

MOX-SMPI-SERIES

MoxiE[®]
INDUCTOR CORPORATION

Surface Mount Power Inductors & Transformers

- May be used as single inductors, coupled inductors or transformers.
- High Frequency, low loss MPP core material.
- Operating temperature: -40°C to +85°C.
- Excellent solderability & resistance to soldering heat.
- RoHS compliant.
- Secure four (4) terminal mounting.
- High current ratings.
- Tape & reel packaging. (500 pieces per reel)
- MoxiE Inductor Corporation custom designs available.

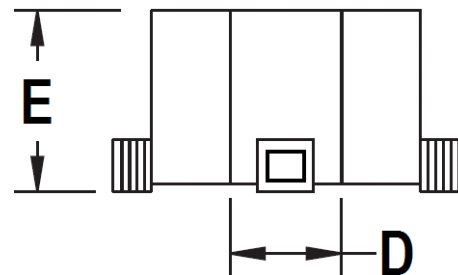
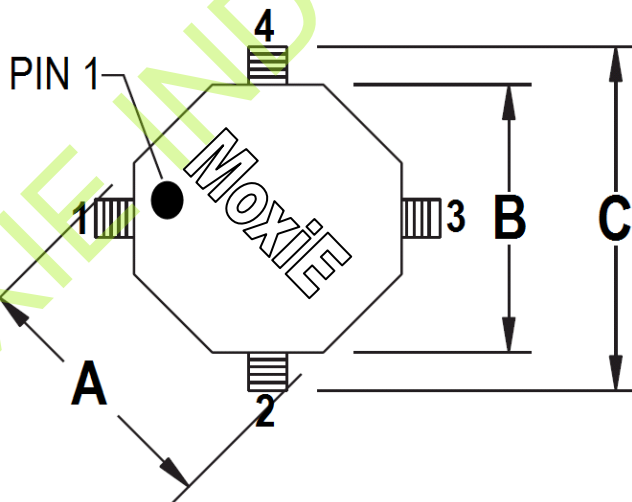


PART NUMBERS

MOXIE PART NUMBER	A	B	C	D (REF.)	E (MAX.)
MOXIE MOX-SMPI-1	8.89	8.89	11.43	3.68	4.19
MOXIE MOX-SMPI-2	8.89	8.89	11.43	3.68	5.97
MOXIE MOX-SMPI-3	11.43	11.43	13.97	4.72	4.83
MOXIE MOX-SMPI-4	11.43	11.43	13.97	4.72	6.35



