# Inductors

## Wound Type for Power Circuit
## SMD

## LDR Series LDR655312 Type

These products are low height type power inductors optimum to a DC-DC converter for driving an LCD panel. A plane accuracy of a user terminal is increased by separating a winding terminal. In addition, an application of a new-designed thin type drum core significantly lowers leakage flux so as to satisfy needs for high density mounting.

### FEATURES

- The first low height realized by using new magnetic material superior in superimposed DC current characteristics with high specific resistance and by adopting a design in which a lead frame is directly bonded.
- Mountable on the back side of the LCD surface because of low height type (1.20mm max.).
- Low leakage flux drum core with original design applied.
- Size equivalent to a half of a conventional core having the same characteristics realized, thus enabling light weight (0.1g max.).
- Automatic inserter usable in taping specifications.
- All terminals are welded without lead.

### APPLICATIONS

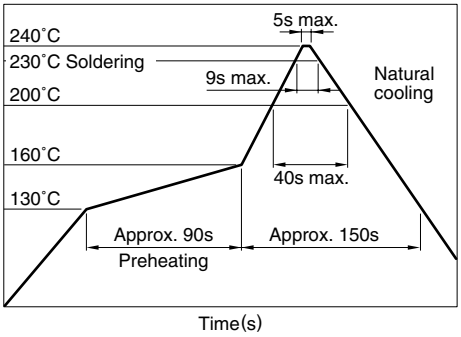
LCD driving circuits (DC-DC converters) such as notebook-sized personal computers, portable terminal equipment, game units

### SPECIFICATIONS

| | |
|---|---|
| Operating temperature range | –25 to +85°C<br>[Including self-temperature rise] |
| Storage temperature range | –40 to +85°C[Unit of products] |

### RECOMMENDED SOLDERING CONDITIONS

**REFLOW SOLDERING**




### PRODUCT IDENTIFICATION

| LDR | 655312 | T- | 2R2 | W |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |

(1) Series name

(2) DimensionsL×W×T

| | |
|---|---|
| 655312 | 6.5×5.3×1.2mm |

(3) Packaging style

| | |
|---|---|
| T | Taping(reel) |

(4) Inductance value

| | |
|---|---|
| 2R2 | 2.2µH |
| 100 | 10µH |

(5)Variation code

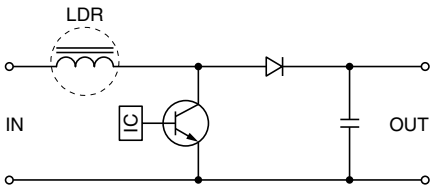
| | |
|---|---|
| W | Welding |

### PACKAGING STYLE AND QUANTITIES

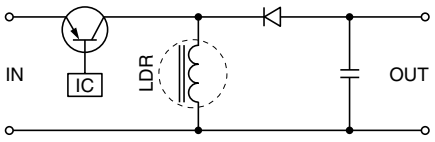
| Packaging style | Quantity |
|---|---|
| Taping | 3000 pieces/reel |

### APPLICATION EXAMPLES

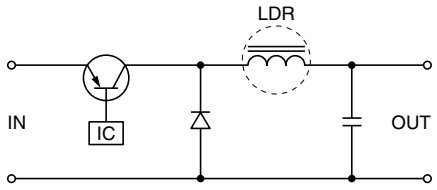
**Step-up chopper circuit**




**Inverting chopper circuit**




**Step-down chopper circuit**



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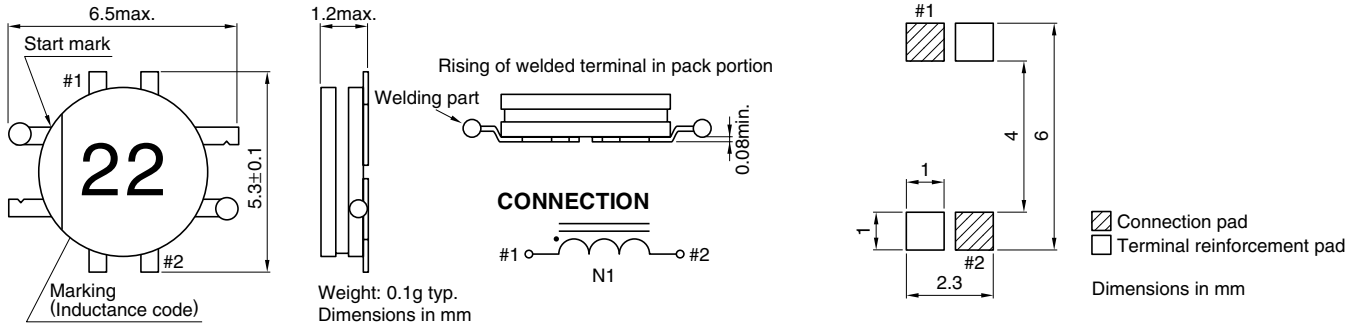
### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN




### ELECTRICAL CHARACTERISTICS

| Inductance (μH) | Inductance tolerance (%) | Test frequency L (kHz) | DC resistance (Ω)±20% | Rated current (A)* max. | Part No. |
|---|---|---|---|---|---|
| 2.2 | ±20 | 100 | 0.125 | 1.2 | LDR655312T-2R2W |
| 3.3 | ±20 | 100 | 0.155 | 0.96 | LDR655312T-3R3W |
| 4.7 | ±20 | 100 | 0.206 | 0.9 | LDR655312T-4R7W |
| 6.8 | ±20 | 100 | 0.24 | 0.8 | LDR655312T-6R8W |
| 10 | ±20 | 100 | 0.37 | 0.7 | LDR655312T-100W |
| 15 | ±20 | 100 | 0.46 | 0.6 | LDR655312T-150W |
| 22 | ±20 | 100 | 0.668 | 0.5 | LDR655312T-220W |
| 33 | ±20 | 100 | 1.1 | 0.42 | LDR655312T-330W |
| 47 | ±20 | 100 | 1.38 | 0.34 | LDR655312T-470W |

* Rated current: Value obtained when self-temperature has risen to 40°C.
• Test equipment Inductance: YHP 4284 LDR METER, or equivalent(Test frequency:100kHz/20mV)
Rdc: DIGITAL MILLIOHM METER VP-2941A MATSUSHITA, or equivalent

### TYPICAL ELECTRICAL CHARACTERISTICS
### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS