# IHLP5050FDER2R2M01 Datasheet


https://www.DiGi-Electronics.com

| | |
|---|---|
| DiGi Electronics Part Number | IHLP5050FDER2R2M01-DG |
| Manufacturer | Vishay Dale |
| Manufacturer Product Number | IHLP5050FDER2R2M01 |
| Description | FIXED IND 2.2UH 22A 4.2 MOHM SMD |
| Detailed Description | 2.2 µH Shielded Molded Inductor 22 A 4.2mOhm Max Nonstandard |

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

## Purchase and inquiry

| Manufacturer Product Number: | Manufacturer: |
| --- | --- |
| IHLP5050FDER2R2M01 | Vishay Dale |
| Series: | Product Status: |
| IHLP-5050FD-01 | Active |
| Type: | Material - Core: |
| Molded | - |
| Inductance: | Tolerance: |
| 2.2 µH | ±20% |
| Current Rating (Amps): | Current - Saturation (Isat): |
| 22 A | 40A |
| Shielding: | DC Resistance (DCR): |
| Shielded | 4.2mOhm Max |
| Q @ Freq: | Frequency - Self Resonant: |
| - | - |
| Ratings: | Operating Temperature: |
| - | -55°C ~ 125°C |
| Inductance Frequency - Test: | Mounting Type: |
| 100 kHz | Surface Mount |
| Package / Case: | Supplier Device Package: |
| Nonstandard | - |
| Size / Dimension: | Height - Seated (Max): |
| 0.520" L x 0.508" W (13.20mm x 12.90mm) | 0.256" (6.50mm) |

## Environmental & Export classification

| RoHS Status: | Moisture Sensitivity Level (MSL): |
| --- | --- |
| ROHS3 Compliant | 1 (Unlimited) |
| REACH Status: | ECCN: |
| REACH Unaffected | EAR99 |
| HTSUS: | |
| 8504.50.4000 | |

VISHAY
www.vishay.com

# IHLP-5050FD-01

Vishay Dale

# IHLP® Commercial Inductors, High Saturation Series

## LINKS TO ADDITIONAL RESOURCES

3D Models  Design Tools

## FEATURES

- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- IHLP design;
  PATENT(S): www.vishay.com/patents
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free
RoHS COMPLIANT
HALOGEN FREE

## APPLICATIONS

- Notebook / desktop / server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

## STANDARD ELECTRICAL SPECIFICATIONS

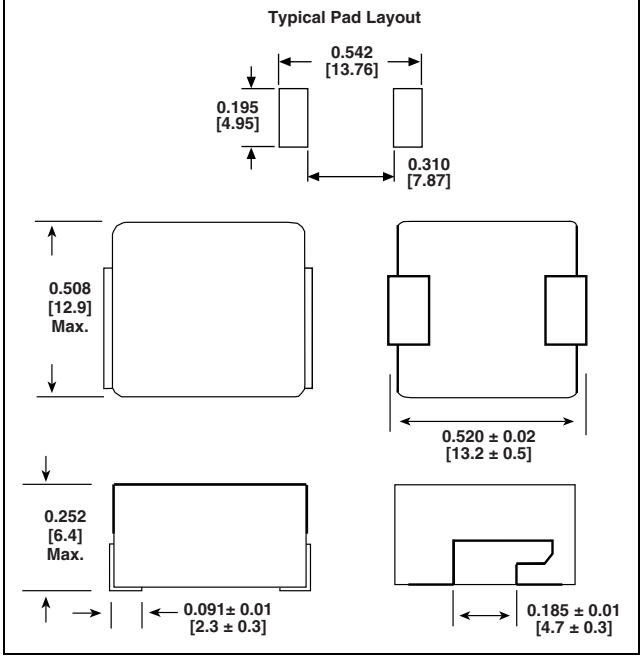
| $L_0$ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH) | DCR TYP. 25 °C (mΩ) | DCR MAX. 25 °C (mΩ) | HEAT RATING CURRENT DC TYP. (A) (1) | SATURATION CURRENT DC TYP. (A) (2) |
|---|---|---|---|---|
| 0.10 | 0.47 | 0.50 | 60 | 120 |
| 0.15 | 0.53 | 0.60 | 55 | 118 |
| 0.22 | 0.63 | 0.70 | 53 | 112 |
| 0.30 | 0.70 | 0.80 | 48 | 72 |
| 0.33 | 0.83 | 0.90 | 46 | 65 |
| 0.40 | 0.90 | 1.0 | 44 | 64 |
| 0.47 | 1.0 | 1.2 | 41 | 63 |
| 0.56 | 1.2 | 1.4 | 37 | 62 |
| 0.68 | 1.4 | 1.6 | 35 | 60 |
| 0.82 | 1.6 | 1.9 | 33 | 50 |
| 1.0 | 1.7 | 2.0 | 32 | 49 |
| 1.2 | 2.1 | 2.5 | 30 | 48 |
| 1.5 | 2.5 | 3.0 | 27 | 45 |
| 1.8 | 2.8 | 3.2 | 24 | 41 |
| 2.2 | 3.5 | 4.2 | 22 | 40 |
| 3.3 | 5.7 | 6.8 | 18 | 35 |
| 4.7 | 8.0 | 8.7 | 13.5 | 32 |
| 5.6 | 9.3 | 10 | 13.5 | 32 |
| 6.8 | 13.1 | 14 | 11.5 | 16.5 |
| 8.2 | 14.5 | 15.5 | 10.5 | 16 |
| 10 | 16.4 | 17.2 | 10 | 15.5 |

**Notes**

- All test data is referenced to 25 °C ambient
- Operating temperature range -55 °C to +125 °C
- The part temperature (ambient + temp. rise) should not exceed 125 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- Rated operating voltage (across inductor) = 75 V

(1) DC current (A) that will cause an approximate ΔT of 40 °C
(2) DC current (A) that will cause $L_0$ to drop approximately 20 %

## DIMENSIONS in inches [millimeters]




## DESCRIPTION

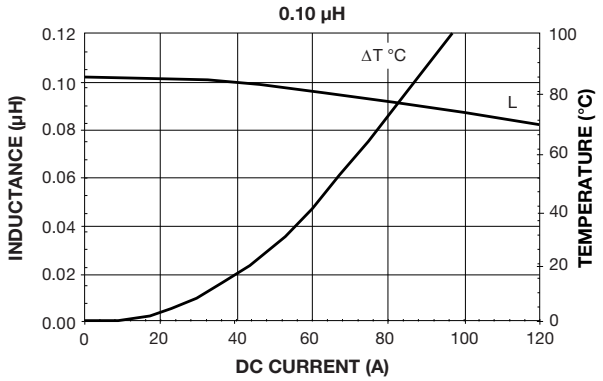
| IHLP-5050FD-01 | 1.0 µH | ± 20 % | ER | e3 |
|---|---|---|---|---|
| MODEL | INDUCTANCE VALUE | INDUCTANCE TOLERANCE | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

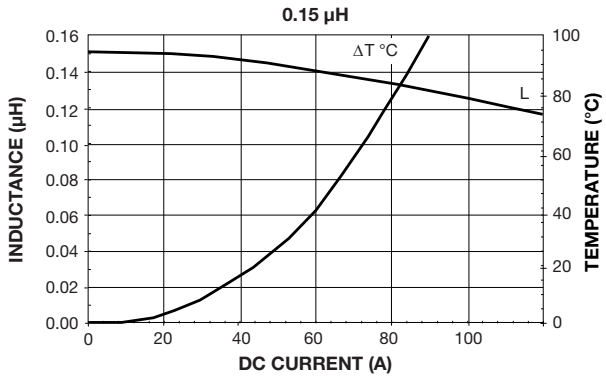
## GLOBAL PART NUMBER

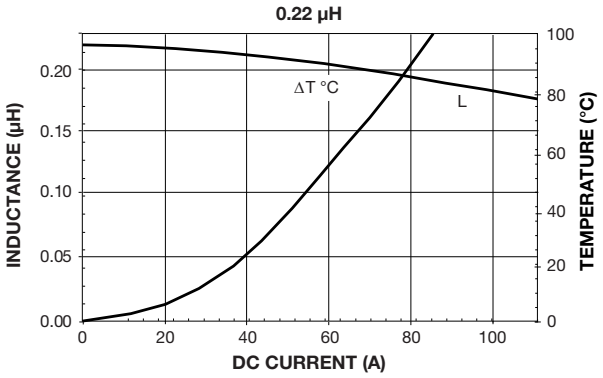
| I | H | L | P | 5 | 0 | 5 | 0 | F | D | E | R | 1 | R | 0 | M | 0 | 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCT FAMILY | | | | SIZE | | | | | | PACKAGE CODE | | INDUCTANCE VALUE | | | TOL. | SERIES | |

