |
| 680 | 68µ | 481m(385m) | 550m | 318m(255m) | 650m | 275m(220m) | 820m |
| 820 | 82µ | 646m(517m) | 470m | 364m(291m) | 600m | 312m(250m) | 730m |
| 101 | 100µ | 750m(600m) | 440m | 479m(383m) | 530m | 394m(315m) | 700m |
| 121 | 120µ | 843m(674m) | 420m | 530m(424m) | 500m | 438m(350m) | 630m |
| 151 | 150µ | | | | | 580m(465m) | 580m |

Measuring Freq. (L)

CDCH8D38/A 100kHz
CDRH8D38/A 100kHz
CDRH8D48/A 100kHz

Tolerance of Inductance

CDCH8D38/A 10µH – 120µH ± 10% (K)
CDRH8D38/A 10µH – 120µH ± 20% (M)
CDRH8D48/A 10µH – 150µH ± 20% (M)

Other

*A The rated DC current Indicates the DC current when the inductance decreases to maximum 90% of nominal value or DC current when the temperature of coil is increased to 30 °c. The smaller one is defined as DC rated current.
*B The rated DC current Indicates the DC current when the inductance decreases to maximum 65% of nominal value or DC current when the temperature of coil is increased to 30 °c. The smaller one is defined as DC rated current.

About CDCH8D38/A, CDRH8D38/A, CDRH8D48/A

*This specification might be changed without notice due to under developing and improving.
Please contact us for our mass production schedule.Thank you for your understanding.

About Lead-free products

・Lead-free products are now available for sale
・To order a lead-free product, please add " NP " after the product type
*e.g.* Ordering code of lead product : Type name-△△△○×
Ordering code of lead-free product : Type name NP △△△○×

Ordering Code

CDCH8D38/A - △△△○×

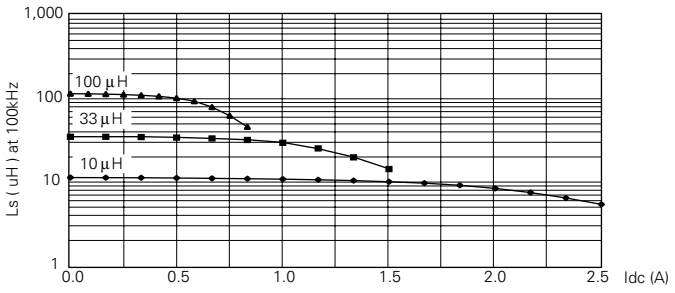
△ : Parts No. ○ : Tolerance of inductance K (10%) M (20%) × : Packing C (Carrier tape) B (Box)

NOTE

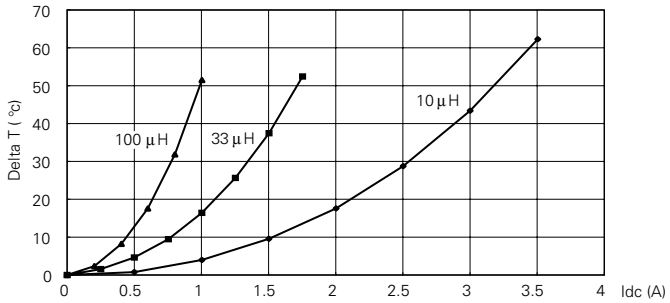
Please note that when using the product for automotive while applying current with audio-frequency (AF) signals may result in audible noises due to magnetostriction.
Also, in order to avoid an audible noise problem, operating with Non-AF signals would be recommended. The noise may amplify depending on the coil mount area on the PCB.

## CHARACTERICTICS OF CDRH8D38/A

〔 SATURATION CURRENT




〔 TEMPERATURE RISE CURRENT



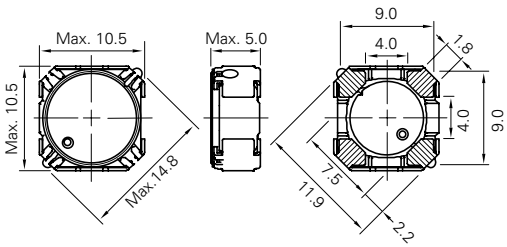
## CDCH10D48/A

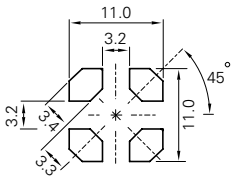
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

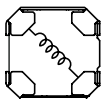
NEW

( 10µH - 390µH )

