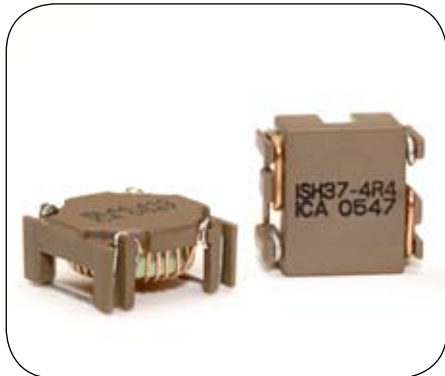


# ISL & ISH Series SMT Power Inductor



## Features

- Low Profile SMT Design
- Self-leaded for Improved Reliability
- Current Rating up to 14A
- Frequency Range up to 1MHz

## Applications

- DC/DC Converters
- Buck/Boost Converters
- Output Chokes



## Electrical Specifications

| Part Number | Inductance <sup>2</sup><br>@ 0 Adc<br>( $\mu$ H, typ.) | Inductance <sup>2</sup><br>@ Ispec<br>( $\mu$ H, typ.) | ( $\mu$ H, min.) | I <sub>SPEC</sub><br>(A) | DCR max<br>(m $\Omega$ ) | ET<br>(V-us) |
|-------------|--|--|------------------|--------------------------|--------------------------|--------------|
| ISL37-3R8   | 3.80   | 2.5  | 2.25             | 8.00                     | 8.30                     | 1.77         |
| ISL37-7R5   | 7.50   | 5.1  | 4.59             | 5.40                     | 17.70                    | 2.51         |
| ISL37-220   | 21.9   | 16.2   | 14.58            | 2.70                     | 72                       | 4.29         |
| ISL37-730   | 73.0   | 58.1   | 52.29            | 1.30                     | 290                      | 7.83         |
| ISL37-291   | 292  | 192  | 172.8            | 0.90                     | 560                      | 15.7         |
| ISL37-671   | 672  | 383  | 344.7            | 0.72                     | 862                      | 23.5         |
| ISH37-1R3   | 1.25   | 0.81   | 0.7              | 14.30                    | 2.5                      | 1.04         |
| ISH37-2R1   | 2.10   | 1.32   | 1.2              | 11.50                    | 4.0                      | 1.33         |
| ISH37-3R2   | 3.15   | 2.00   | 1.8              | 9.10                     | 6.3                      | 1.61         |
| ISH37-4R4   | 4.40   | 2.78   | 2.5              | 8.10                     | 7.9                      | 1.91         |
| ISL44-7R9   | 7.90   | 4.90   | 4.41             | 7.80                     | 12.4                     | 3.04         |
| ISL44-140   | 14.0   | 9.00   | 8.1              | 5.50                     | 28                       | 4.06         |
| ISL44-410   | 40.5   | 29.10  | 26.19            | 2.70                     | 100                      | 6.9          |
| ISL44-112   | 1134   | 645.00   | 580.5            | 0.74                     | 1250                     | 36.5         |

1. Electrical specifications at 25°C.
2. Tested at 100kHz.
3. Operating temperature range: -40°C to +130°C. Operating temperature is a combination of ambient temperature plus temperature rise.
4. Meets UL 94V-0.
5. Specifications shown are for an inductor with a 55°C temperature rise. The core loss is 10% of the copper loss when operating at 500kHz.
6. Please remember it is much easier to remove heat from a copper-loss dominated design than from a core-loss dominated design.

# ISL & ISH Series SMT Power Inductor

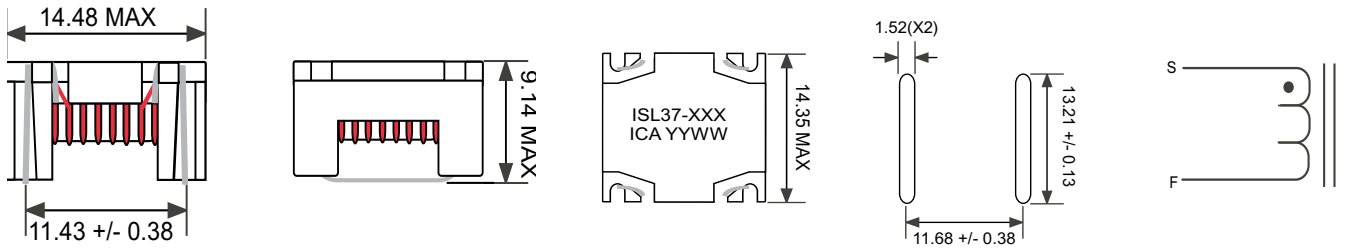


## Mechanical - ISL37

Packaging: Reel Diameter=13", Reel Width=32mm, Pieces/reel=300 pieces

### Recommended PCB Layout

### Schematic



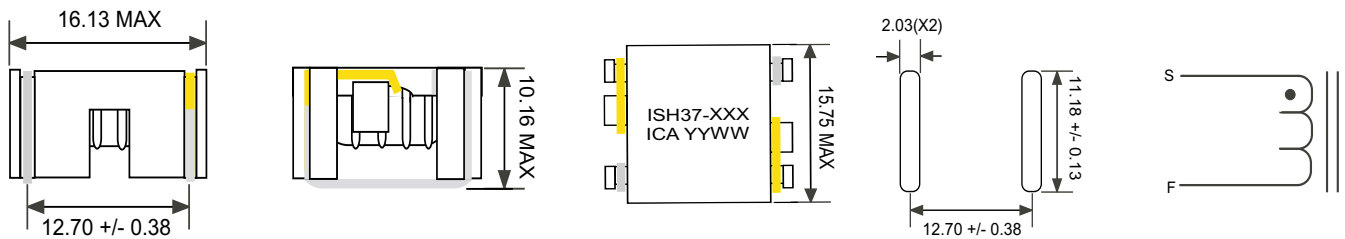
units: mm

## Mechanical - ISH37

Packaging: Reel Diameter=13", Reel Width=32mm, Pieces/reel=250 pieces

### Recommended PCB Layout

### Schematic



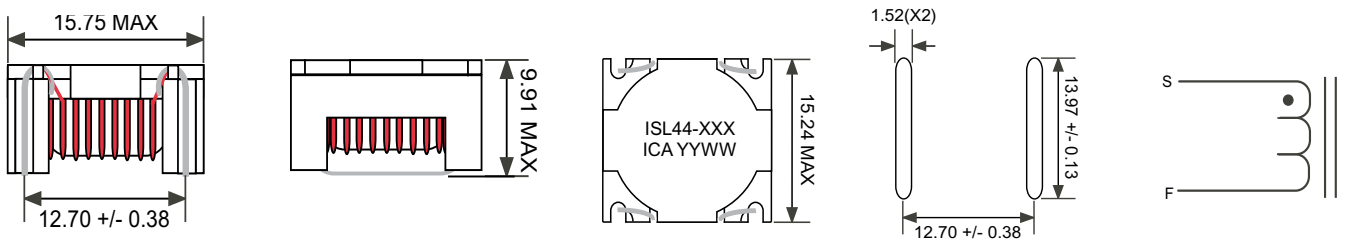
units: mm

## Mechanical - ISL44

Packaging: Reel Diameter=13", Reel Width=32mm, Pieces/reel=250 pieces

### Recommended PCB Layout

### Schematic



units: mm