

MOX-HCSM SERIES

Surface Mount High Current Power Inductors

MoxiE's HCSM series of surface mount high power inductors are widely used in high current DC-DC converters, base stations, RSM, multi-phase buck regulators & routers. MoxiE offers a ultra low profile package that provides high inductance & current ratings up to 28 Amps.

Features:

- High frequency design.
- Operating temperature: -40°C to +125°C.
- Flat wire construction.
- Excellent thermal stability.
- MoxiE Inductor Corporation custom designs available.

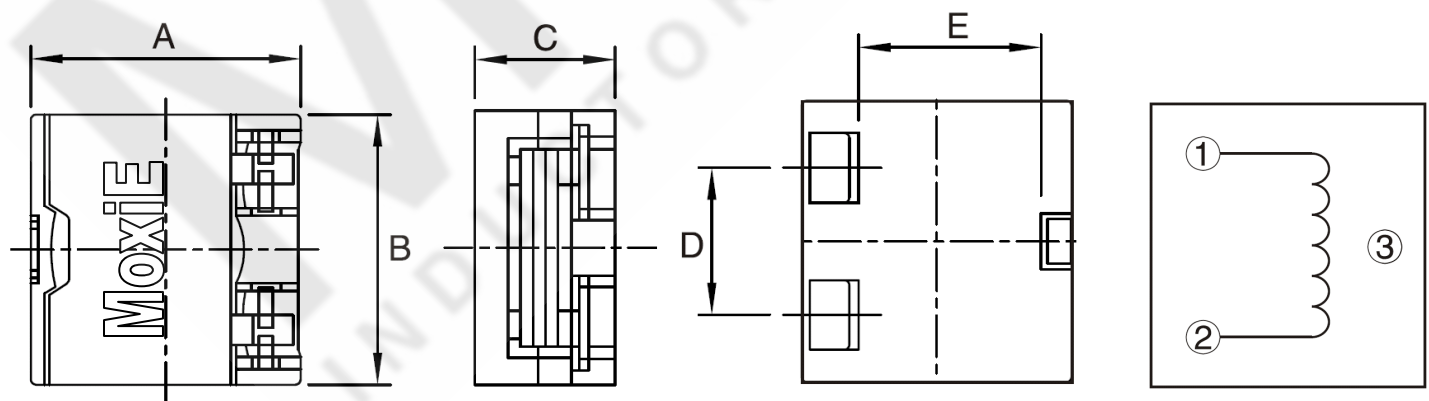


PART NUMBER DIMENSIONS (mm)

MoxiE Part Number	A	B	C	D	E
MOX-HCSM-104	11.00 ± 0.30	9.35 ± 0.30	4.50 ± 0.30	6.00 REF.	5.80 REF.
MOX-HCSM-105	11.00 ± 0.30	9.35 ± 0.30	5.50 ± 0.30	6.00 REF.	5.80 REF.
MOX-HCSM-124	12.50 ± 0.30	12.50 ± 0.30	4.00 ± 0.30	7.50 REF.	6.40 REF.
MOX-HCSM-125	12.50 ± 0.30	12.50 ± 0.30	5.00 ± 0.30	7.50 REF.	6.40 REF.

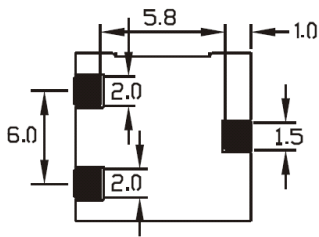


MECHANICAL DIMENSIONS & SCHEMATIC

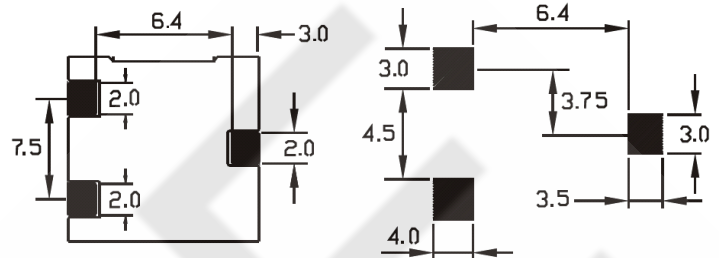
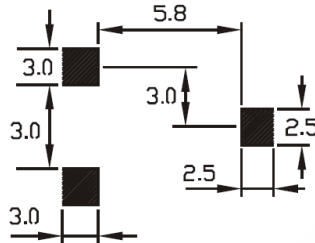