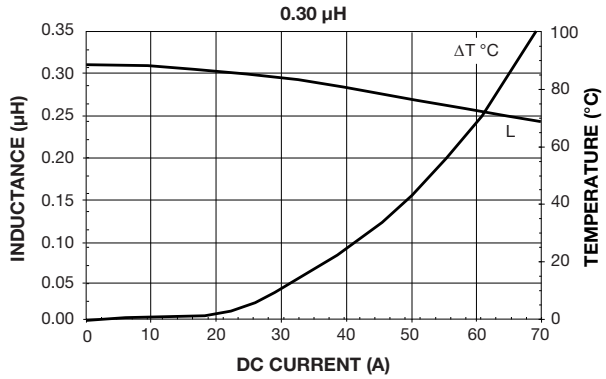
**PATENT(S): www.vishay.com/patents**
**This Vishay product is protected by one or more United States and international patents.**

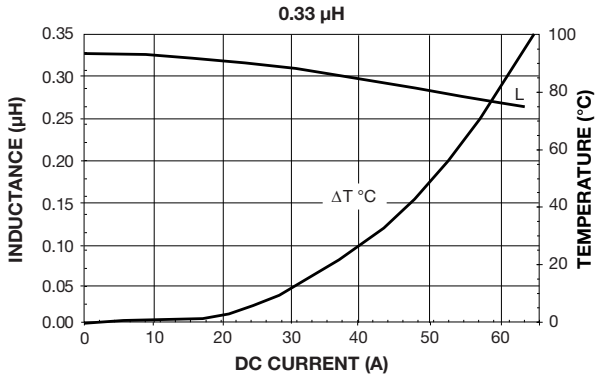
## PERFORMANCE GRAPHS

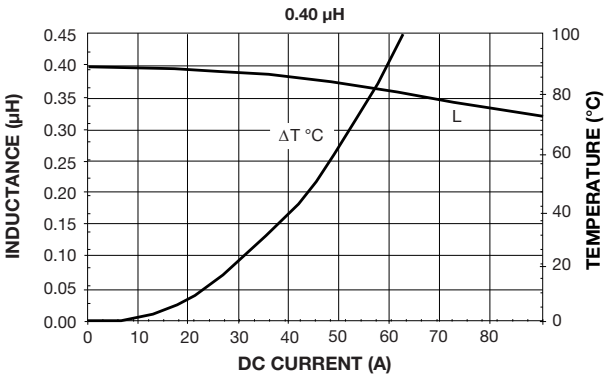


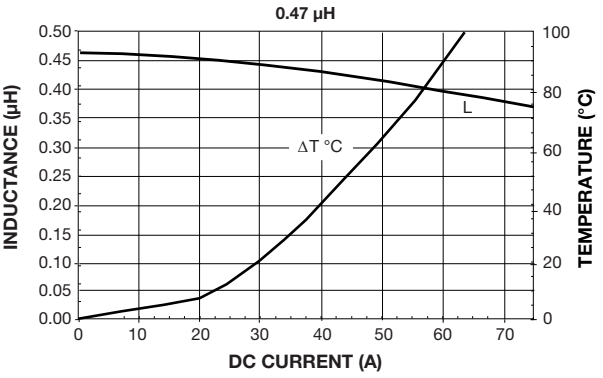



