

MOX-SMHC-SERIES

MoxiE[®]
INDUCTOR CORPORATION

Surface Mount High Current Unshielded Power Inductors

MoxiE's MOX-SMHC series of surface mount high current power inductors are specially engineered for high current, low voltage DC-DC converter applications. The industrial grade rugged design provides current ranges normally only available with larger packages.

Features:

- Low cost.
- High current & low voltage.
- RoHS compliant.
- MoxiE Inductor corporation custom designs available.

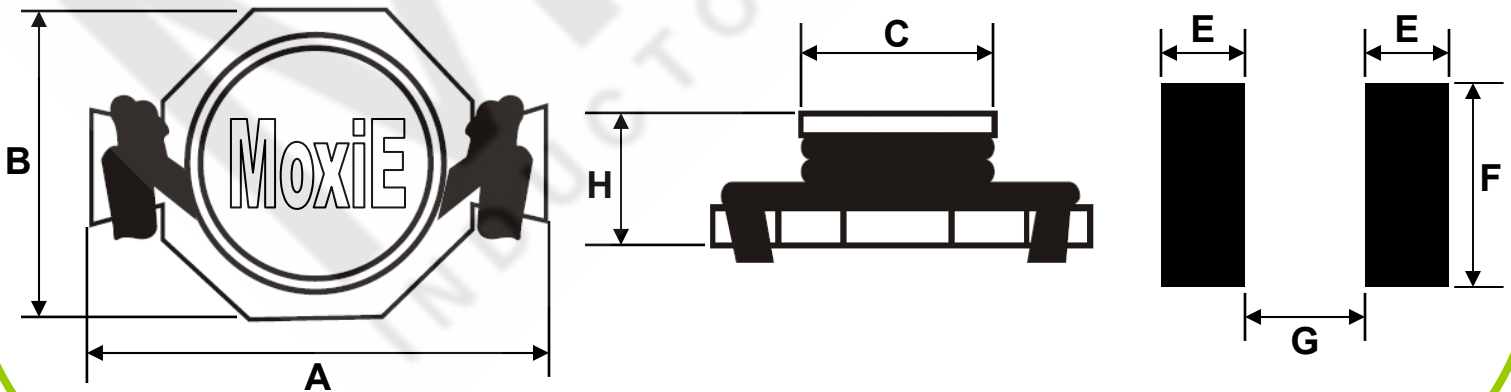


PART NUMBERS

| MOXIE PART NUMBER | A (MAX.) | B (MAX.) | C (MAX.) | H (MAX.) | E (REF.) | F (REF.) | G (REF.) |
|-------------------|----------|----------|----------|----------|----------|----------|----------|
| MOX-SMHC-0402 | 7.50 | 5.20 | 2.00 | 3.20 | 2.00 | 2.00 | 3.00 |
| MOX-SMHC-0504 | 9.00 | 6.10 | 4.00 | 5.00 | 3.00 | 3.50 | 5.00 |
| MOX-SMHC-0804 | 13.20 | 9.90 | 4.00 | 6.00 | 2.50 | 6.00 | 8.00 |
| MOX-SMHC-1105 | 19.40 | 13.30 | 5.00 | 6.80 | 4.00 | 8.50 | 11.00 |
| MOX-SMHC-1306 | 22.20 | 15.00 | 6.00 | 7.80 | 4.50 | 9.00 | 13.00 |



MECHANICAL DIMENSIONS





ELECTRICAL SPECIFICATIONS @ 25°C

| MoxiE Part Number | Inductance (µH) | Tolerance (±) | DC Resistance | Rated Current | Test Condition |
|--------------------|-----------------|---------------|---------------|---------------|----------------|
| MOX-SMHC-0402-R47N | 0.47 | 30% | 0.025 | 6.50 | 100KHz @ 0.1V |
| MOX-SMHC-0402-1R0N | 1.00 | 30% | 0.050 | 3.00 | 100KHz @ 0.1V |
| MOX-SMHC-0402-1R5M | 1.50 | 20% | 0.050 | 2.95 | 100KHz @ 0.1V |
| MOX-SMHC-0402-2R2M | 2.20 | 20% | 0.070 | 2.50 | 100KHz @ 0.1V |
| MOX-SMHC-0402-3R3M | 3.30 | 20% | 0.080 | 2.10 | 100KHz @ 0.1V |
| MOX-SMHC-0402-4R7M | 4.70 | 20% | 0.090 | 1.60 | 100KHz @ 0.1V |
| MOX-SMHC-0402-6R8M | 6.80 | 20% | 0.130 | 1.50 | 100KHz @ 0.1V |
| MOX-SMHC-0402-100M | 10.00 | 20% | 0.160 | 1.20 | 100KHz @ 0.1V |
| MOX-SMHC-0402-150M | 15.00 | 20% | 0.230 | 1.10 | 100KHz @ 0.1V |
| MOX-SMHC-0402-220M | 22.00 | 20% | 0.370 | 0.90 | 100KHz @ 0.1V |