PROVISIONAL



BOTTOM VIEW

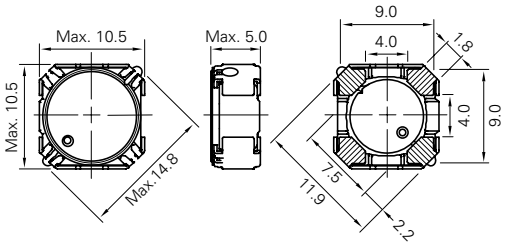
## CDRH10D48/A

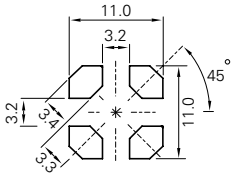
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

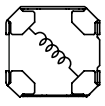
NEW

( 2.4µH - 330µH )

PROVISIONAL



BOTTOM VIEW

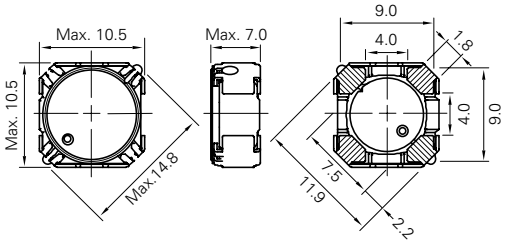
## CDRH10D68/A

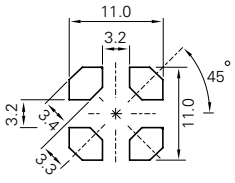
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

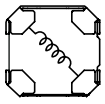
NEW

( 10µH - 560µH )

PROVISIONAL



BOTTOM VIEW

## TYPE : CDCH10D48/A, CDRH10D48/A, CDRH10D68/A

| Parts No. | L (H) | CDCH10D48/A | | CDRH10D48/A | | CDRH10D68/A | |
|---|---|---|---|---|---|---|---|
| | | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125 °c) (A) *A | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125 °c) (A) *B | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125 °c) (A) *B |
| 2R4 | 2.4µ | | | 12m(9m) | 5.20 | | |
| 2R4 | 3.4µ | | | 13m(10m) | 4.80 | | |
| 4R3 | 4.3µ | | | 15m(12m) | 4.30 | | |
| 5R8 | 5.8µ | | | 24m(19m) | 3.90 | | |
| 7R2 | 7.2µ | | | 29m(23m) | 2.90 | | |
| 8R7 | 8.7µ | | | 37m(29m) | 2.60 | | |
| 100 | 10µ | 41m(33m) | 2.50 | 40m(32m) | 2.60 | 26.3m(21m) | 3.07 |
| 120 | 12µ | 54m(43m) | 2.20 | 44m(35m) | 2.50 | 28.8m(23m) | 2.80 |
| 150 | 15µ | 61m(49m) | 2.10 | 49m(39m) | 2.40 | 35.0m(28m) | 2.56 |
| 180 | 18µ | 76m(61m) | 1.80 | 62m(49m) | 2.20 | 37.5m(30m) | 2.40 |
| 220 | 22µ | 88m(70m) | 1.70 | 70m(56m) | 1.90 | 51.3m(41m) | 2.03 |
| 270 | 27µ | 108m(86m) | 1.50 | 90m(72m) | 1.70 | 63.8m(51m) | 1.89 |
| 330 | 33µ | 140m(112m) | 1.30 | 120m(96m) | 1.50 | 80.0m(64m) | 1.68 |
| 390 | 39µ | 165m(132m) | 1.20 | 127m(101m) | 1.40 | 100m(80m) | 1.50 |
| 470 | 47µ | 189m(151m) | 1.10 | 138m(110m) | 1.30 | 125m(100m) | 1.32 |
| 560 | 56µ | 228m(182m) | 1.00 | 172m(137m) | 1.20 | 156m(125m) | 1.24 |
| 680 | 68µ | 285m(228m) | 880m | 209m(167m) | 1.10 | 191m(153m) | 1.12 |
| 820 | 82µ | 326m(261m) | 840m | 268m(214m) | 970m | 215m(172m) | 1.03 |
| 101 | 100µ | 410m(328m) | 720m | 294m(235m) | 920m | 250m(200m) | 920m |
| 121 | 120µ | 470m(376m | 690m | 374m(299m) | 820m | 273m(218m) | 880m |
| 151 | 150µ | 609m(487m) | 600m | 437m(349m) | 770m | 359m(287m) | 770m |
| 181 | 180µ | 684m(547m) | 580m | 558m(446m) | 650m | 463m(370m) | 700m |
| 221 | 220µ | 893m(714m) | 500m | 637m(509m) | 610m | 590m(472m) | 640m |
| 271 | 270µ | 1.00(800m) | 470m | 839m(671m) | 530m | 674m(539m) | 580m |
| 331 | 330µ | 1.36(1.08) | 400m | 948m(750m) | 490m | 740m(592m) | 520m |
| 391 | 390µ | 1.51(1.21) | 380m | | | 986m(789m) | 470m |
| 471 | 470µ | | | | | 1.11(884m) | 450m |
| 561 | 560µ | | | | | 1.21(965m) | 430m |