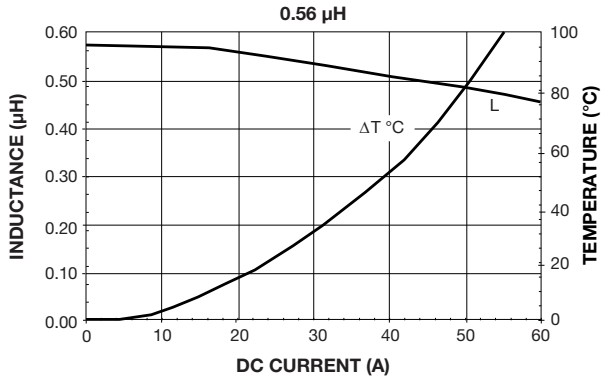



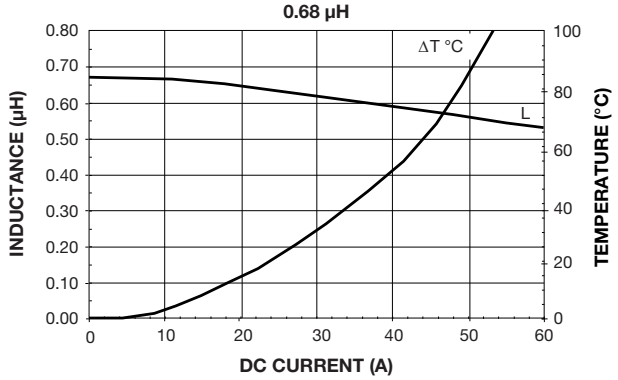



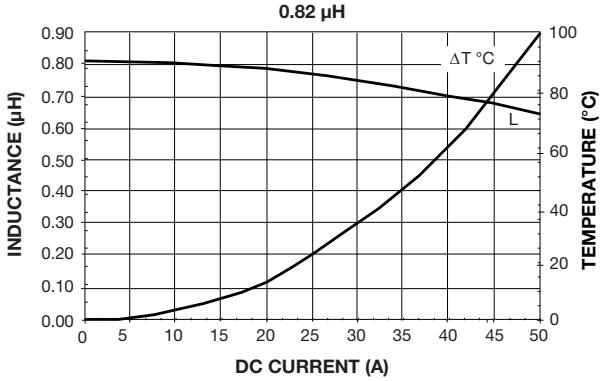



## PERFORMANCE GRAPHS

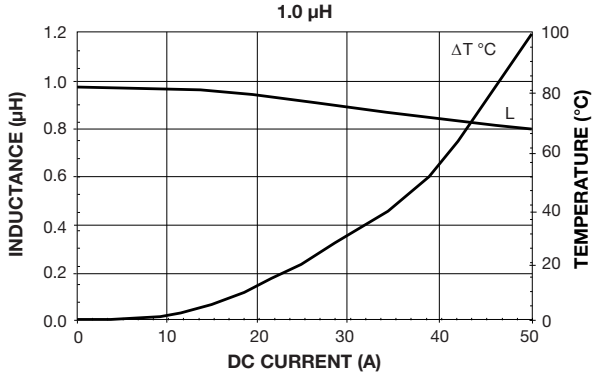
0.68 µH



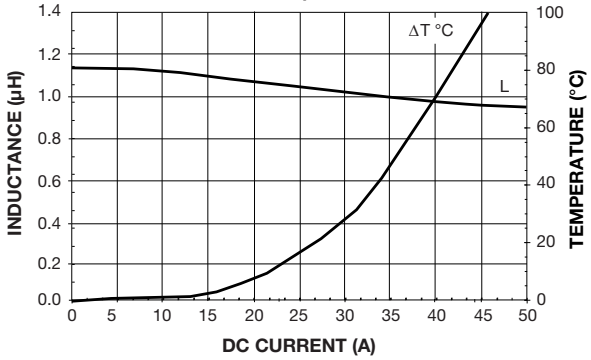

0.82 µH



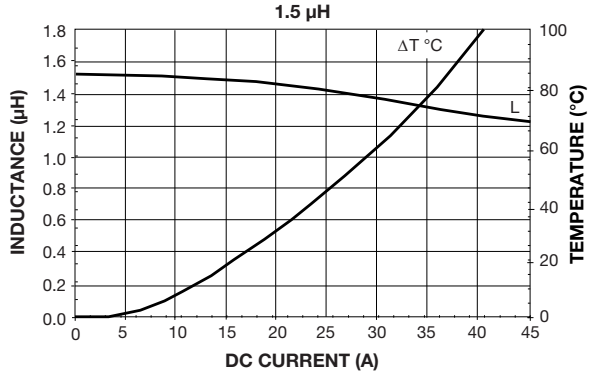

