

# Wire Wound SMD Power Inductors - SWRB-S Series

Operating Temperature: -40°C ~+105°C (Including Self-heating)



## FEATURES

- High saturation current, low DCR
- Suitable for surface mounting equipment
- Close magnetic circuit design reduce leakage

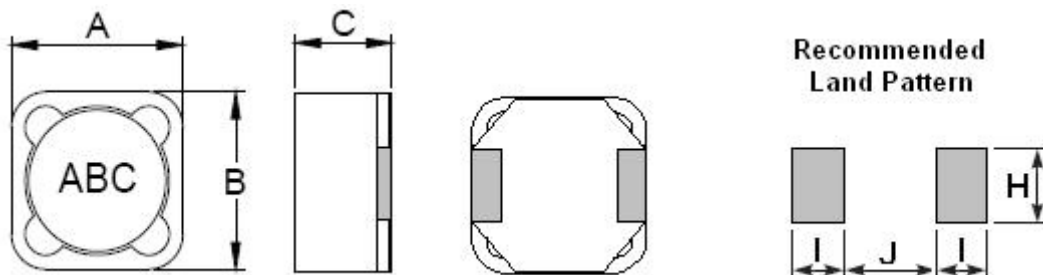
## APPLICATIONS

- Power supply choke for small electrical equipments such as DVC, LCD display, notebook, communication equipment, OA equipment and so on.

## PRODUCT IDENTIFICATION

| <u>SWRB</u>          | <u>1204</u>  | <u>S</u> | <u>-1R0</u>          | <u>N</u> | <u>T</u> |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
|----------------------|--|----------|----------------------|----------|----------|---|---|------|---------------------|--|-----------|----------------------|---|--|--------------------|--|---------|---------------|-----|-------|-----|------|-----|-------|
| ①                    | ②  | ③        | ④                    | ⑤        | ⑥        |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| ①                    | <table border="1"> <tr><th colspan="2">Type</th></tr> <tr><td style="text-align: center;">SWRB</td><td>Wire Wound SMD Type Power Inductors (With Plastic Base)</td></tr> </table>  |          | Type                 |          | SWRB     | Wire Wound SMD Type Power Inductors (With Plastic Base) | <table border="1"> <tr><th colspan="2">External Dimensions</th></tr> <tr><td colspan="2" style="text-align: center;">1204~1207</td></tr> </table> |      | External Dimensions |  | 1204~1207 |                      | <table border="1"> <tr><th colspan="2">Nominal Inductance</th></tr> <tr><th>Example</th><th>Nominal Value</th></tr> <tr><td style="text-align: center;">1R0</td><td style="text-align: center;">1.0μH</td></tr> <tr><td style="text-align: center;">100</td><td style="text-align: center;">10μH</td></tr> <tr><td style="text-align: center;">101</td><td style="text-align: center;">100μH</td></tr> </table> |  | Nominal Inductance |  | Example | Nominal Value | 1R0 | 1.0μH | 100 | 10μH | 101 | 100μH |
| Type                 |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| SWRB                 | Wire Wound SMD Type Power Inductors (With Plastic Base)  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| External Dimensions  |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| 1204~1207            |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| Nominal Inductance   |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| Example              | Nominal Value  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| 1R0                  | 1.0μH  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| 100                  | 10μH   |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| 101                  | 100μH  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| ③                    | <table border="1"> <tr><th colspan="2">Configuration</th></tr> <tr><td style="text-align: center;">S</td><td>S Type Base</td></tr> </table>  |          | Configuration        |          | S        | S Type Base   | <table border="1"> <tr><th colspan="2">Packing</th></tr> <tr><td style="text-align: center;">T</td><td>Tape Carrier Package</td></tr> </table>    |      | Packing             |  | T         | Tape Carrier Package |   |  |                    |  |         |               |     |       |     |      |     |       |
| Configuration        |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| S                    | S Type Base  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| Packing              |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| T                    | Tape Carrier Package   |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| ⑤                    | <table border="1"> <tr><th colspan="2">Inductance Tolerance</th></tr> <tr><td style="text-align: center;">M</td><td style="text-align: center;">±20%</td></tr> <tr><td style="text-align: center;">N</td><td style="text-align: center;">±30%</td></tr> </table> |          | Inductance Tolerance |          | M        | ±20%  | N   | ±30% |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| Inductance Tolerance |  |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| M                    | ±20%   |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |
| N                    | ±30%   |          |                      |          |          |   |   |      |                     |  |           |                      |   |  |                    |  |         |               |     |       |     |      |     |       |

## SHAPE AND DIMENSIONS



Unit: mm

| Series    | A max. | B max. | C max. | I typ. | J typ. | H typ. |
|-----------|--------|--------|--------|--------|--------|--------|
| SWRB1204S | 12.5   | 12.5   | 5.0    | 2.9    | 7.0    | 5.4    |
| SWRB1205S | 12.5   | 12.5   | 6.0    | 2.9    | 7.0    | 5.4    |
| SWRB1207S | 12.5   | 12.5   | 8.0    | 2.9    | 7.0    | 5.4    |

## SPECIFICATIONS

### SWRB1204S TYPE

| Part Number     | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|-----------------|---------------|------------------|--------------------|--------------------|
| Units           | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol          | L             | -                | DCR                | I <sub>r</sub>     |
| SWRB1204S-1R0NT | 1.0±30%       | 100k, 0.3V       | 0.010              | 7.00               |
| SWRB1204S-2R2NT | 2.2±30%       | 100k, 0.3V       | 0.014              | 5.70               |
| SWRB1204S-3R3NT | 3.3±30%       | 100k, 0.3V       | 0.015              | 5.20               |
| SWRB1204S-4R7NT | 4.7±30%       | 100k, 0.3V       | 0.018              | 4.90               |
| SWRB1204S-5R6NT | 5.6±30%       | 100k, 0.3V       | 0.020              | 4.50               |
| SWRB1204S-6R8NT | 6.8±30%       | 100k, 0.3V       | 0.023              | 4.20               |
| SWRB1204S-8R2NT | 8.2±30%       | 100k, 0.3V       | 0.026              | 4.00               |
| SWRB1204S-100MT | 10±20%        | 1k, 0.3V         | 0.028              | 3.80               |
| SWRB1204S-120MT | 12±20%        | 1k, 0.3V         | 0.038              | 3.50               |
| SWRB1204S-150MT | 15±20%        | 1k, 0.3V         | 0.050              | 3.20               |
| SWRB1204S-180MT | 18±20%        | 1k, 0.3V         | 0.057              | 3.10               |
| SWRB1204S-220MT | 22±20%        | 1k, 0.3V         | 0.066              | 2.90               |
| SWRB1204S-270MT | 27±20%        | 1k, 0.3V         | 0.080              | 2.80               |
| SWRB1204S-330MT | 33±20%        | 1k, 0.3V         | 0.097              | 2.70               |
| SWRB1204S-390MT | 39±20%        | 1k, 0.3V         | 0.132              | 2.10               |
| SWRB1204S-470MT | 47±20%        | 1k, 0.3V         | 0.160              | 1.90               |
| SWRB1204S-560MT | 56±20%        | 1k, 0.3V         | 0.190              | 1.80               |
| SWRB1204S-680MT | 68±20%        | 1k, 0.3V         | 0.220              | 1.50               |
| SWRB1204S-820MT | 82±20%        | 1k, 0.3V         | 0.260              | 1.30               |
| SWRB1204S-101MT | 100±20%       | 1k, 0.3V         | 0.310              | 1.20               |
| SWRB1204S-121MT | 120±20%       | 1k, 0.3V         | 0.380              | 1.10               |
| SWRB1204S-151MT | 150±20%       | 1k, 0.3V         | 0.530              | 0.95               |
| SWRB1204S-181MT | 180±20%       | 1k, 0.3V         | 0.620              | 0.85               |
| SWRB1204S-221MT | 220±20%       | 1k, 0.3V         | 0.700              | 0.80               |
| SWRB1204S-271MT | 270±20%       | 1k, 0.3V         | 0.870              | 0.60               |
| SWRB1204S-331MT | 330±20%       | 1k, 0.3V         | 0.990              | 0.50               |
| SWRB1204S-471MT | 470±20%       | 1k, 0.3V         | 1.350              | 0.25               |

### SWRB1205S TYPE

| Part Number     | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|-----------------|---------------|------------------|--------------------|--------------------|
| Units           | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol          | L             | -                | DCR                | I <sub>r</sub>     |
| SWRB1205S-1R0NT | 1.0±30%       | 100k, 0.3V       | 0.010              | 8.00               |
| SWRB1205S-2R2NT | 2.2±30%       | 100k, 0.3V       | 0.014              | 7.80               |
| SWRB1205S-2R4NT | 2.4±30%       | 100k, 0.3V       | 0.014              | 7.80               |
| SWRB1205S-3R3NT | 3.3±30%       | 100k, 0.3V       | 0.018              | 6.00               |
| SWRB1205S-5R6NT | 5.6±30%       | 100k, 0.3V       | 0.020              | 5.20               |
| SWRB1205S-6R8NT | 6.8±30%       | 100k, 0.3V       | 0.020              | 4.70               |
| SWRB1205S-8R2NT | 8.2±30%       | 100k, 0.3V       | 0.021              | 4.40               |
| SWRB1205S-100MT | 10±20%        | 1k, 0.3V         | 0.025              | 4.00               |
| SWRB1205S-120MT | 12±20%        | 1k, 0.3V         | 0.027              | 3.50               |
| SWRB1205S-150MT | 15±20%        | 1k, 0.3V         | 0.030              | 3.30               |
| SWRB1205S-180MT | 18±20%        | 1k, 0.3V         | 0.034              | 3.00               |
| SWRB1205S-220MT | 22±20%        | 1k, 0.3V         | 0.036              | 2.80               |
| SWRB1205S-270MT | 27±20%        | 1k, 0.3V         | 0.051              | 2.30               |
| SWRB1205S-330MT | 33±20%        | 1k, 0.3V         | 0.057              | 2.10               |
| SWRB1205S-390MT | 39±20%        | 1k, 0.3V         | 0.068              | 2.00               |
| SWRB1205S-470MT | 47±20%        | 1k, 0.3V         | 0.075              | 1.80               |
| SWRB1205S-560MT | 56±20%        | 1k, 0.3V         | 0.110              | 1.70               |
| SWRB1205S-680MT | 68±20%        | 1k, 0.3V         | 0.120              | 1.50               |
| SWRB1205S-820MT | 82±20%        | 1k, 0.3V         | 0.140              | 1.40               |
| SWRB1205S-101MT | 100±20%       | 1k, 0.3V         | 0.160              | 1.30               |

## SPECIFICATIONS

### SWRB1205S TYPE

| Part Number     | Inductance    | L Test Condition | Max. DC Resistance | Max. Rated Current |
|-----------------|---------------|------------------|--------------------|--------------------|
| Units           | $\mu\text{H}$ | Hz, V            | $\Omega$           | A                  |
| Symbol          | L             | -                | DCR                | $I_r$              |
| SWRB1205S-121MT | 120 $\pm$ 20% | 1k, 0.3V         | 0.170              | 1.10               |
| SWRB1205S-151MT | 150 $\pm$ 20% | 1k, 0.3V         | 0.230              | 1.00               |
| SWRB1205S-181MT | 180 $\pm$ 20% | 1k, 0.3V         | 0.290              | 0.90               |
| SWRB1205S-221MT | 220 $\pm$ 20% | 1k, 0.3V         | 0.400              | 0.80               |
| SWRB1205S-271MT | 270 $\pm$ 20% | 1k, 0.3V         | 0.460              | 0.75               |
| SWRB1205S-331MT | 330 $\pm$ 20% | 1k, 0.3V         | 0.510              | 0.68               |
| SWRB1205S-391MT | 390 $\pm$ 20% | 1k, 0.3V         | 0.690              | 0.65               |
| SWRB1205S-471MT | 470 $\pm$ 20% | 1k, 0.3V         | 0.770              | 0.58               |
| SWRB1205S-561MT | 560 $\pm$ 20% | 1k, 0.3V         | 0.860              | 0.54               |
| SWRB1205S-681MT | 680 $\pm$ 20% | 1k, 0.3V         | 1.200              | 0.48               |