Measuring Freq. (L)

CDCH10D48/A 100kHz
CDRH10D48/A 100kHz
CDRH10D68/A 100kHz

Tolerance of Inductance

CDCH10D48/A 10µH – 390µH ± 10% (K)
CDRH10D48/A 2.4µH – 330µH ± 20% (M)
CDRH10D68/A 10µH – 560µH ± 20% (M)

Other

*A The rated DC current Indicates the DC current when the inductance decreases to maximum 90% of nominal value or DC current when the temperature of coil is increased to 30 °c. The smaller one is defined as DC rated current.
*B The rated DC current Indicates the DC current when the inductance decreases to maximum 65% of nominal value or DC current when the temperature of coil is increased to 30 °c. The smaller one is defined as DC rated current.

About CDCH10D48/A, CDRH10D48/A, CDRH10D68/A

*This specification might be changed without notice due to under developing and improving.
Please contact us for our mass production schedule.Thank you for your understanding.

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*e.g.* Ordering code of lead product : Type name-△△△○×
Ordering code of lead-free product : Type name NP △△△○×

Ordering Code

CDCH10D48/A - △△△○×

△ : Parts No. ○ : Tolerance of inductance K (10%) M (20%) × : Packing C (Carrier tape) B (Box)

NOTE

Please note that when using the product for automotive while applying current with audio-frequency (AF) signals may result in audible noises due to magnetostriction.
Also, in order to avoid an audible noise problem, operating with Non-AF signals would be recommended. The noise may amplify depending on the coil mount area on the PCB.

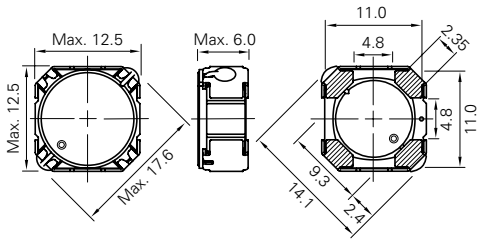
## CDRH12D58/A

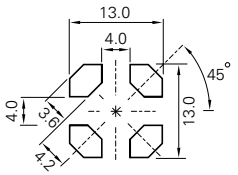
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

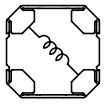
*NEW*

( 10µH - 390µH )

*PROVISIONAL*



BOTTOM VIEW

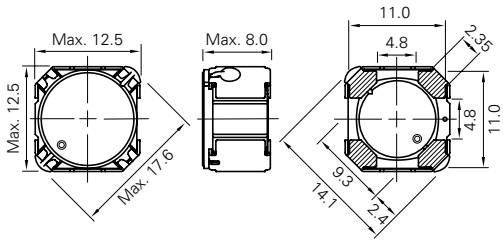
## CDRH12D78/A

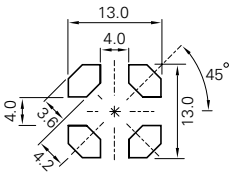
| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

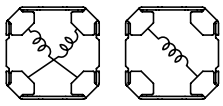
*NEW*

( 10µH - 390µH )

*PROVISIONAL*



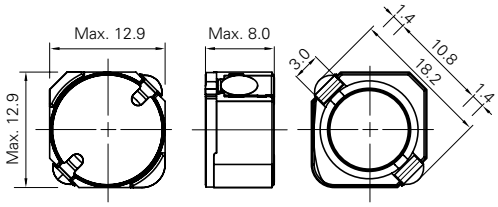

BOTTOM VIEW

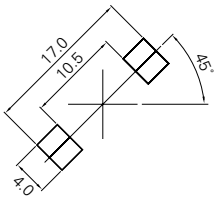
## CDRH127C/A

| DIMENSIONS (mm) | LAND PATTERNS (mm) | CONNECTION | CONSTRUCTION |
|---|---|---|---|

*NEW*

( 10µH - 470µH )





BOTTOM VIEW

## TYPE : CDRH12D58/A, CDRH12D78/A, CDRH127C/A

| Parts No. | L (H) | CDRH12D58/A | | CDRH12D78/A | | CDRH127C/A | |
|---|---|---|---|---|---|---|---|
| | | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *A | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *A | D.C.R.(Ω) : Max.(Typ.) | Rated Current (at 125℃) (A) *A |
| 100 | 10µ | 22m(17m) | 3.8 | 22m(17m) | 4.2 | 16.8m(13.4m) | 4.60 |
| 120 | 12µ | 24m(19m) | 3.7 | 24m(19m) | 4.0 | 18.7m(14.9m) | 4.30 |
| 150 | 15µ | 29m(23m) | 3.1 | 27m(21m) | 3.7 | 20.5m(16.4m) | 4.10 |
| 180 | 18µ | 38m(30m) | 2.9 | 29m(23m) | 3.4 | 25.4m(20.3m) | 3.50 |
| 220 | 22µ | 42m(33m) | 2.7 | 44m(35m) | 2.9 | 30.0m(23.8m) | 3.30 |
| 270 | 27µ | 57m(45m) | 2.4 | 47m(37m) | 2.7 | 32.0m(25.6m) | 3.20 |
| 330 | 33µ | 60m(48m) | 2.2 | 64m(51m) | 2.4 | 46.0m(36.8m) | 2.50 |
| 390 | 39µ | 88m(70m) | 1.9 | 68m(54m) | 2.3 | 57.4m(45.9m) | 2.20 |
| 470 | 47µ | 98m(78m) | 1.8 | 75m(60m) | 2.1 | 64.7m51.7m) | 2.10 |
| 560 | 56µ | 108m(86m) | 1.7 | 84m(67m) | 1.9 | 80.3m(64.2m) | 1.90 |
| 680 | 68µ | 118m(94m) | 1.6 | 97m(77m) | 1.7 | 88.2m(70.5m) | 1.80 |
| 820 | 82µ | 175m(140m) | 1.4 | 124m(99m) | 1.6 | 123m(98.4m) | 1.55 |
| 101 | 100µ | 223m(178m) | 1.3 | 152m(121m) | 1.4 | 139m(112m) | 1.50 |
| 121 | 120µ | 247m(197m) | 1.2 | 197m(157m) | 1.3 | 175m(140m) | 1.35 |
| 151 | 150µ | 280m(224m) | 1.1 | 249m(199m) | 1.2 | 201m(161m) | 1.30 |
| 181 | 180µ | 307m(245m) | 1.0 | 270m(216m) | 1.1 | 219m(175m) | 1.25 |
| 221 | 220µ | 453m(362m) | 800m | 308m(246m) | 1.0 | 315m(252m) | 1.00 |
| 271 | 270µ | 550m(440m) | 740m | 448m(358m) | 860m | 354m(284m) | 950m |
| 331 | 330µ | 623m(498m) | 690m | 579m(463m) | 750m | 502m(401m) | 800m |
| 391 | 390µ | 723m(578m) | 630m | 730m(584m) | 660m | 554m(444m) | 750m |
| 471 | 470µ | | | | | 620m(496m) | 700m |

Measuring Freq. (L)

CDRH12D58/A 100kHz
CDRH12D78/A 100kHz
CDRH127C/A 100kHz

Tolerance of Inductance

CDRH12D58/A 10µH – 390µH ± 20% (M)
CDRH12D78/A 10µH – 390µH ± 20% (M)
CDRH127C/A 10µH – 470µH ± 20% (M)

Other

*A The rated DC current Indicates the DC current when the inductance decreases to maximum 65% of nominal value or DC current when the temperature of coil is increased to 30 °c. The smaller one is defined as DC rated current.

About CDRH12D58/A, CDRH12D78/A

*This specification might be changed without notice due to under developing and improving.
Please contact us for our mass production schedule.Thank you for your understanding.

About Lead-free products

・Lead-free products are now available for sale
・To order a lead-free product, please add " NP " after the product type
*e.g.* Ordering code of lead product : Type name-△△△○×
Ordering code of lead-free product : Type name NP △△△○×

Ordering Code

CDRH12D58/A - △△△○×

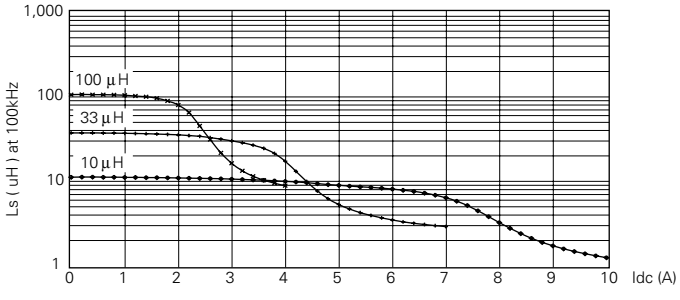
△ : Parts No. ○ : Tolerance of inductance M (20%) × : Packing C (Carrier tape) B (Box)

NOTE

Please note that when using the product for automotive while applying current with audio-frequency (AF) signals may result in audible noises due to magnetostriction.
Also, in order to avoid an audible noise problem, operating with Non-AF signals would be recommended. The noise may amplify depending on the coil mount area on the PCB.

## CHARACTERICTICS OF CDRH127C/A

〔 SATURATION CURRENT




〔 TEMPERATURE RISE CURRENT