

MOX-SPI-1207



MoxiE's MOX-SPI-1207 series shielded surface mount power inductors are engineered to offer a low DC resistance that are ideal for large current applications. The robust package allows for high energy storage with low power loss and low noise Maximum temperature range of 125°C.

Features:

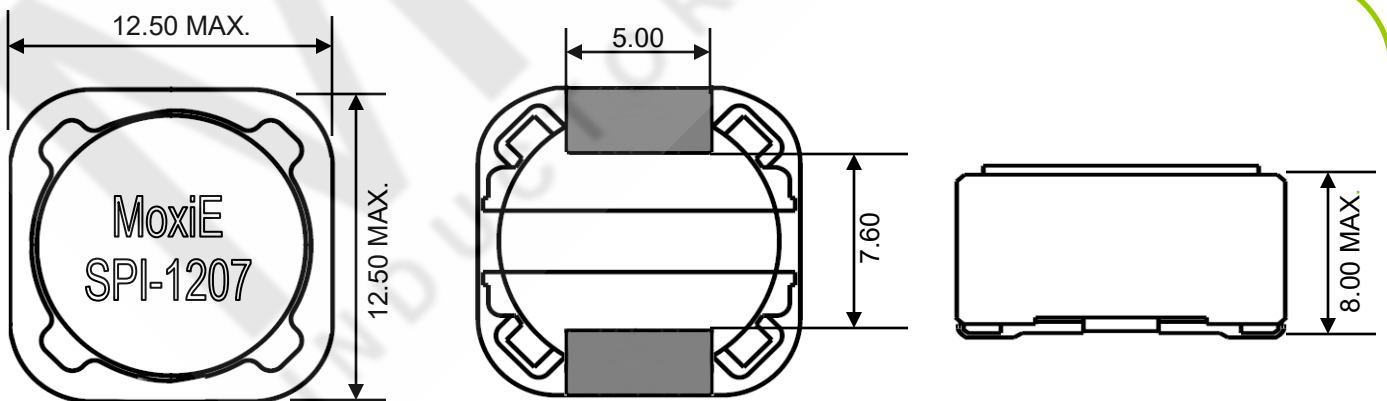
- Magnetically shielding available.
- Ideal for a variety of DC to DC converter applications.
- Ferrite core material.
- Low cost.
- RoHS compliant.
- Available on tape & reel for auto surface mounting.



NOTES



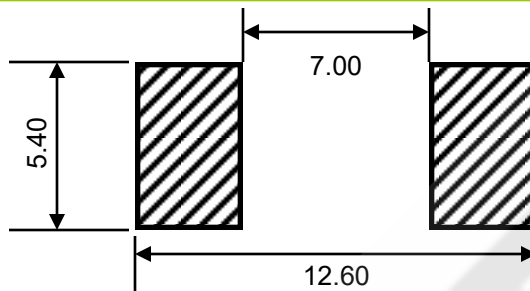
MECHANICAL DIMENSIONS





LANDING PATTERN & CONSTRUCTION

NOTE:
ALL DIMENSIONS
ARE IN MM.