LANDING PATTERNS



MOX-HCSM-104 & MOX-HCSM-105



MOX-HCSM-124 & MOX-HCSM-125



ELECTRICAL SPECIFICATIONS

MoxiE Part Number	Inductance (μH)	DCR (mΩ) Max.	Isat ¹ (A)	I _{rms} ² (A)
MOX-HCSM-104-R36N	0.36 ± 30%	1.7	26.0	23.0
MOX-HCSM-104-R80M	0.80 ± 20%	3.9	17.0	15.0
MOX-HCSM-104-1R4M	1.40 ± 20%	4.4	14.0	13.0
MOX-HCSM-104-2R2M	2.20 ± 20%	8.7	10.0	9.5
MOX-HCSM-104-3R2M	3.20 ± 20%	10.4	8.0	8.0
MOX-HCSM-105-R36M	0.36 ± 30%	1.7	26.0	28.0
MOX-HCSM-105-R80M	0.80 ± 20%	2.5	18.0	20.0
MOX-HCSM-105-1R4M	1.40 ± 20%	3.2	14.0	16.0
MOX-HCSM-105-2R2M	2.20 ± 20%	5.8	10.0	12.0
MOX-HCSM-105-3R2M	3.20 ± 20%	7.2	9.0	11.0
MOX-HCSM-105-4R3M	4.30 ± 20%	8.5	8.0	10.0
MOX-HCSM-105-5R7M	5.70 ± 20%	13.2	7.0	7.6
MOX-HCSM-105-7R2M	7.20 ± 20%	15.5	6.2	7.0

MoxiE Part Number	Inductance (μH)	DCR (mΩ) Max.	Isat ¹ (A)	I _{rms} ² (A)
MOX-HCSM-105-8R8M	8.80 ± 20%	17.2	5.6	6.0
MOX-HCSM-124-R75M	0.75 ± 20%	3.0	14.0	13.0
MOX-HCSM-124-1R3M	1.30 ± 20%	4.5	13.0	12.0
MOX-HCSM-124-2R0M	2.00 ± 20%	6.0	11.0	10.0
MOX-HCSM-125-R90M	0.90 ± 20%	2.5	20.0	18.0
MOX-HCSM-125-1R4M	1.40 ± 20%	3.4	16.0	15.0
MOX-HCSM-125-2R0M	2.00 ± 20%	4.6	13.0	12.0
MOX-HCSM-125-3R5M	3.50 ± 20%	6.3	9.0	11.2
MOX-HCSM-125-4R0M	4.00 ± 20%	7.2	12.0	10.9
MOX-HCSM-125-4R8N	4.80 ± 30%	10.5	7.2	9.3
MOX-HCSM-125-6R8N	6.80 ± 30%	11.0	6.0	7.8
MOX-HCSM-125-8R6N	8.60 ± 30%	12.0	5.4	7.2
MOX-HCSM-125-105N	10.5 ± 30%	13.5	4.7	6.5

- MoxiE inductance test: HP4284A @ 100kHz/1V or equivalent.
- OCL: Open Circuit Inductance test parameters: 100kHz, 0.1Vrms, 0.0Adc.
- OCL@-40°C can be lower than OCL@20°C by 15% max.
- Isat¹ Amperes Peak for approximately 30% rolloff (@25°C)
- I_{rms}² DC current for an approximate DT of 40°C without core loss.
- PCB layout, trace thickness and width, air-flow, and proximity of heat generating components will affect the overall temperature rise.
- MoxiE recommends that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.
- Derating is necessary for AC currents.
- Storage temperature: -40°C to +125°C.
- MoxiE Inductor Corporation specifications are subject to change without notice.