1.0 µH



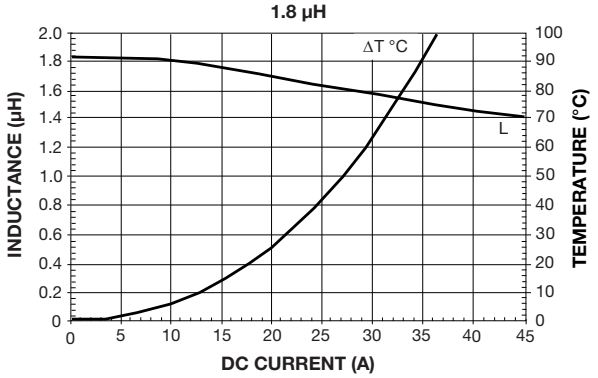

1.2 µH



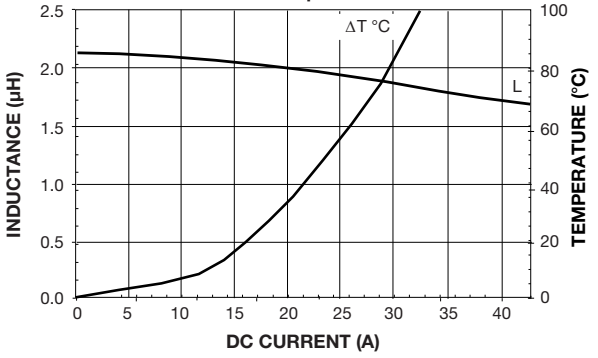

1.5 µH



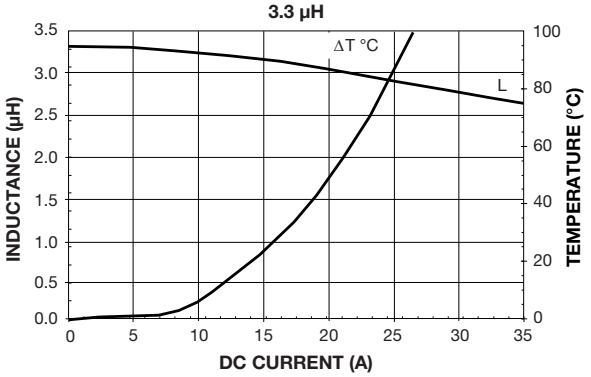

1.8 µH




2.2 µH




3.3 µH



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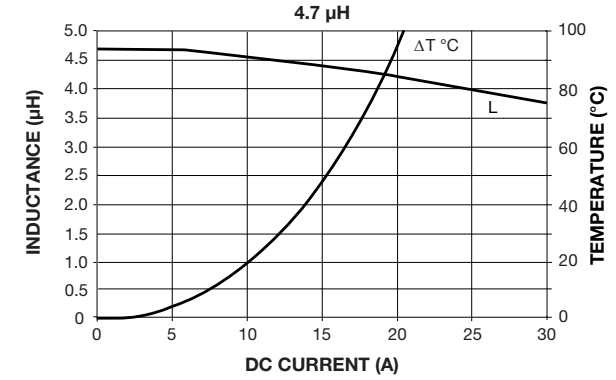