### SWRB1207S TYPE

| Part Number     | Inductance     | L Test Condition | Max. DC Resistance | Max. Rated Current |
|-----------------|----------------|------------------|--------------------|--------------------|
| Units           | $\mu\text{H}$  | Hz, V            | $\Omega$           | A                  |
| Symbol          | L              | -                | DCR                | $I_r$              |
| SWRB1207S-1R0NT | 1.0 $\pm$ 30%  | 100k, 0.3V       | 0.009              | 10.00              |
| SWRB1207S-2R2NT | 2.2 $\pm$ 30%  | 100k, 0.3V       | 0.012              | 8.00               |
| SWRB1207S-3R3NT | 3.3 $\pm$ 30%  | 100k, 0.3V       | 0.013              | 7.00               |
| SWRB1207S-4R7NT | 4.7 $\pm$ 30%  | 100k, 0.3V       | 0.016              | 6.80               |
| SWRB1207S-5R6NT | 5.6 $\pm$ 30%  | 100k, 0.3V       | 0.018              | 6.70               |
| SWRB1207S-6R8NT | 6.8 $\pm$ 30%  | 100k, 0.3V       | 0.019              | 6.60               |
| SWRB1207S-8R2NT | 8.2 $\pm$ 30%  | 100k, 0.3V       | 0.020              | 5.60               |
| SWRB1207S-100MT | 10 $\pm$ 20%   | 1k, 0.3V         | 0.021              | 5.40               |
| SWRB1207S-120MT | 12 $\pm$ 20%   | 1k, 0.3V         | 0.024              | 4.90               |
| SWRB1207S-150MT | 15 $\pm$ 20%   | 1k, 0.3V         | 0.027              | 4.50               |
| SWRB1207S-180MT | 18 $\pm$ 20%   | 1k, 0.3V         | 0.039              | 3.90               |
| SWRB1207S-220MT | 22 $\pm$ 20%   | 1k, 0.3V         | 0.043              | 3.60               |
| SWRB1207S-270MT | 27 $\pm$ 20%   | 1k, 0.3V         | 0.046              | 3.40               |
| SWRB1207S-330MT | 33 $\pm$ 20%   | 1k, 0.3V         | 0.065              | 3.00               |
| SWRB1207S-390MT | 39 $\pm$ 20%   | 1k, 0.3V         | 0.073              | 2.75               |
| SWRB1207S-470MT | 47 $\pm$ 20%   | 1k, 0.3V         | 0.100              | 2.50               |
| SWRB1207S-560MT | 56 $\pm$ 20%   | 1k, 0.3V         | 0.110              | 2.35               |
| SWRB1207S-680MT | 68 $\pm$ 20%   | 1k, 0.3V         | 0.140              | 2.10               |
| SWRB1207S-820MT | 82 $\pm$ 20%   | 1k, 0.3V         | 0.160              | 1.95               |
| SWRB1207S-101MT | 100 $\pm$ 20%  | 1k, 0.3V         | 0.220              | 1.70               |
| SWRB1207S-121MT | 120 $\pm$ 20%  | 1k, 0.3V         | 0.250              | 1.60               |
| SWRB1207S-151MT | 150 $\pm$ 20%  | 1k, 0.3V         | 0.280              | 1.42               |
| SWRB1207S-181MT | 180 $\pm$ 20%  | 1k, 0.3V         | 0.350              | 1.30               |
| SWRB1207S-221MT | 220 $\pm$ 20%  | 1k, 0.3V         | 0.390              | 1.16               |
| SWRB1207S-271MT | 270 $\pm$ 20%  | 1k, 0.3V         | 0.560              | 1.06               |
| SWRB1207S-331MT | 330 $\pm$ 20%  | 1k, 0.3V         | 0.640              | 0.95               |
| SWRB1207S-391MT | 390 $\pm$ 20%  | 1k, 0.3V         | 0.700              | 0.88               |
| SWRB1207S-471MT | 470 $\pm$ 20%  | 1k, 0.3V         | 0.980              | 0.79               |
| SWRB1207S-561MT | 560 $\pm$ 20%  | 1k, 0.3V         | 1.070              | 0.73               |
| SWRB1207S-681MT | 680 $\pm$ 20%  | 1k, 0.3V         | 1.460              | 0.67               |
| SWRB1207S-821MT | 820 $\pm$ 20%  | 1k, 0.3V         | 1.640              | 0.60               |
| SWRB1207S-102MT | 1000 $\pm$ 20% | 1k, 0.3V         | 1.820              | 0.55               |