MECHANICAL DIMENSIONS





MOX-SMPI ELECTRICAL SPECIFICATIONS

PART NUMBER		PARALLEL RATINGS					SERIES RATINGS				
MoxiE Part Number	Inductance (μH)	OCL (μH) Nominal	Isat (A) Peak	Irms (A) Maximum	DCR (Ω) Maximum	Volt μ-Sec	OCL (μH) Nominal	Isat (A) Peak	Irms (A) Maximum	DCR (Ω) Maximum	Volt μ-Sec
MOX-SMPI-1-R33	0.33	0.402	12.5	10.0	0.0037	.93	1.61	6.25	4.98	0.015	1.86
MOX-SMPI-1-R68	0.68	0.752	9.4	9.0	0.0046	1.24	3.01	4.69	4.48	0.0185	2.49
MOX-SMPI-1-1R0	1.0	1.18	7.5	7.26	0.0070	1.55	4.70	3.75	3.63	0.0282	3.11
MOX-SMPI-1-2R0	2.0	2.30	5.36	5.64	0.012	2.17	9.21	2.68	2.82	0.0470	4.35
MOX-SMPI-1-5R0	5.0	4.70	3.75	4.27	0.020	3.11	18.8	1.88	2.13	0.082	6.21
MOX-SMPI-1-8R0	8.0	7.94	2.88	3.37	0.033	4.04	31.77	1.44	1.69	0.130	8.08
MOX-SMPI-1-100	10.0	10.58	2.5	2.84	0.046	4.66	42.30	1.25	1.42	0.183	9.32
MOX-SMPI-1-150	15.0	15.23	2.08	2.07	0.087	5.59	60.91	1.04	1.03	0.348	11.2
MOX-SMPI-1-200	20.0	20.73	1.79	1.71	0.127	6.52	82.91	0.89	0.86	0.507	13.0
MOX-SMPI-1-250	25.0	24.86	1.63	1.46	0.173	7.14	99.45	0.82	0.73	0.693	14.3
MOX-SMPI-1-330	33.0	34.26	1.39	1.22	0.249	8.39	137.1	0.69	0.61	0.995	16.8
MOX-SMPI-1-500	50.0	51.18	1.14	0.99	0.381	10.3	204.7	0.57	0.49	1.524	20.5
MOX-SMPI-1-680	68.0	67.87	0.99	0.92	0.437	11.8	271.5	0.49	0.46	1.749	23.6
MOX-SMPI-1-101	100.0	99.45	0.82	0.74	0.686	14.3	397.8	0.41	0.37	2.745	28.6
MOX-SMPI-1-151	150.0	147.4	0.67	0.67	0.832	17.4	589.6	0.33	0.33	3.329	34.8
MOX-SMPI-1-201	200.0	198.6	0.58	0.62	0.963	20.2	794.3	0.29	0.31	3.854	40.4
MOX-SMPI-1-301	300.0	300.8	0.47	0.56	1.181	24.9	1203	0.23	0.28	4.726	49.7
MOX-SMPI-2-R33	0.33	0.284	18.8	10.9	0.0033	.85	1.14	9.38	5.47	0.0132	1.71
MOX-SMPI-2-R68	0.68	0.675	12.5	9.4	0.0045	1.28	2.70	6.25	4.68	0.0180	2.56
MOX-SMPI-2-1R0	1.0	1.26	9.38	8.22	0.0058	1.71	5.06	4.69	4.11	0.0233	3.42
MOX-SMPI-2-2R0	2.0	1.98	7.50	6.74	0.0090	2.14	7.90	3.75	3.37	0.035	4.27
MOX-SMPI-2-5R0	5.0	5.06	4.69	4.34	0.021	3.42	20.22	2.34	2.17	0.084	6.84
MOX-SMPI-2-8R0	8.0	7.90	3.75	3.50	0.032	4.27	31.60	1.88	1.75	0.129	8.55
MOX-SMPI-2-100	10.0	11.38	3.13	2.89	0.047	5.13	45.50	1.56	1.45	0.188	10.3
MOX-SMPI-2-150	15.0	15.48	2.68	2.69	0.054	5.98	61.94	1.34	1.35	0.218	12.0
MOX-SMPI-2-200	20.0	20.22	2.34	2.24	0.078	6.84	80.90	1.17	1.12	0.313	13.7
MOX-SMPI-2-250	25.0	25.60	2.08	1.89	0.111	7.69	102.38	1.04	0.94	0.443	15.4
MOX-SMPI-2-330	33.0	34.84	1.79	1.56	0.162	8.97	139.4	0.89	0.78	0.649	17.9
MOX-SMPI-2-500	50.0	49.38	1.50	1.28	0.240	10.7	197.5	0.75	0.64	0.961	21.4
MOX-SMPI-2-680	68.0	66.44	1.29	1.07	0.342	12.4	265.8	0.65	0.54	1.367	24.8
MOX-SMPI-2-101	100.0	102.38	1.04	0.75	0.695	15.4	409.5	0.52	0.38	2.778	30.8
MOX-SMPI-2-151	150.0	152.9	0.85	0.68	0.842	18.8	611.8	0.43	0.34	3.366	37.6
MOX-SMPI-2-201	200.0	197.5	0.75	0.64	0.950	21.4	790.0	0.38	0.32	3.800	42.7
MOX-SMPI-2-301	300.0	303.7	0.60	0.58	1.174	26.5	1215	0.30	0.29	4.697	53.0

