Elec & Eltek依利安達
E & E Magnetic Products Limited

# SHIELDED SURFACE MOUNT POWER INDUCTOR

SIS12557ZX Series

- Low Profile
- High power
- DC-DC converter for driving PCs at high speed On-board power supply module for DC-DC converters applications
- Operating temperature range: -40°C to +125°C.
- RoHS compliant

## ELECTRICAL SPECIFICATION @ 25°C

| Part Number | Initial Inductance [3] | | Inductance at flat point [4] | | Saturation Current [5] (A) Min | | DCR (mΩ) Max | Heat Current [6] ΔT = 40°C (A) | Marking (XYYY) |
|---|---|---|---|---|---|---|---|---|---|
| | Lo(uH) | Tolerance(%) | L1(uH) | Tolerance(%) | @25°C | @100°C | | | |
| SIS12557HN-1R2R | 2.3 | ±30 | 1.2 | ±30 | 14.3 | 11.7 | 2.24 | 14.2 | HN1R2 |
| SIS12557HN-2R0R | 3.5 | ±30 | 2.0 | ±30 | 10.7 | 8.7 | 3.30 | 12.5 | HN2R0 |
| SIS12557HP-3R2R | 4.8 | ±25 | 3.2 | ±25 | 8.6 | 7.1 | 4.92 | 10.8 | HP3R2 |
| SIS12557HN-4R6R | 6.6 | ±25 | 4.6 | ±30 | 7.3 | 6.0 | 6.48 | 9.3 | HN4R6 |
| SIS12557HP-6R4R | 8.3 | ±25 | 6.4 | ±25 | 6.2 | 5.2 | 8.64 | 7.9 | HP6R4 |
| SIS12557HP-8R2R | 10.4 | ±25 | 8.2 | ±25 | 5.6 | 4.7 | 10.90 | 7.2 | HP8R2 |
| SIS12557HP-102R | 12.5 | ±25 | 10.2 | ±25 | 4.7 | 4.0 | 13.30 | 6.5 | HP102 |
| SIS12557SN-1R0R | 1.9 | ±30 | 1.0 | ±30 | 19.4 | 15.4 | 2.24 | 14.2 | SN1R0 |
| SIS12557SN-1R6R | 2.8 | ±30 | 1.6 | ±30 | 14.9 | 12.2 | 3.30 | 12.5 | SN1R6 |
| SIS12557SN-2R5R | 3.6 | ±30 | 2.5 | ±30 | 11.3 | 9.3 | 4.92 | 10.8 | SN2R5 |
| SIS12557SN-3R5R | 4.9 | ±30 | 3.5 | ±30 | 9.5 | 8.0 | 6.48 | 9.3 | SN3R5 |
| SIS12557LN-0R8R | 1.8 | ±30 | 0.8 | ±30 | 25.2 | 20.0 | 2.24 | 14.2 | LN0R8 |
| SIS12557LN-1R3R | 2.5 | ±30 | 1.3 | ±30 | 18.6 | 15.8 | 3.30 | 12.5 | LN1R3 |
| SIS12557LN-2R0R | 3.1 | ±30 | 2.0 | ±30 | 15.1 | 12.1 | 4.92 | 10.8 | LN2R0 |
| SIS12557LN-2R9R | 4.1 | ±30 | 2.9 | ±30 | 12.0 | 10.0 | 6.48 | 9.3 | LN2R9 |
| SIS12557LM-4R1R | 5.0 | ±20 | 4.1 | ±20 | 10.8 | 8.7 | 8.64 | 7.9 | LM4R1 |

Notes:

1. Ordering Information: SIS12557Xa - bbbRc.

   SIS12557X = Product Type(X = H, S, L).
   a = Tolerance of L1 Inductance (M= ±20%, P = 25%, N= ±30%).
   bbb = Inductance value in uH (i.e. 3R2 = 3.2uH; 102 = 10.2uH).
   R = Internal Control Code.
   c = Packaging Code (U = Tape & Reel Packaging in 7 inch Reel).

2. Inductance is tested at 100kHz.
3. L0 is the initial inductance when Idc is to 0A.
4. L1 is the inductance at flat point where the inductance curve becomes flat when Idc is increased.
5. Saturation current is the current value that inductance (L1) decreases to 80% of the initial value.
6. Heat current is the actual value of the current at which the temperature rise of coil becomes 40°C when DC current is blown.
7. The part temperature (ambient temperature + temperature rise) should not exceed the upper limit of the Operating temperature under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.

