

# MOX-SPI-4012S

## LOW PROFILE SHIELDED POWER INDUCTORS

**MoxiE**  
INDUCTOR CORPORATION



MoxiE's MOX-SPI-4012S series of shielded power inductors are engineered to provide very low DCR while offering excellent current handling.

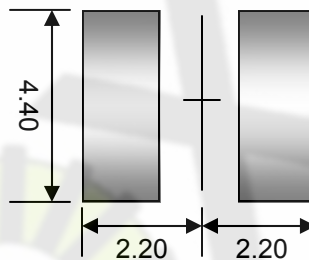
### Features:

- Low cost.
- RoHS compliant.
- Low profile shielded construction.
- High current handling design.
- MoxiE custom inductance values and tolerance available.

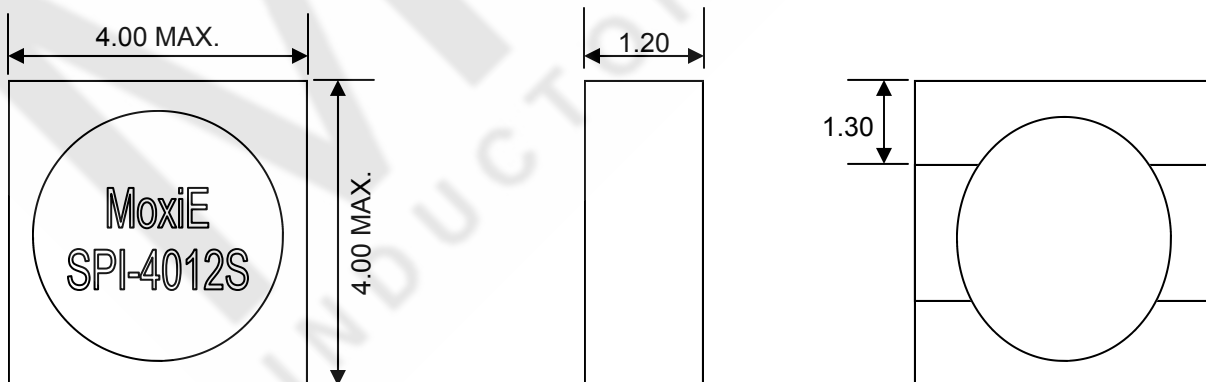


## LANDING PATTERN

NOTE:  
ALL DIMENSIONS IN MM



## MECHANICAL DIMENSIONS





## MOX-SPI-4012S ELECTRICAL SPECIFICATIONS

| MoxiE Part Number  | Inductance (μH) | Test Frequency | Tolerance (±) | DCR (Ω) Max. | Isat* (A) | Irms** (A) 40°C Rise |
|--------------------|-----------------|----------------|---------------|--------------|-----------|----------------------|
| MOX-SPI-4012S-R33N | 0.33            | 100.0 KHz/0.1V | 30%           | 0.023        | 5.25      | 3.80                 |
| MOX-SPI-4012S-R68N | 0.68            | 100.0 KHz/0.1V | 30%           | 0.055        | 3.75      | 2.50                 |
| MOX-SPI-4012S-1R0M | 1.00            | 100.0 KHz/0.1V | 20%           | 0.060        | 2.75      | 2.50                 |
| MOX-SPI-4012S-1R5M | 1.50            | 100.0 KHz/0.1V | 20%           | 0.070        | 2.70      | 2.30                 |
| MOX-SPI-4012S-2R2M | 2.20            | 100.0 KHz/0.1V | 20%           | 0.100        | 2.25      | 1.85                 |
| MOX-SPI-4012S-3R3M | 3.30            | 100.0 KHz/0.1V | 20%           | 0.100        | 1.50      | 2.10                 |
| MOX-SPI-4012S-4R7M | 4.70            | 100.0 KHz/0.1V | 20%           | 0.175        | 1.60      | 1.50                 |
| MOX-SPI-4012S-6R8M | 6.80            | 100.0 KHz/0.1V | 20%           | 0.26         | 1.45      | 1.20                 |
| MOX-SPI-4012S-100M | 10.0            | 100.0 KHz/0.1V | 20%           | 0.34         | 0.98      | 1.00                 |
| MOX-SPI-4012S-150M | 15.0            | 100.0 KHz/0.1V | 20%           | 0.35         | 0.80      | 0.78                 |
| MOX-SPI-4012S-180M | 18.0            | 100.0 KHz/0.1V | 20%           | 0.55         | 0.74      | 0.75                 |
| MOX-SPI-4012S-220M | 22.0            | 100.0 KHz/0.1V | 20%           | 0.60         | 0.45      | 0.72                 |
| MOX-SPI-4012S-330M | 33.0            | 100.0 KHz/0.1V | 20%           | 0.82         | 0.35      | 0.65                 |
| MOX-SPI-4012S-470M | 47.0            | 100.0 KHz/0.1V | 20%           | 1.35         | 0.32      | 0.55                 |
| MOX-SPI-4012S-680M | 68.0            | 100.0 KHz/0.1V | 20%           | 1.70         | 0.35      | 0.48                 |
| MOX-SPI-4012S-101M | 100.0           | 100.0 KHz/0.1V | 20%           | 2.40         | 0.25      | 0.42                 |
| MOX-SPI-4012S-121M | 120.0           | 100.0 KHz/0.1V | 20%           | 3.30         | 0.23      | 0.38                 |
| MOX-SPI-4012S-151M | 150.0           | 100.0 KHz/0.1V | 20%           | 3.50         | 0.21      | 0.35                 |
| MOX-SPI-4012S-181M | 180.0           | 100.0 KHz/0.1V | 20%           | 5.00         | 0.19      | 0.32                 |
| MOX-SPI-4012S-221M | 220.0           | 100.0 KHz/0.1V | 20%           | 5.20         | 0.16      | 0.29                 |
| MOX-SPI-4012S-331M | 330.0           | 100.0 KHz/0.1V | 20%           | 7.15         | 0.15      | 0.225                |
| MOX-SPI-4012S-471M | 470.0           | 100.0 KHz/0.1V | 20%           | 10.00        | 0.12      | 0.18                 |
| MOX-SPI-4012S-561M | 560.0           | 100.0 KHz/0.1V | 20%           | 12.50        | 0.11      | 0.145                |
| MOX-SPI-4012S-681M | 680.0           | 100.0 KHz/0.1V | 20%           | 12.50        | 0.10      | 0.14                 |
| MOX-SPI-4012S-821M | 820.0           | 100.0 KHz/0.1V | 20%           | 13.50        | 0.10      | 0.135                |
| MOX-SPI-4012S-102M | 1000.0          | 100.0 KHz/0.1V | 20%           | 20.00        | 0.092     | 0.132                |
| MOX-SPI-4012S-152M | 1500.0          | 100.0 KHz/0.1V | 20%           | 21.50        | 0.090     | 0.12                 |
| MOX-SPI-4012S-182M | 1800.0          | 100.0 KHz/0.1V | 20%           | 35.50        | 0.083     | 0.11                 |
| MOX-SPI-4012S-221M | 2200.0          | 100.0 KHz/0.1V | 20%           | 39.50        | 0.082     | 0.10                 |
| MOX-SPI-4012S-331M | 3300.0          | 100.0 KHz/0.1V | 20%           | 76.00        | 0.075     | 0.09                 |



## ENGINEERING NOTES

- Inductance tested at 100KHZ, 0.1V Vrms.
- DCR measured on a micro-ohmmeter.
- SRF measured using Agilent/HP 8753ES or equivalent.
- \*DC current that causes the specified inductance drop from its initial value without current.
- \*\*Current that causes the specified temperature rise from 25°C
- DCR limits @ 20°C.
- Weight: 55-65mg.
- Core material: Ferrite.
- Operating temperature: -40°C to +85°C.
- Storage temperature: -40°C to +125°C.
- RoHS Compliant.
- MoxiE Inductor Corporation specifications are subject to change without notice.
- MoxiE Inductor Corporation custom designed products are subject to United States copyright and or patent(s) protection.