

# SHIELDED POWER INDUCTOR

ASPI-1207S-xxx



**RoHS**  
Compliant



12.0 x 12.0 x 8.0 mm

## FEATURES:

- High saturation
- Magnetic shielding
- Very small footprint
- Flat-top for pick and place
- Low resistance to keep power loss minimum

## APPLICATIONS:

- Palm-top and laptop
- LCD TV
- Power line DC to DC converters used in hard drive, notebook computer

## ELECTRICAL SPECIFICATIONS:

### PARAMETERS

|                       |                                                 |
|-----------------------|-------------------------------------------------|
| ABRACON P/N           | ASPI-1207S-xxx                                  |
| Operating Temperature | -40°C to +125°C (including self-generated heat) |
| Storage Temperature   | -40°C to +125°C                                 |

| Part Number | L<br>( $\mu$ H) | Tolerance<br>% | Test<br>Conditions<br>Hz, V | R <sub>DC</sub> | I <sub>DC</sub> |
|-------------|-----------------|----------------|-----------------------------|-----------------|-----------------|
|             |                 |                |                             | ( $\Omega$ )Max | (A)Max          |
| 1R0         | 1.0             | M              | 100k, 0.25V                 | 0.007           | 10.00           |
| 1R2         | 1.2             | N              | 100k, 0.25V                 | 0.007           | 9.80            |
| 1R8         | 1.8             | M              | 100k, 0.25V                 | 0.011           | 8.50            |
| 2R2         | 2.2             | M              | 100k, 0.25V                 | 0.010           | 8.50            |
| 2R4         | 2.4             | M              | 100k, 0.25V                 | 0.012           | 8.00            |
| 2R7         | 2.7             | M              | 100k, 0.25V                 | 0.012           | 8.00            |
| 3R3         | 3.3             | M              | 100k, 0.25V                 | 0.013           | 7.80            |
| 3R5         | 3.5             | M              | 100k, 0.25V                 | 0.014           | 7.50            |
| 4R7         | 4.7             | M              | 100k, 0.25V                 | 0.016           | 6.80            |
| 5R6         | 5.6             | M              | 100k, 0.25V                 | 0.014           | 6.70            |
| 6R1         | 6.1             | M              | 100k, 0.25V                 | 0.018           | 6.60            |
| 6R8         | 6.8             | M              | 100k, 0.25V                 | 0.014           | 6.40            |
| 7R6         | 7.6             | M              | 100k, 0.25V                 | 0.020           | 5.90            |
| 8R2         | 8.2             | M              | 100k, 0.25V                 | 0.016           | 6.32            |
| 100         | 10              | M              | 1k, 0.25V                   | 0.022           | 5.40            |
| 120         | 12              | M              | 1k, 0.25V                   | 0.024           | 4.90            |
| 150         | 15              | M              | 1k, 0.25V                   | 0.027           | 4.50            |
| 180         | 18              | M              | 1k, 0.25V                   | 0.039           | 3.90            |
| 220         | 22              | M              | 1k, 0.25V                   | 0.043           | 3.60            |
| 270         | 27              | M              | 1k, 0.25V                   | 0.046           | 3.40            |
| 330         | 33              | M              | 1k, 0.25V                   | 0.065           | 3.00            |
| 390         | 39              | M              | 1k, 0.25V                   | 0.073           | 2.75            |
| 470         | 47              | M              | 1k, 0.25V                   | 0.100           | 2.50            |
| 560         | 56              | M              | 1k, 0.25V                   | 0.110           | 2.35            |
| 680         | 68              | M              | 1k, 0.25V                   | 0.140           | 2.10            |
| 820         | 82              | M              | 1k, 0.25V                   | 0.160           | 1.95            |
| 101         | 100             | M              | 1k, 0.25V                   | 0.220           | 1.70            |
| 121         | 120             | M              | 1k, 0.25V                   | 0.250           | 1.60            |
| 151         | 150             | M              | 1k, 0.25V                   | 0.280           | 1.42            |
| 181         | 180             | M              | 1k, 0.25V                   | 0.350           | 1.30            |
| 221         | 220             | M              | 1k, 0.25V                   | 0.390           | 1.16            |
| 271         | 270             | M              | 1k, 0.25V                   | 0.560           | 1.06            |
| 331         | 330             | M              | 1k, 0.25V                   | 0.640           | 0.95            |
| 391         | 390             | M              | 1k, 0.25V                   | 0.700           | 0.88            |
| 471         | 470             | M              | 1k, 0.25V                   | 0.980           | 0.79            |
| 561         | 560             | M              | 1k, 0.25V                   | 1.070           | 0.73            |
| 681         | 680             | M              | 1k, 0.25V                   | 1.460           | 0.67            |
| 821         | 820             | M              | 1k, 0.25V                   | 1.640           | 0.60            |
| 102         | 1000            | M              | 1k, 0.25V                   | 1.820           | 0.55            |
| 222         | 2200            | M              | 100k, 0.25V                 | 3.250           | 0.65            |

