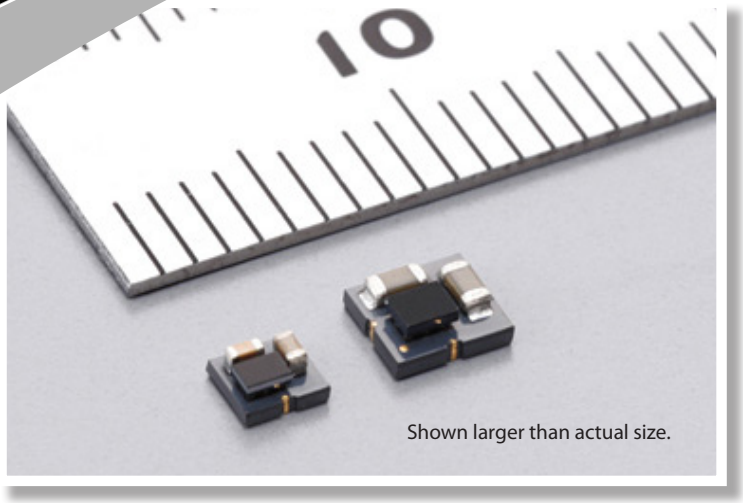
muRata
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# LXDC Series

## µDCDC Converters



Shown larger than actual size.

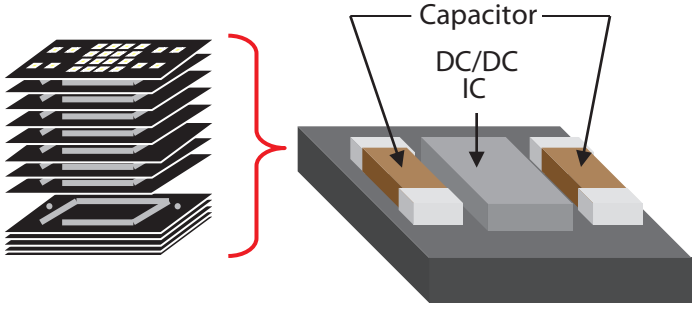
## Features

- *Low EMI noise and small footprint due to Murata's inductor-embedded ferrite substrate technology*
- *High efficiency using synchronous rectifier technology and PFM/PWM auto-select function (forced mode available on some models)*
- *Input voltage range = 2.3–5.5V*
- *Load currents available are 600mA, 1A, 2A, and 3A*
- *Fixed output voltage = 1.0V, 1.2V, 1.35V, 1.5V, 1.8V, 2.5V, 3.0V, or 3.3V (see product line-up table on back)*
- *Switching frequency = 3.0, 3.3, 4.0, or 6MHz (see back)*
- *Operating temperature range = -40 to +85°C*

## Applications

- *Any device currently using discrete DC-DC circuits where downsizing and space-savings are required*
- *Cellular Phones, PDAs, Mobile Internet Devices*
- *Digital Cameras, eBooks, Tablets, W-LAN, BT*
- *Portable Game Consoles, Music Players, etc.*

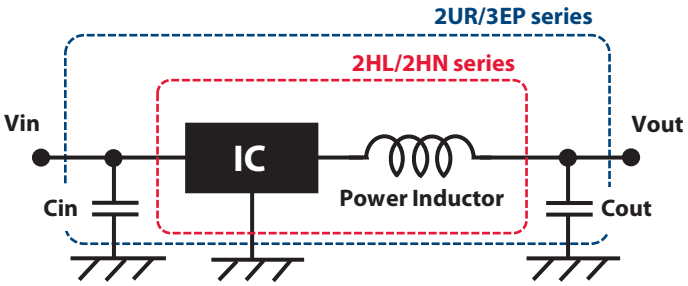
## Structure




Multilayer process to create a ferrite substrate with 3-dimensional circuits and embedded power inductor

I/O via holes through the ferrite substrate act as ferrite beads and reduce conductive noise.

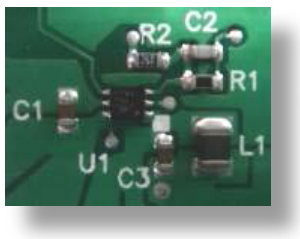
## Application Circuit




Note: See back page for circuits specific to each series.