MOX-SPI-1207 ELECTRICAL SPECIFICATIONS

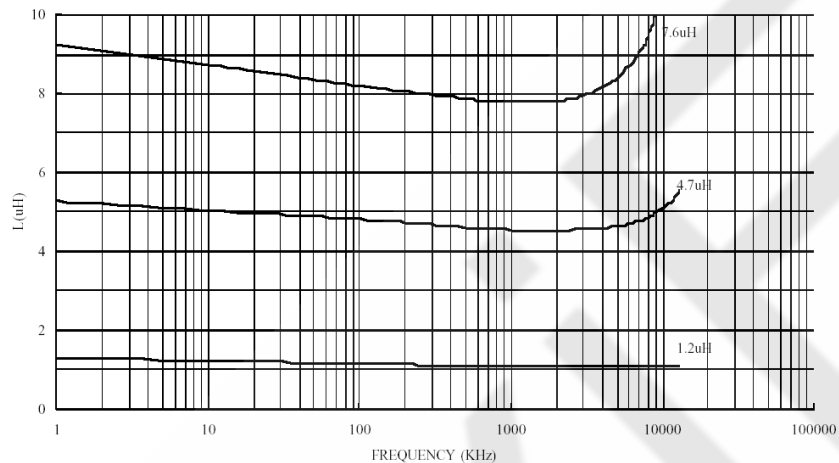
MoxiE Part Number	Inductance (μH)	Test Frequency	DCR (mΩ)		SRF Typical (MHz)	Isat (A)			I _{rms} (A)	
			Typical	Maximum		10% Drop	20% Drop	30% Drop	20°C Rise	40°C Rise
MOX-SPI-1207-1R2M	1.2±20%	1 kHz/1V	8.8	9.8	80.0	25.2	28.6	30.6	7.00	10.00
MOX-SPI-1207-2R4M	2.4±20%	1 kHz/1V	9.5	10.7	70.0	22.5	23.4	26.4	6.40	8.90
MOX-SPI-1207-3R5M	3.5±20%	1 kHz/1V	12.2	13.50	50.0	14.5	16.5	17.2	4.50	6.80
MOX-SPI-1207-4R7M	4.7±20%	1 kHz/1V	13.9	15.5	30.0	13.7	15.2	15.9	4.30	6.20
MOX-SPI-1207-5R6M	5.6±20%	1 kHz/1V	15.7	17.5	24.0	12.2	13.7	14.6	4.30	6.20
MOX-SPI-1207-6R8M	6.8±20%	1 kHz/1V	19.1	21.3	21.0	11.3	12.7	13.7	4.20	6.00
MOX-SPI-1207-8R2M	8.2±20%	1 kHz/1V	20.3	22.6	20.0	10.1	11.5	12.3	4.10	5.93
MOX-SPI-1207-100M	10 ±20%	1 kHz/1V	21.8	24.3	17.0	9.36	10.6	11.2	4.00	5.75
MOX-SPI-1207-120M	12 ±20%	1 kHz/1V	23.2	25.8	15.0	8.84	10.0	10.7	3.70	5.22
MOX-SPI-1207-150M	15 ±20%	1 kHz/1V	27.9	31.0	13.0	7.30	8.36	9.00	3.50	4.92
MOX-SPI-1207-180M	18 ±20%	1 kHz/1V	30.8	34.3	12.0	6.10	7.10	7.74	3.00	4.53
MOX-SPI-1207-220M	22 ±20%	1 kHz/1V	35.5	39.5	11.0	6.04	6.78	7.24	2.90	4.05
MOX-SPI-1207-270M	27 ±20%	1 kHz/1V	45.0	50.0	10.0	5.80	6.56	7.02	2.60	3.63
MOX-SPI-1207-330M	33 ±20%	1 kHz/1V	61.4	67.5	9.5	5.25	5.95	6.34	2.33	3.12
MOX-SPI-1207-390M	39 ±20%	1 kHz/1V	69.1	76.8	8.5	4.68	5.42	5.80	2.10	3.00
MOX-SPI-1207-470M	47 ±20%	1 kHz/1V	72.3	80.4	7.5	4.40	5.02	5.32	2.00	2.90
MOX-SPI-1207-560M	56 ±20%	1 kHz/1V	80.2	89.2	7.0	4.02	4.60	4.90	1.91	2.70
MOX-SPI-1207-680M	68 ±20%	1 kHz/1V	91.3	101.5	6.5	3.40	3.86	4.26	1.82	2.60
MOX-SPI-1207-820M	82 ±20%	1 kHz/1V	125.9	139.9	5.0	3.12	3.58	3.80	1.62	2.30
MOX-SPI-1207-101M	100±20%	1 kHz/1V	135.1	150.2	4.5	2.88	3.28	3.52	1.51	2.20
MOX-SPI-1207-121M	120±20%	1 kHz/1V	182.3	202.6	4.3	2.62	3.00	3.24	1.42	1.90
MOX-SPI-1207-151M	150±20%	1 kHz/1V	216.5	240.6	4.1	2.48	2.86	3.02	1.33	1.80
MOX-SPI-1207-181M	180±20%	1 kHz/1V	229.0	254.5	4.0	2.26	2.58	2.74	1.22	1.72
MOX-SPI-1207-221M	220±20%	1 kHz/1V	323.6	359.6	3.4	1.96	2.22	2.36	1.00	1.62
MOX-SPI-1207-271M	270±20%	1 kHz/1V	415.6	461.8	3.1	1.74	2.04	2.18	0.91	1.25
MOX-SPI-1207-331M	330±20%	1 kHz/1V	487.3	541.5	2.9	1.66	1.86	2.00	0.80	1.05
MOX-SPI-1207-471M	470±20%	1 kHz/1V	707.5	786.2	2.2	1.34	1.54	1.64	0.68	0.93
MOX-SPI-1207-561M	560±20%	1 kHz/1V	777.4	863.8	2.0	1.24	1.42	1.50	0.60	0.82
MOX-SPI-1207-681M	680±20%	1 kHz/1V	1045	1162	1.7	1.16	1.28	1.38	0.55	0.77
MOX-SPI-1207-821M	820±20%	1 kHz/1V	1166	1296	1.4	1.04	1.16	1.26	0.52	0.71
MOX-SPI-1207-102M	1000±20%	1 kHz/1V	1334	1483	1.3	0.97	1.10	1.14	0.49	0.69