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12.0 x 12.0 x 8.0 mm

## PART IDENTIFICATION:

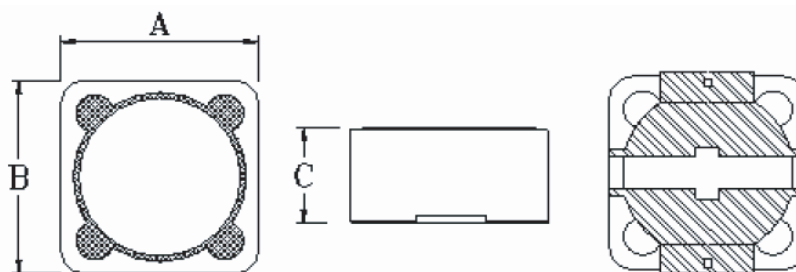
ASPI-1207S -     -  

| Inductance Code                           |
|-------------------------------------------|
| Please refer to the Electrical Spec Table |

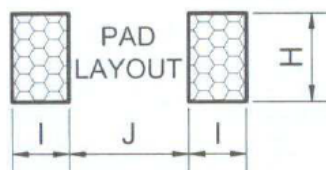
| Tolerance                      |
|--------------------------------|
| M: $\pm 20\%$<br>N: $\pm 30\%$ |

| Packaging                        |
|----------------------------------|
| T: Tape and Reel (400pcs / reel) |

## MECHANICAL INFORMATION:



| Part#          | A                 | B                 | C          |
|----------------|-------------------|-------------------|------------|
| ASPI-1207S-xxx | $0.472 \pm 0.012$ | $0.472 \pm 0.012$ | 0.315 max. |
|                | (12.0 $\pm$ 0.3)  | (12.0 $\pm$ 0.3)  | (8.0 max.) |



| Part#          | D          | E          | F          |
|----------------|------------|------------|------------|
| ASPI-1207S-xxx | 0.110 ref. | 0.276 ref. | 0.213 ref. |
|                | (2.8 ref.) | (7.0 ref.) | (5.4 ref.) |