## Downsizing Advantage

**Discrete Solution**



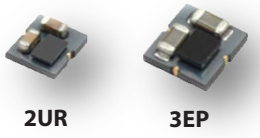

Footprint
**35~60mm²**

**2HL or 2HN Series (0.6A)**



**10mm²**
(including two external capacitors)

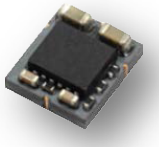
**2UR Series (0.6A)**
**3EP Series (1A)**



2UR 3EP

**6-10mm²**
(with on-board input and output capacitors)

**55K Series (3A)**



55K

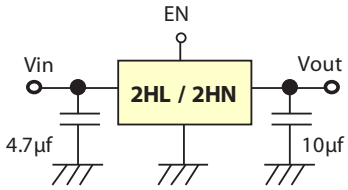
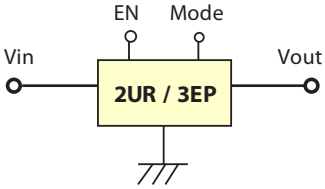
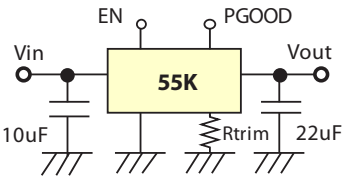
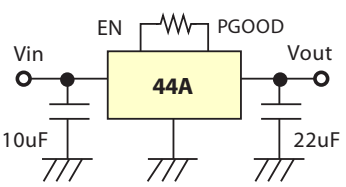
**28.5mm²**

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# LXDC Series

## µDCDC Converters

## Product Line-Up

| Type | Load Current | Series | W x L x T (mm) | Application Circuit | Part Number | Input Voltage (V) | Output Voltage (V) | Max. Iout (mA) | Switch. Freq. | Pkg. (pcs/reel) |
|---|---|---|---|---|---|---|---|---|---|---|
| Buck | ≤0.6A | 2HL | 2.5×2.0×1.1  |   | LXDC2HL10A-080 | 2.3-5.5 | 1.0 | 600 | 3MHz | 3,000 |
| | | | | | LXDC2HL12A-050 | 2.3-5.5 | 1.2 | | | |
| | | | | | LXDC2HL1DA-087 | 2.35-5.5 | 1.35 | | | |
| | | | | | LXDC2HL15A-051 | 2.5-5.5 | 1.5 | | | |
| | | | | | LXDC2HL18A-052 | 2.8-5.5 | 1.8 | | | |
| | | | | | LXDC2HL25A-053 | 3.5-5.5 | 2.5 | 500 | | |
| | | | | | LXDC2HL30A-054 | 3.7-5.5 | 3.0 | 400 | | |
| | | | | | LXDC2HL33A-055 | 3.8-5.5 | 3.3 | 300 | | |
| | | 2HN | 2.5×2.0×1.2  (w/resin coating) | | LXDC2HN10A-132 | 2.3-5.5 | 1.0 | 600 | 3MHz | 3,000 |
| | | | | | LXDC2HN12A-099 | 2.3-5.5 | 1.2 | | | |
| | | | | | LXDC2HN1DA-133 | 2.35-5.5 | 1.35 | | | |
| | | | | | LXDC2HN15A-126 | 2.5-5.5 | 1.5 | | | |
| | | | | | LXDC2HN18A-097 | 2.8-5.5 | 1.8 | | | |
| | | | | | LXDC2HN25A-134 | 3.5-5.5 | 2.5 | 500 | | |
| | | | | | LXDC2HN30A-135 | 3.7-5.5 | 3.0 | 400 | | |
| | | | | | LXDC2HN33A-136 | 3.8-5.5 | 3.3 | 300 | | |
| | | 2UR | 2.5×2.3×1.2  |   | LXDC2UR12A-118 | 2.7-5.5 | 1.2 | 600 | 6MHz | 3,000 |
| | | | | | LXDC2UR15A-119 | 2.7-5.5 | 1.5 | | | |
| | | | | | LXDC2UR18A-120 | 2.7-5.5 | 1.8 | | | |
| | | | | | LXDC2UR30A-143 | 3.6-5.5 | 3.0 | | | |
| | | | | | LXDC2UR33A-122 | 3.6-5.5 | 3.3 | | | |
| | ≤1A | 3EP | 3.5×3.2×1.3  | | LXDC3EP10A-176 | 2.5-5.5 | 1.0 | 1000 | 4MHz | 1,000 |
| | | | | | LXDC3EP12A-104 | 2.5-5.5 | 1.2 | | | |
| | | | | | LXDC3EP15A-105 | 2.5-5.5 | 1.5 | | | |
| | | | | | LXDC3EP18A-106 | 2.5-5.5 | 1.8 | | | |
| | | | | | LXDC3EP25A-109 | 3.0-5.5 | 2.5 | | | |
| | | | | | LXDC3EP33A-107 | 4.0-5.5 | 3.3 | | | |
| | ≤3A | 55K | 5.7×5.0×2.1  |   | LXDC55KAAA-205 **Product under development** | 2.7-5.5 | Set by trim resistor | 3000 | 3MHz | 1,000 |
| Boost | ≤0.7A | 44A | 4.0×4.0×2.0  |   | LXDC44AAAC-169 | 2.7-5.5 | 5.0 | 700 | 3.3MHz | 1,000 |