- DCR limits @ 20°C.
- The value of current when the inductance is -25% more than it's nominal value and temperature rising ▲T=40°C lower at D.C. superposition (Ta=20°C)
- Peak current for an approximate ▲T of 40°C without core loss, MoxiE recommends that the temperature of this part not exceed 125°C.
- Peak current for approximate 30% roll off at 20°C.

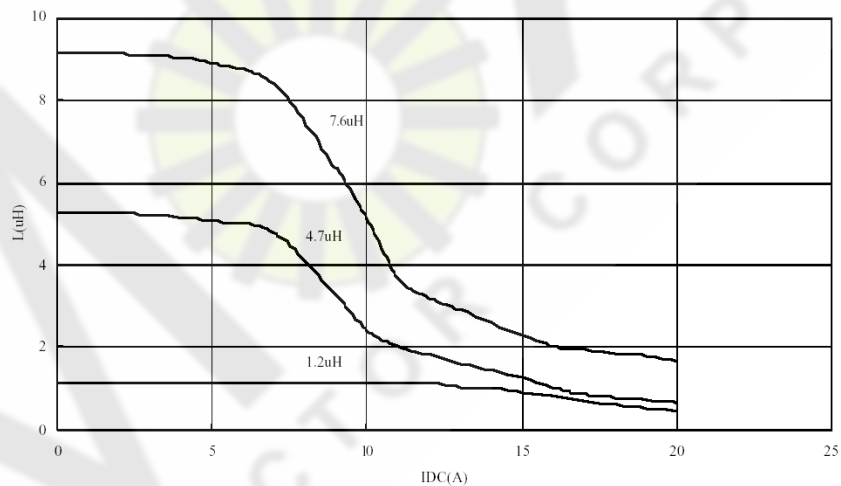


SPI-1207 SERIES CURVES

INDUCTANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. IDC CHARACTERISTICS



- MoxiE test instruments: L: HP4192A LF IMEDANCE ANALYZER DC: CHEN HWA 502BC.
- RATED CURRENT: HP4284+42841A or CH1061+CH301A
- DCR limits @ 20°C.
- Peak current for an approximate ΔT of 40°C without core loss, MoxiE recommends that the temperature of this part not exceed 125°C.
- Peak current for approximate 30% roll off at 20°C.
- Rated current: The rated current indicates the current when the inductance decreases 65% over it's nominal value or DC current when the temp rising $\Delta t=40^\circ\text{C}$ lower, whichever is less.