Dimension: mm

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ASPI-1207S-xxx

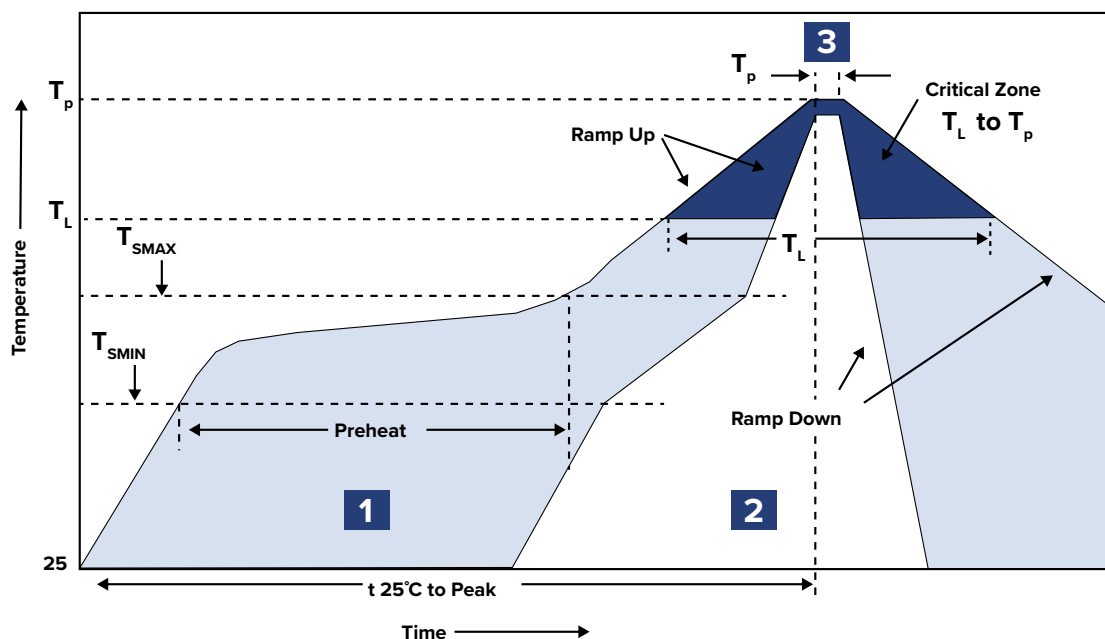


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12.0 x 12.0 x 8.0 mm

## REFLOW PROFILE:



| Zone | Description    | Temperature                                                                | Time             |
|------|----------------|----------------------------------------------------------------------------|------------------|
| 1    | Preheat / Soak | $T_{SMIN} \sim T_{SMAX}$<br>$120^{\circ}\text{C} \sim 180^{\circ}\text{C}$ | 50 ~ 150 sec.    |
| 2    | Reflow         | $T_L$<br>$217^{\circ}\text{C}$                                             | 70 sec.          |
| 3    | Peak heat      | $T_p$<br>$250^{\circ}\text{C} \sim 260^{\circ}\text{C}$                    | 10 ~ 30 sec. MAX |

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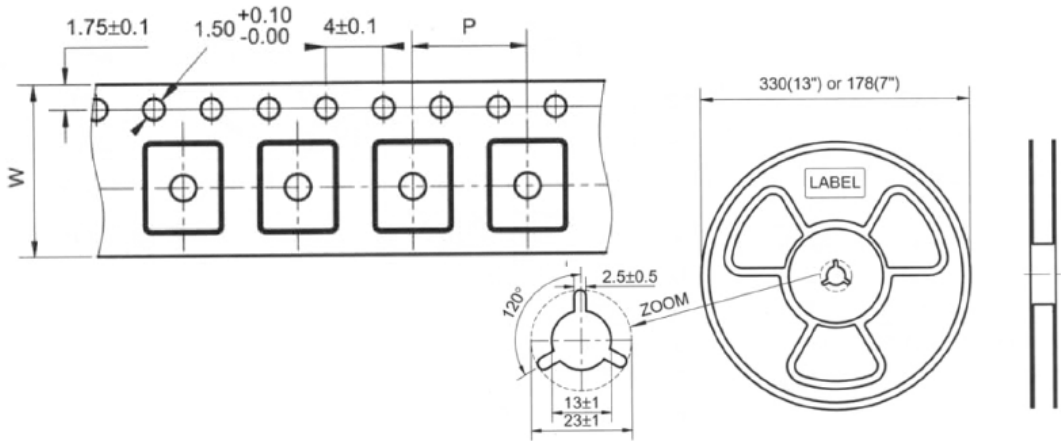
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12.0 x 12.0 x 8.0 mm

## PACKAGING:

T: 400pcs / reel



| Series     | W  | P  |
|------------|----|----|
| ASPI-1207S | 24 | 16 |

Dimension: mm

**ATTENTION:** Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.