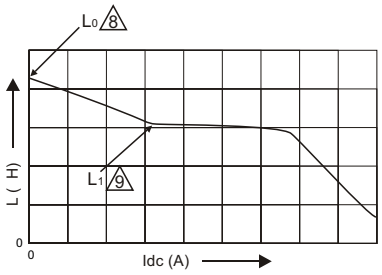


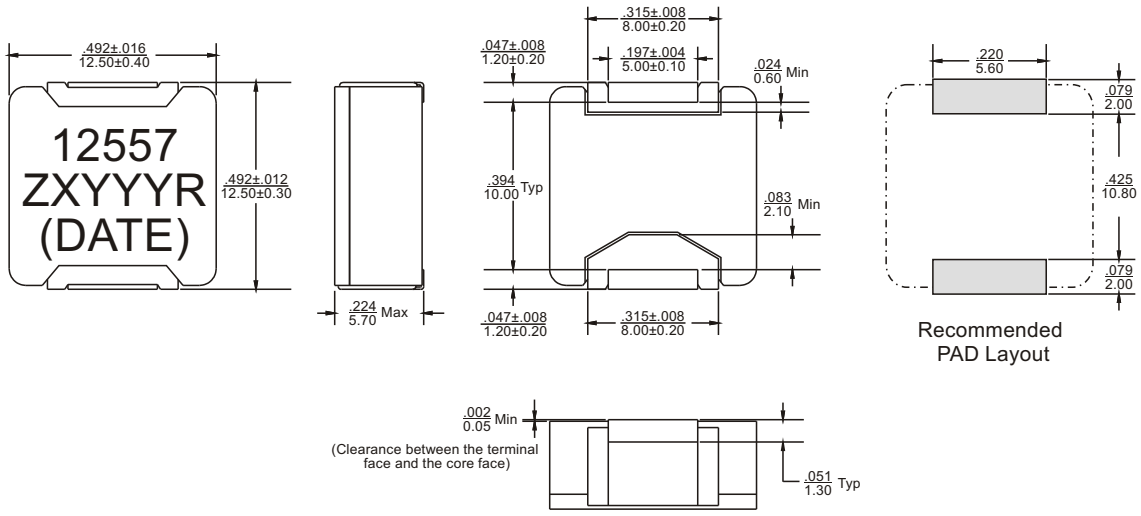
Figure : DC Bias Characteristic

1/F., Harbour View 1, No.12 Science Park East Avenue, Phase II, Hong Kong Science Park, Shatin, N.T. Hong Kong
Tel: (852) 2954 3333 • Fax: (852) 2954 3304

# SHIELDED SURFACE MOUNT POWER INDUCTOR

SIS12557ZX Series

## MECHANICAL DIMENSIONS

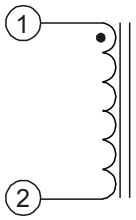



Notes:

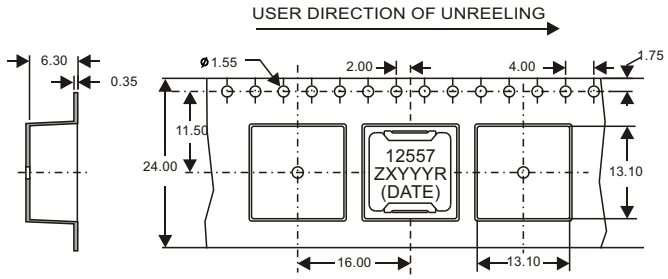
8. All dimensions are specified in $\frac{\text{inches}}{\text{mm}}$ with higher precedence in mm.
9. Unless otherwise specified, all tolerances are $\pm\frac{.010}{0.25}$.

| | | |
|---|---|---|
| Weight (in gram) | : | 3.0 typ. |
| Tape & Reel | : | 550 / reel |

## SCHEMATIC




## PACKAGING




## FOR MORE INFORMATION, PLEASE CONTACT

HEADQUARTER
1/F., Harbour View 1, No.12 Science Park East Avenue,
Phase II, Hong Kong Science Park, Shatin, N.T.
Hong Kong
Tel: (852) 2954 3333 Fax: (852) 2954 3304
Email: eempl@eleceltek.com
Website: http://www.eleceltek.com / www.eemagnetic.com