

# SURFACE-MOUNT POWER INDUCTORS

ASPI SERIES : 1306HC, 5025, 5813, 4209CD, 6215CD



## FEATURES:

- Magnetic shielding
- Very small foot print
- Flat-top for pick & place
- Increased size selection guide

## OPTIONS:

- Tape & Reel is standard  
Bulk packaging available
- Tolerance: 20% is standard
- Custom design available

## APPLICATIONS:

- Ideal for Palm-Top and Laptop DC to DC converters
- PDA's flash memory
- Step-up, step-down converters

## STANDARD SPECIFICATIONS:

| Part No - XXX | L (μH) ±20% | DCR (Ω) Max |           |             |             | I <sub>DC</sub> (A) Max |           |           |             |             |
|---------------|-------------|-------------|-----------|-------------|-------------|-------------------------|-----------|-----------|-------------|-------------|
|               |             | ASPI 5025   | ASPI 5813 | ASPI 4209CD | ASPI 6215CD | ASPI 1306HC             | ASPI 5025 | ASPI 5813 | ASPI 4209CD | ASPI 6215CD |
| R47           | 0.47        | 0.0012      |           |             |             |                         | 63        |           |             |             |
| R56           | 0.56        |             |           |             |             |                         |           |           |             |             |
| R78           | 0.78        |             |           |             |             | 30                      |           |           |             |             |
| 1R0           | 1.00        |             |           |             |             | 27                      |           |           |             |             |
| 1R2           | 1.2         |             |           | 0.08        |             |                         |           |           | 2.10        |             |
| 1R5           | 1.5         |             |           | 0.10        |             | 25                      |           |           | 1.90        |             |
| 1R8           | 1.8         | 0.0048      |           |             |             |                         | 22        |           |             |             |
| 2R2           | 2.2         | 0.0050      |           | 0.12        |             | 20                      | 21        |           | 1.60        |             |
| 2R7           | 2.7         |             |           |             |             | 17                      |           |           |             |             |
| 3R3           | 3.3         |             |           | 0.16        |             | 17                      |           |           | 1.30        |             |
| 3R9           | 3.9         |             |           |             |             | 15                      |           |           |             |             |
| 4R7           | 4.7         |             | 0.17      | 0.20        | 0.15        | 13                      |           | 1.50      | 1.10        | 1.60        |
| 5R6           | 5.6         |             |           |             |             | 12                      |           |           |             |             |
| 6R8           | 6.8         |             | 0.23      | 0.32        | 0.17        | 11                      |           | 1.20      | 0.90        | 1.30        |
| 7R8           | 7.8         |             |           |             |             | 11                      |           |           |             |             |
| 8R2           | 8.2         |             |           |             |             | 10                      |           |           |             |             |
| 100           | 10          |             | 0.31      | 0.41        | 0.24        | 10                      |           | 0.90      | 0.85        | 1.00        |
| 150           | 15          |             |           | 0.55        | 0.30        | 8                       |           |           | 0.65        | 0.90        |
| 220           | 22          |             | 0.58      | 0.85        | 0.42        | 7                       |           | 0.60      | 0.50        | 0.70        |
| 330           | 33          |             | 0.90      | 1.3         | 0.55        | 5                       |           | 0.55      | 0.40        | 0.60        |
| 400           | 40          |             |           |             |             | 4.8                     |           |           |             |             |
| 470           | 47          |             | 0.97      | 1.8         | 0.77        | 4.2                     |           | 0.50      | 0.35        | 0.50        |
| 600           | 60          |             |           |             |             |                         |           |           |             |             |
| 680           | 68          |             | 2.00      | 2.5         | 1.10        | 3.8                     |           | 0.35      | 0.30        | 0.40        |
| 101           | 100         |             | 2.65      | 3.5         | 1.60        | 3.3                     |           | 0.30      | 0.25        | 0.30        |
| 121           | 120         |             |           |             |             |                         |           |           |             |             |
| 151           | 150         |             |           | 5.0         | 2.50        | 3.0                     |           |           | 0.18        | 0.25        |
| 221           | 220         |             | 5.50      | 7.0         | 3.65        |                         |           | 0.20      | 0.16        | 0.22        |
| 331           | 330         |             | 8.40      |             | 4.65        |                         |           | 0.16      |             | 0.18        |
| 471           | 470         |             | 11.2      | 15.0        | 6.75        |                         |           | 0.12      | 0.13        | 0.14        |
| 681           | 680         |             | 14.2      |             | 9.15        |                         |           | 0.10      |             | 0.12        |
| 102           | 1000        |             | 26.2      |             | 14.2        |                         |           | 0.09      |             | 0.10        |

## TECHNICAL INFORMATION:

- L Testing Frequency: 100KHz, 0.1VRMS
- Add -M for ±20% inductance tolerance, -T for tape and reel
- L drops 10% typical at IDC except ASPI-5025 is 20% typical
- Operating Temperature: -40°C to +85°C
- See SCD for detail electrical and mechanical specification

**Note:** All specifications subject to change without notice.

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| PART NUMBERS | DIMENSIONS : INCH / MM                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASPI-5025    | <p>Top view: <math>0.520 \pm 0.008</math> / <math>13.20 \pm 0.20</math> (width), <math>0.508 \pm 0.008</math> / <math>12.90 \pm 0.20</math> (height), <math>0.138 \pm 0.020</math> / <math>3.50 \pm 0.50</math> (lead width).<br/> Side view: <math>0.256 \pm 0.012</math> / <math>6.50 \pm 0.30</math> (thickness), <math>0.095 \pm 0.0060</math> / <math>2.40 \pm 0.15</math> (lead height).<br/> Bottom view: <math>0.138 \pm 0.020</math> / <math>3.50 \pm 0.50</math> (lead width).</p> |
| ASPI-5813    | <p>Top view: <math>0.205</math> / <math>5.20</math> (width), <math>0.228</math> / <math>5.80</math> (height).<br/> Side view: <math>0.051</math> / <math>1.30</math> (thickness), <math>0.110</math> / <math>2.80</math> (lead height).<br/> Bottom view: <math>0.064</math> / <math>1.62</math> (lead width).</p>                                                                                                                                                                           |
| ASPI-4209CD  | <p>Top view: <math>0.098</math> / <math>2.50</math> (width), <math>0.033</math> / <math>0.85</math> (height), <math>0.260</math> Max / <math>6.60</math> (total width).<br/> Side view: <math>0.040</math> Max / <math>1.00</math> (thickness).<br/> Bottom view: <math>0.220</math> Max / <math>5.60</math> (lead width).</p>                                                                                                                                                               |
| ASPI-6215CD  | <p>Top view: <math>0.020</math> / <math>5.10</math> (width), <math>0.047</math> / <math>1.20</math> (height), <math>0.362</math> Max / <math>9.20</math> (total width).<br/> Side view: <math>0.065</math> Max / <math>1.65</math> (thickness).<br/> Bottom view: <math>0.311</math> Max / <math>7.90</math> (lead width).</p>                                                                                                                                                               |

• Tolerance: X.XX =  $\pm 0.030$ , X.XXX =  $\pm 0.015$

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