| MoxiE Part Number | Inductance (µH) | Tolerance (±) | DC Resistance | Rated Current | Test Condition |
|--------------------|-----------------|---------------|---------------|---------------|----------------|
| MOX-SMHC-0504-R47N | 0.47 | 30% | 0.010 | 6.50 | 100KHz @ 0.1V |
| MOX-SMHC-0504-1R0N | 1.00 | 30% | 0.018 | 4.70 | 100KHz @ 0.1V |
| MOX-SMHC-0504-1R5M | 1.50 | 20% | 0.020 | 4.50 | 100KHz @ 0.1V |
| MOX-SMHC-0504-2R2M | 2.20 | 20% | 0.037 | 3.20 | 100KHz @ 0.1V |
| MOX-SMHC-0504-3R3M | 3.30 | 20% | 0.43 | 3.00 | 100KHz @ 0.1V |
| MOX-SMHC-0504-4R7M | 4.70 | 20% | 0.055 | 2.40 | 100KHz @ 0.1V |
| MOX-SMHC-0504-6R8M | 6.80 | 20% | 0.090 | 1.80 | 100KHz @ 0.1V |
| MOX-SMHC-0504-100M | 10.00 | 20% | 0.111 | 1.60 | 100KHz @ 0.1V |
| MOX-SMHC-0504-150M | 15.00 | 20% | 0.175 | 1.30 | 100KHz @ 0.1V |
| MOX-SMHC-0504-220M | 22.00 | 20% | 0.255 | 1.20 | 100KHz @ 0.1V |
| MOX-SMHC-0504-330M | 33.00 | 20% | 0.367 | 0.92 | 100KHz @ 0.1V |
| MOX-SMHC-0504-470M | 47.00 | 20% | 0.472 | 0.78 | 100KHz @ 0.1V |
| MOX-SMHC-0504-680M | 68.00 | 20% | 0.745 | 0.66 | 100KHz @ 0.1V |
| MOX-SMHC-0504-101M | 100.00 | 20% | 1.100 | 0.53 | 100KHz @ 0.1V |

MOXIE NOTES:

- Inductance instrument testing : HP4286A/CH1062A LCR meter.
- Inductance test condition: 100KHz @ 1KHz.
- DCR instrument testing: TH2512B or MoxiE equivalent DCR testing equipment.
- Rated current testing: VR7210 & VR113H.
- Rated current definition: Inductance drop by 25% or when temperature rises by 40°C (the lesser of the minimum as the rated current.)
- Operating temperature: -40°C to +85°C.
- Storage temperature: -40°C to +125°C.
- Moxie Inductor Corporation specifications are subject to change without notice.



ELECTRICAL SPECIFICATIONS @ 25°C

| MoxiE Part Number | Inductance (μH) | Tolerance (±) | DC Resistance | Rated Current | Test Condition |
|--------------------|-----------------|---------------|---------------|---------------|----------------|
| MOX-SMHC-0804-R47N | 0.47 | 30% | 0.005 | 11.10 | 100KHz @ 0.1V |
| MOX-SMHC-0804-1R0N | 1.00 | 30% | 0.007 | 9.50 | 100KHz @ 0.1V |
| MOX-SMHC-0804-1R5M | 1.50 | 20% | 0.009 | 8.70 | 100KHz @ 0.1V |
| MOX-SMHC-0804-2R2M | 2.20 | 20% | 0.011 | 7.50 | 100KHz @ 0.1V |
| MOX-SMHC-0804-3R3M | 3.30 | 20% | 0.013 | 6.70 | 100KHz @ 0.1V |
| MOX-SMHC-0804-4R7M | 4.70 | 20% | 0.017 | 5.75 | 100KHz @ 0.1V |
| MOX-SMHC-0804-6R8M | 6.80 | 20% | 0.021 | 5.50 | 100KHz @ 0.1V |
| MOX-SMHC-0804-100M | 10.00 | 20% | 0.028 | 4.75 | 100KHz @ 0.1V |
| MOX-SMHC-0804-150M | 15.00 | 20% | 0.041 | 3.70 | 100KHz @ 0.1V |
| MOX-SMHC-0804-220M | 22.00 | 20% | 0.062 | 3.00 | 100KHz @ 0.1V |
| MOX-SMHC-0804-330M | 33.00 | 20% | 0.092 | 2.50 | 100KHz @ 0.1V |
| MOX-SMHC-0804-470M | 47.00 | 20% | 0.139 | 1.80 | 100KHz @ 0.1V |
| MOX-SMHC-0804-680M | 68.00 | 20% | 0.179 | 1.72 | 100KHz @ 0.1V |
| MOX-SMHC-0804-101M | 100.00 | 20% | 0.271 | 1.50 | 100KHz @ 0.1V |