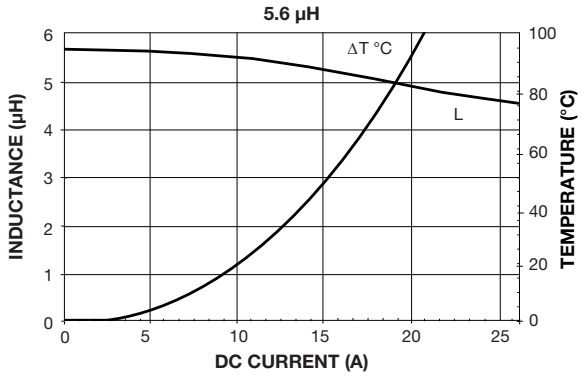


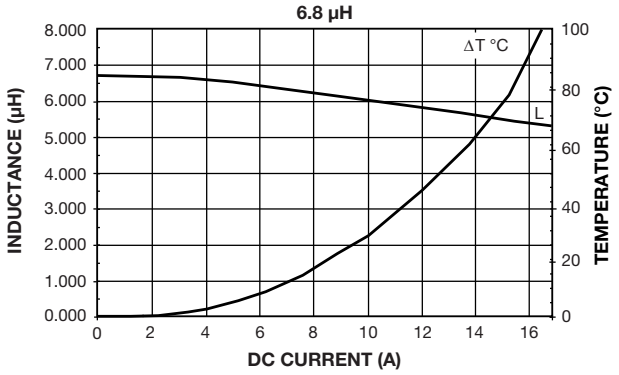


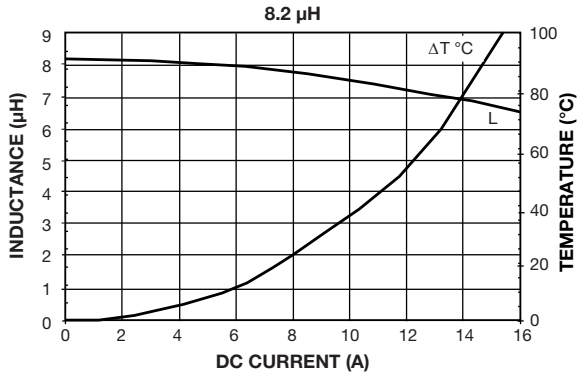


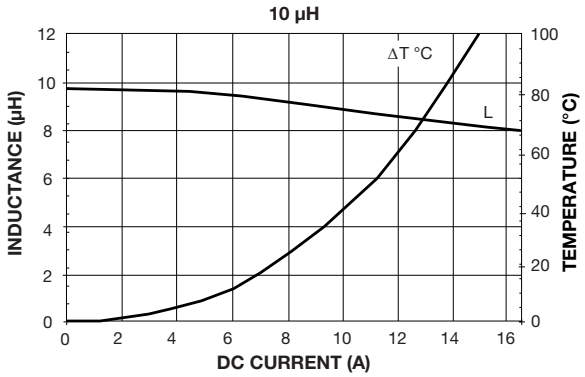

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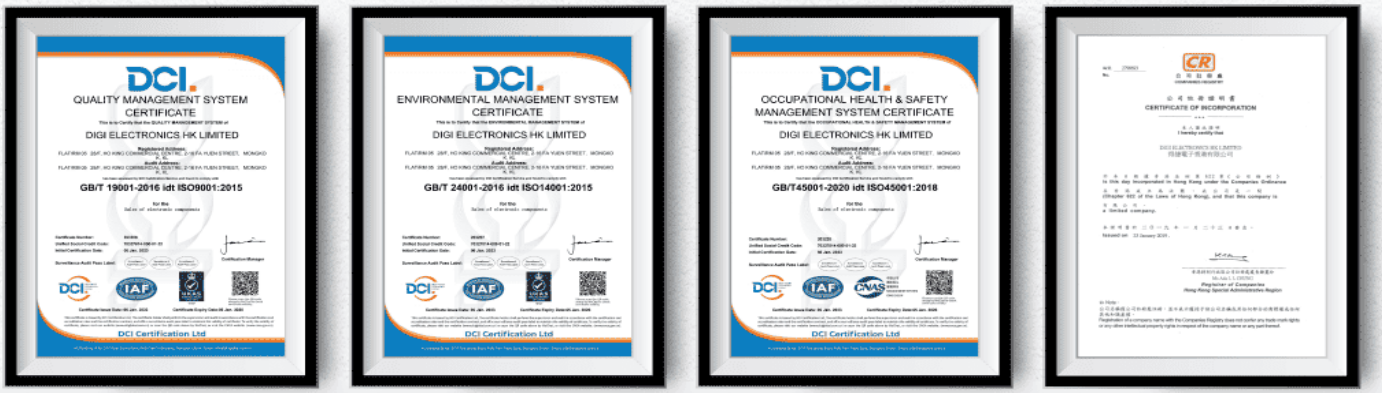



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