

# SMT Shielded Power Inductors

## GSRH124 / GSRH125 / GSRH127 / GSRH129

### Features (特長)

- Magnetically shielded construction (閉磁路構造設計)
- Compact and thin (輕便薄小)
- Large Current and Low DCR (大電流低直流阻抗)

### Applications (用途)

- VTR, OA equipment, LCD television set, Notebook, portable communication equipments, DC/DC converters, etc.. (錄放影機、OA 儀器、液晶電視、筆記型電腦、小型通信機器、直流轉換器等)



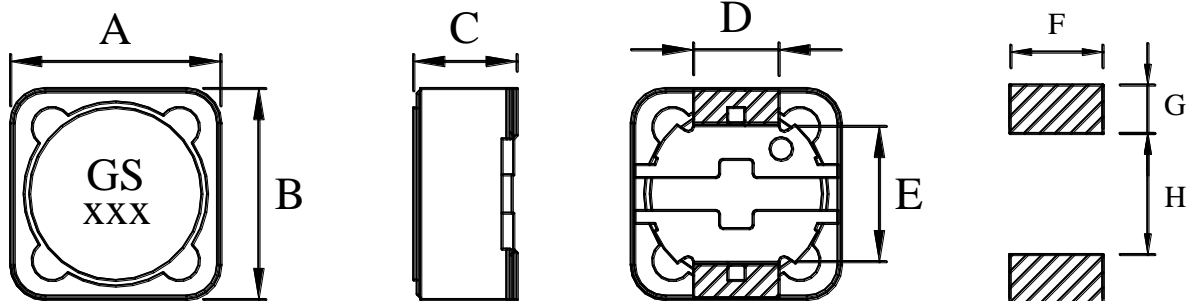
### Product Identification (產品識別)

GSRH124 - \_\_\_\_\_ (Ex. GSRH124-3R9N)

1                      2                      3

1. SMT Shielded Power Inductors (閉磁式功率電感)  
(GSRH124, GSRH125, GSRH127, GSRH129)
2. Inductance (電感值)
3. Tolerance (誤差值) ( 參照表 K 10%, L 15%, M 20%, N 30%)

### Configurations & Dimensions (結構圖及規格尺寸)



Unit In mm

| Type (型式) | A (max)  | B (max)  | C (max) | D ±0.2 | E ±0.2 | F   | G   | H   |
|-----------|----------|----------|---------|--------|--------|-----|-----|-----|
| GSRH124   | 12.3     | 12.3     | 4.5     | 5.0    | 7.6    | 5.4 | 2.9 | 7.0 |
| GSRH125   | 12.3     | 12.3     | 6.0     | 5.0    | 7.6    | 5.4 | 2.9 | 7.0 |
| GSRH127   | 12.3     | 12.3     | 8.0     | 5.0    | 7.6    | 5.4 | 3.0 | 7.0 |
| GSRH129   | 12.2±0.3 | 12.2±0.3 | 10.0    | 5.0    | 7.6    | 5.4 | 3.0 | 7.0 |

♣ Design as Customer's Requested Specifications. (可依客戶特殊需求設計)

# SMT Shielded Power Inductors

## GSRH124

Electrical Characteristics for GSRH124 Series [GSRH124 系列電子特性規格]

| Part Number<br>產品料號 | Inductance<br>( $\mu$ H)<br>電感值 (L) | Test Freq.<br>(Hz)<br>測試頻率 | DCR ( $\Omega$ )<br>(max)<br>直流阻抗 | IDC (A)<br>(max)<br>定格電流 |
|---------------------|-------------------------------------|----------------------------|-----------------------------------|--------------------------|
| GSRH124 – 3R9N      | 3.90                                | 100K                       | 0.015                             | 6.50                     |
| GSRH124 – 4R7N      | 4.70                                | 100K                       | 0.018                             | 5.70                     |
| GSRH124 – 6R8N      | 6.80                                | 100K                       | 0.023                             | 4.90                     |
| GSRH124 – 8R2N      | 8.20                                | 100K                       | 0.026                             | 4.60                     |
| GSRH124 – 100M      | 10.00                               | 100K                       | 0.028                             | 4.50                     |
| GSRH124 – 120M      | 12.00                               | 100K                       | 0.038                             | 4.00                     |
| GSRH124 – 150M      | 15.00                               | 100K                       | 0.050                             | 3.20                     |
| GSRH124 – 180M      | 18.00                               | 100K                       | 0.057                             | 3.10                     |
| GSRH124 – 220M      | 22.00                               | 100K                       | 0.066                             | 2.90                     |
| GSRH124 – 270M      | 27.00                               | 100K                       | 0.080                             | 2.80                     |
| GSRH124 – 330M      | 33.00                               | 100K                       | 0.097                             | 2.70                     |
| GSRH124 – 390M      | 39.00                               | 100K                       | 0.132                             | 2.10                     |
| GSRH124 – 470M      | 47.00                               | 100K                       | 0.160                             | 1.90                     |
| GSRH124 – 560M      | 56.00                               | 100K                       | 0.190                             | 1.80                     |
| GSRH124 – 680M      | 68.00                               | 100K                       | 0.220                             | 1.50                     |
| GSRH124 – 820M      | 82.00                               | 100K                       | 0.260                             | 1.30                     |
| GSRH124 – 101M      | 100.00                              | 100K                       | 0.308                             | 1.20                     |
| GSRH124 – 121M      | 120.00                              | 100K                       | 0.380                             | 1.10                     |
| GSRH124 – 151M      | 150.00                              | 100K                       | 0.530                             | 0.95                     |
| GSRH124 – 181M      | 180.00                              | 100K                       | 0.620                             | 0.85                     |
| GSRH124 – 221M      | 220.00                              | 100K                       | 0.700                             | 0.80                     |
| GSRH124 – 271M      | 270.00                              | 100K                       | 0.870                             | 0.60                     |
| GSRH124 – 331M      | 330.00                              | 100K                       | 0.990                             | 0.50                     |

※Test Freq. : 100KHz / 0.1V.

※Operating Temp. :  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

※Inductance drop=25% typ. at IDC.

※Storage Temperature&Humidity :  $\leq 40^{\circ}\text{C}$  & 70% RH maximum

# SMT Shielded Power Inductors

## GSRH125

Electrical Characteristics for GSRH125 Series [GSRH125 系列電子特性規格]

| Part Number<br>產品料號 | Inductance<br>( $\mu$ H)<br>電感值 (L) | Test Freq.<br>(Hz)<br>測試頻率 | DCR ( $\Omega$ )<br>(max)<br>直流阻抗 | IDC (A)<br>(max)<br>定格電流 |
|---------------------|-------------------------------------|----------------------------|-----------------------------------|--------------------------|
| GSRH125 – 1R3N      | 1.30                                | 7.96M                      | 0.012                             | 8.00                     |
| GSRH125 – 2R1N      | 2.10                                | 7.96M                      | 0.014                             | 7.00                     |
| GSRH125 – 3R1N      | 3.10                                | 7.96M                      | 0.017                             | 6.00                     |
| GSRH125 – 4R4N      | 4.40                                | 7.96M                      | 0.020                             | 5.00                     |
| GSRH125 – 5R8N      | 5.80                                | 7.96M                      | 0.021                             | 4.40                     |
| GSRH125 – 7R5N      | 7.50                                | 7.96M                      | 0.024                             | 4.20                     |
| GSRH125 – 100M      | 10.00                               | 1K                         | 0.025                             | 4.00                     |
| GSRH125 – 120M      | 12.00                               | 1K                         | 0.027                             | 3.50                     |
| GSRH125 – 150M      | 15.00                               | 1K                         | 0.030                             | 3.30                     |
| GSRH125 – 180M      | 18.00                               | 1K                         | 0.034                             | 3.00                     |
| GSRH125 – 220M      | 22.00                               | 1K                         | 0.036                             | 2.80                     |
| GSRH125 – 270M      | 27.00                               | 1K                         | 0.051                             | 2.30                     |
| GSRH125 – 330M      | 33.00                               | 1K                         | 0.057                             | 2.10                     |
| GSRH125 – 390M      | 39.00                               | 1K                         | 0.068                             | 2.00                     |
| GSRH125 – 470M      | 47.00                               | 1K                         | 0.075                             | 1.80                     |
| GSRH125 – 560M      | 56.00                               | 1K                         | 0.110                             | 1.70                     |
| GSRH125 – 680M      | 68.00                               | 1K                         | 0.120                             | 1.50                     |
| GSRH125 – 820M      | 82.00                               | 1K                         | 0.140                             | 1.40                     |
| GSRH125 – 101M      | 100.00                              | 1K                         | 0.160                             | 1.30                     |
| GSRH125 – 121M      | 120.00                              | 1K                         | 0.170                             | 1.10                     |
| GSRH125 – 151M      | 150.00                              | 1K                         | 0.230                             | 1.00                     |
| GSRH125 – 181M      | 180.00                              | 1K                         | 0.290                             | 0.90                     |
| GSRH125 – 221M      | 220.00                              | 1K                         | 0.400                             | 0.80                     |
| GSRH125 – 271M      | 270.00                              | 1K                         | 0.460                             | 0.75                     |
| GSRH125 – 331M      | 330.00                              | 1K                         | 0.510                             | 0.68                     |
| GSRH125 – 391M      | 390.00                              | 1K                         | 0.690                             | 0.65                     |
| GSRH125 – 471M      | 470.00                              | 1K                         | 0.770                             | 0.58                     |
| GSRH125 – 561M      | 560.00                              | 1K                         | 0.860                             | 0.54                     |
| GSRH125 – 681M      | 680.00                              | 1K                         | 1.200                             | 0.48                     |
| GSRH125 – 821M      | 820.00                              | 1K                         | 1.340                             | 0.43                     |
| GSRH125 – 102M      | 1000.00                             | 1K                         | 1.530                             | 0.40                     |

※100~102 Test Freq. : 1KHz / 0.25V.

※Operating Temp. :  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

※Inductance drop=10% typ. at IDC.

※Storage Temperature&Humidity :  $\leq 40^{\circ}\text{C}$  & 70% RH maximum

# SMT Shielded Power Inductors

## GSRH127

Electrical Characteristics for GSRH127 Series [GSRH127 系列電子特性規格]

| Part Number<br>產品料號 | Inductance<br>( $\mu$ H)<br>電感值(L) | Test Freq.<br>(Hz)<br>測試頻率 | DCR ( $\Omega$ )<br>(max)<br>直流阻抗 | IDC (A)<br>(max)<br>定格電流 |
|---------------------|------------------------------------|----------------------------|-----------------------------------|--------------------------|
| GSRH127 - 1R2N      | 1.20                               | 100K                       | 0.0070                            | 9.80                     |
| GSRH127 - 2R4N      | 2.40                               | 100K                       | 0.0115                            | 8.00                     |
| GSRH127 - 3R5N      | 3.50                               | 100K                       | 0.0135                            | 7.50                     |
| GSRH127 - 4R7N      | 4.70                               | 100K                       | 0.0158                            | 6.80                     |
| GSRH127 - 6R1N      | 6.10                               | 100K                       | 0.0176                            | 6.60                     |
| GSRH127 - 7R6N      | 7.60                               | 100K                       | 0.0200                            | 5.90                     |
| GSRH127 - 100M      | 10.00                              | 1K                         | 0.0216                            | 5.40                     |
| GSRH127 - 120M      | 12.00                              | 1K                         | 0.0243                            | 4.90                     |
| GSRH127 - 150M      | 15.00                              | 1K                         | 0.0270                            | 4.50                     |
| GSRH127 - 180M      | 18.00                              | 1K                         | 0.0392                            | 3.90                     |
| GSRH127 - 220M      | 22.00                              | 1K                         | 0.0432                            | 3.60                     |
| GSRH127 - 270M      | 27.00                              | 1K                         | 0.0459                            | 3.40                     |
| GSRH127 - 330M      | 33.00                              | 1K                         | 0.0648                            | 3.00                     |
| GSRH127 - 390M      | 39.00                              | 1K                         | 0.0729                            | 2.75                     |
| GSRH127 - 470M      | 47.00                              | 1K                         | 0.100                             | 2.50                     |
| GSRH127 - 560M      | 56.00                              | 1K                         | 0.110                             | 2.35                     |
| GSRH127 - 680M      | 68.00                              | 1K                         | 0.140                             | 2.10                     |
| GSRH127 - 820M      | 82.00                              | 1K                         | 0.160                             | 1.95                     |
| GSRH127 - 101M      | 100.00                             | 1K                         | 0.220                             | 1.70                     |
| GSRH127 - 121M      | 120.00                             | 1K                         | 0.250                             | 1.60                     |
| GSRH127 - 151M      | 150.00                             | 1K                         | 0.280                             | 1.42                     |
| GSRH127 - 181M      | 180.00                             | 1K                         | 0.350                             | 1.30                     |
| GSRH127 - 221M      | 220.00                             | 1K                         | 0.390                             | 1.16                     |
| GSRH127 - 271M      | 270.00                             | 1K                         | 0.560                             | 1.06                     |
| GSRH127 - 331M      | 330.00                             | 1K                         | 0.640                             | 0.95                     |
| GSRH127 - 391M      | 390.00                             | 1K                         | 0.700                             | 0.88                     |
| GSRH127 - 471M      | 470.00                             | 1K                         | 0.980                             | 0.79                     |
| GSRH127 - 561M      | 560.00                             | 1K                         | 1.070                             | 0.73                     |
| GSRH127 - 681M      | 680.00                             | 1K                         | 1.460                             | 0.67                     |
| GSRH127 - 821M      | 820.00                             | 1K                         | 1.640                             | 0.60                     |
| GSRH127 - 102M      | 1000.00                            | 1K                         | 1.820                             | 0.55                     |

※1R2 ~ 7R6 Test Freq. : 100KHz / 0.1V ; 100 ~ 102 Test Freq. : 1KHz / 0.25V.

※Operating Temp. : -40°C ~ +125°C

※Inductance drop=10% typ. at IDC

※Storage Temperature&Humidity :  $\leq$  40°C & 70% RH maximum

# SMT Shielded Power Inductors

## GSRH129

Electrical Characteristics for GSRH129 Series [GSRH129 系列電子特性規格]

| Part Number<br>產品料號 | Inductance<br>( $\mu$ H)<br>電感值 (L) | Test Freq.<br>(Hz)<br>測試頻率 | DCR ( $\Omega$ )<br>(max)<br>直流阻抗 | Isat (A)<br>(max)<br>定格電流 | Irms (A)<br>(max)<br>溫昇電流 |
|---------------------|-------------------------------------|----------------------------|-----------------------------------|---------------------------|---------------------------|
| GSRH129 – 1R5N      | 1.50                                | 100K                       | 0.0047                            | 16.0                      | 14.00                     |
| GSRH129 – 2R4N      | 2.40                                | 100K                       | 0.0057                            | 15.0                      | 12.00                     |
| GSRH129 – 3R3N      | 3.30                                | 100K                       | 0.0086                            | 14.0                      | 11.00                     |
| GSRH129 – 5R0N      | 5.00                                | 100K                       | 0.0105                            | 11.0                      | 10.00                     |
| GSRH129 – 6R8N      | 6.80                                | 100K                       | 0.0132                            | 10.0                      | 9.00                      |
| GSRH129 – 8R2N      | 8.20                                | 100K                       | 0.0153                            | 8.20                      | 8.20                      |
| GSRH129 – 100M      | 10.00                               | 1K                         | 0.0180                            | 7.50                      | 7.50                      |
| GSRH129 – 120M      | 12.00                               | 1K                         | 0.0197                            | 7.00                      | 7.00                      |
| GSRH129 – 150M      | 15.00                               | 1K                         | 0.0242                            | 6.00                      | 6.00                      |
| GSRH129 – 180M      | 18.00                               | 1K                         | 0.0312                            | 5.50                      | 5.50                      |
| GSRH129 – 220M      | 22.00                               | 1K                         | 0.0390                            | 5.00                      | 5.00                      |
| GSRH129 – 270M      | 27.00                               | 1K                         | 0.0450                            | 4.50                      | 4.50                      |
| GSRH129 – 330M      | 33.00                               | 1K                         | 0.0500                            | 4.00                      | 4.00                      |
| GSRH129 – 390M      | 39.00                               | 1K                         | 0.0592                            | 3.80                      | 3.80                      |
| GSRH129 – 470M      | 47.00                               | 1K                         | 0.0689                            | 3.50                      | 3.50                      |
| GSRH129 – 560M      | 56.00                               | 1K                         | 0.0790                            | 3.20                      | 3.20                      |
| GSRH129 – 680M      | 68.00                               | 1K                         | 0.0878                            | 3.00                      | 3.00                      |
| GSRH129 – 820M      | 82.00                               | 1K                         | 0.1100                            | 2.60                      | 2.60                      |
| GSRH129 – 101M      | 100.00                              | 1K                         | 0.1400                            | 2.20                      | 2.20                      |
| GSRH129 – 121M      | 120.00                              | 1K                         | 0.1600                            | 2.00                      | 2.00                      |
| GSRH129 – 151M      | 150.00                              | 1K                         | 0.2000                            | 1.80                      | 1.80                      |
| GSRH129 – 181M      | 180.00                              | 1K                         | 0.2700                            | 1.60                      | 1.60                      |
| GSRH129 – 221M      | 220.00                              | 1K                         | 0.3000                            | 1.50                      | 1.50                      |
| GSRH129 – 271M      | 270.00                              | 1K                         | 0.4000                            | 1.30                      | 1.30                      |
| GSRH129 – 331M      | 330.00                              | 1K                         | 0.4500                            | 1.20                      | 1.20                      |
| GSRH129 – 391M      | 390.00                              | 1K                         | 0.5500                            | 1.10                      | 1.10                      |
| GSRH129 – 471M      | 470.00                              | 1K                         | 0.6000                            | 1.00                      | 1.00                      |
| GSRH129 – 561M      | 560.00                              | 1K                         | 0.7000                            | 0.90                      | 0.90                      |
| GSRH129 – 681M      | 680.00                              | 1K                         | 0.8400                            | 0.82                      | 0.82                      |
| GSRH129 – 821M      | 820.00                              | 1K                         | 1.0600                            | 0.80                      | 0.80                      |
| GSRH129 – 102M      | 1000.00                             | 1K                         | 1.2700                            | 0.76                      | 0.76                      |

※1R5 ~ 8R2 Test Freq. : 100KHz / 0.1V.; 100 ~ 102 Test Freq. : 1KHz / 0.25V.

※Operating Temp. :  $-40^{\circ}\text{C}$  ~  $+125^{\circ}\text{C}$

※Inductance drop=20% typ. at Isat.

※ $\Delta T=40^{\circ}\text{C}$  rise at Irms.

※Storage Temperature&Humidity :  $\leq 40^{\circ}\text{C}$  & 70% RH maximum