| MoxiE Part Number | Inductance (μH) | Tolerance (±) | DC Resistance | Rated Current | Test Condition |
|--------------------|-----------------|---------------|---------------|---------------|----------------|
| MOX-SMHC-1105-R47N | 0.47 | 30% | 0.003 | 17.10 | 100KHz @ 0.1V |
| MOX-SMHC-1105-1R0N | 1.00 | 30% | 0.004 | 13.20 | 100KHz @ 0.1V |
| MOX-SMHC-1105-1R5M | 1.50 | 20% | 0.006 | 10.60 | 100KHz @ 0.1V |
| MOX-SMHC-1105-2R2M | 2.20 | 20% | 0.008 | 9.80 | 100KHz @ 0.1V |
| MOX-SMHC-1105-3R3M | 3.30 | 20% | 0.009 | 8.50 | 100KHz @ 0.1V |
| MOX-SMHC-1105-4R7M | 4.70 | 20% | 0.012 | 6.75 | 100KHz @ 0.1V |
| MOX-SMHC-1105-6R8M | 6.80 | 20% | 0.019 | 6.00 | 100KHz @ 0.1V |
| MOX-SMHC-1105-100M | 10.00 | 20% | 0.027 | 4.60 | 100KHz @ 0.1V |
| MOX-SMHC-1105-150M | 15.00 | 20% | 0.032 | 4.20 | 100KHz @ 0.1V |
| MOX-SMHC-1105-220M | 22.00 | 20% | 0.050 | 3.50 | 100KHz @ 0.1V |
| MOX-SMHC-1105-330M | 33.00 | 20% | 0.069 | 2.75 | 100KHz @ 0.1V |
| MOX-SMHC-1105-470M | 47.00 | 20% | 0.109 | 2.20 | 100KHz @ 0.1V |
| MOX-SMHC-1105-680M | 68.00 | 20% | 0.156 | 2.00 | 100KHz @ 0.1V |
| MOX-SMHC-1105-101M | 100.00 | 20% | 0.205 | 1.60 | 100KHz @ 0.1V |

MOXIE NOTES:

- Inductance instrument testing : HP4286A/CH1062A LCR meter.
- Inductance test condition: 100KHz @ 1KHz.
- DCR instrument testing: TH2512B or MoxiE equivalent DCR testing equipment.
- Rated current testing: VR7210 & VR113H.
- Rated current definition: Inductance drop by 25% or when temperature rises by 40°C (the lesser of the minimum as the rated current.)
- Operating temperature: -40°C to +85°C.
- Storage temperature: -40°C to +125°C.
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ELECTRICAL SPECIFICATIONS @ 25°C

| MoxiE Part Number | Inductance (µH) | Tolerance (±) | DC Resistance | Rated Current | Test Condition |
|--------------------|-----------------|---------------|---------------|---------------|----------------|
| MOX-SMHC-1306-R47N | 0.47 | 30% | 0.002 | 20.10 | 100KHz @ 0.1V |
| MOX-SMHC-1306-1R0N | 1.00 | 30% | 0.003 | 17.90 | 100KHz @ 0.1V |
| MOX-SMHC-1306-1R5M | 1.50 | 20% | 0.004 | 13.65 | 100KHz @ 0.1V |
| MOX-SMHC-1306-2R2M | 2.20 | 20% | 0.005 | 12.70 | 100KHz @ 0.1V |
| MOX-SMHC-1306-3R3M | 3.30 | 20% | 0.006 | 11.50 | 100KHz @ 0.1V |
| MOX-SMHC-1306-4R7M | 4.70 | 20% | 0.010 | 9.20 | 100KHz @ 0.1V |
| MOX-SMHC-1306-6R8M | 6.80 | 20% | 0.015 | 8.70 | 100KHz @ 0.1V |
| MOX-SMHC-1306-100M | 10.00 | 20% | 0.020 | 7.20 | 100KHz @ 0.1V |
| MOX-SMHC-1306-150M | 15.00 | 20% | 0.030 | 5.75 | 100KHz @ 0.1V |
| MOX-SMHC-1306-220M | 22.00 | 20% | 0.040 | 4.90 | 100KHz @ 0.1V |
| MOX-SMHC-1306-330M | 33.00 | 20% | 0.060 | 4.20 | 100KHz @ 0.1V |
| MOX-SMHC-1306-470M | 47.00 | 20% | 0.070 | 3.50 | 100KHz @ 0.1V |
| MOX-SMHC-1306-680M | 68.00 | 20% | 0.120 | 2.70 | 100KHz @ 0.1V |
| MOX-SMHC-1306-101M | 100.00 | 20% | 0.170 | 2.50 | 100KHz @ 0.1V |

| MOXIE PART NUMBER | Packaging | Reel Size | Quantity Per Reel |
|-------------------|-------------|-----------|-------------------|
| MOX-SMHC-0402 | Tape & Reel | 330 x 16 | 2000 |
| MOX-SMHC-0504 | Tape & Reel | 330 x 24 | 1500 |
| MOX-SMHC-0804 | Tape & Reel | 330 x 24 | 750 |
| MOX-SMHC-1105 | Tape & Reel | 330 x 32 | 350 |
| MOX-SMHC-1306 | Tape & Reel | 330 x 32 | 350 |

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- Inductance test condition: 100KHz @ 1KHz.
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