- Operating temperature range: -40°C to +85°C.
- Storage temperature range: -40°C to +125°C.
- Open Circuit Inductance Test Parameters: 100kHz, 0.250 Vrms, 0.0 Adc.
- Parallel: (1,4 - 3,2) Series: (1 - 3) tie (2 - 4)
- Peak current for approximately 30% roll-off.
- Turns Ratio: (1-2):(4-3) 1:1
- RMS current, delta temp. of 40° C ambient temperature of 85°C.
- DCR @ 20°C.
- RoHS compliant.
- Hipot rating: winding to winding: 300Vdc minimum.
- Applied volt-time product (v-us) across the inductor. Value represents the applied V-μs @ 300KHz necessary to generate a core loss equal to 10% of the total losses for a 40°C temperature rise.
- MoxiE Inductor Corporation specifications are subject to change without notice.



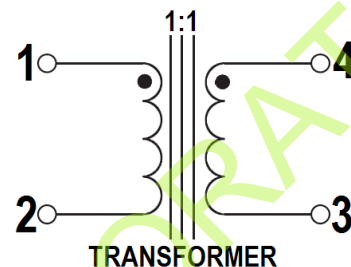
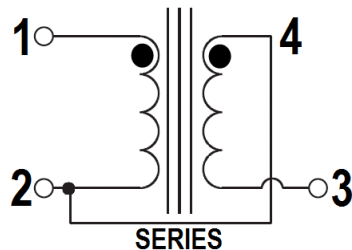
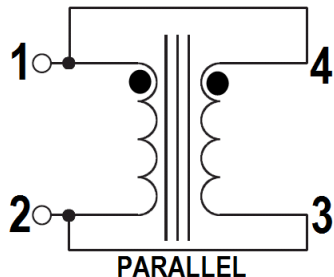
MOX-SMPI ELECTRICAL SPECIFICATIONS

PART NUMBER		PARALLEL RATINGS					SERIES RATINGS				
MoxiE Part Number	Inductance (μH)	OCL (μH) Nominal	Isat (A) Peak	Irms (A) Maximum	DCR (Ω) Maximum	Volt μ-sec	OCL (μH) Nominal	Isat (A) Peak	Irms (A) Maximum	DCR (Ω) Maximum	Volt μ-sec
MOX-SMPI-3-R33	0.33	0.368	15.0	11.4	0.0032	0.97	1.47	7.50	5.72	0.0128	1.93
MOX-SMPI-3-R68	0.68	0.688	11.3	9.3	0.0048	1.29	2.75	5.63	4.64	0.0194	2.58
MOX-SMPI-3-1R0	1.0	1.08	9.0	8.38	0.0059	1.61	4.20	4.50	4.19	0.0238	3.22
MOX-SMPI-3-2R0	2.0	2.11	6.43	7.26	0.0079	2.26	8.43	3.21	3.63	0.0317	4.51
MOX-SMPI-3-5R0	5.0	5.20	4.09	5.24	0.015	3.54	20.81	2.05	2.62	0.061	7.09
MOX-SMPI-3-8R0	8.0	8.43	3.21	4.23	0.023	4.51	33.77	1.61	2.12	0.093	9.02
MOX-SMPI-3-100	10.0	9.68	3.00	3.64	0.032	4.83	38.70	1.50	1.82	0.126	9.67
MOX-SMPI-3-150	15.0	15.52	2.37	3.25	0.039	6.12	62.09	1.18	1.63	0.158	12.2
MOX-SMPI-3-200	20.0	20.81	2.05	2.43	0.071	7.09	83.25	1.02	1.22	0.282	14.2
MOX-SMPI-3-250	25.0	24.77	1.88	2.34	0.076	7.73	99.07	0.94	1.17	0.306	15.5
MOX-SMPI-3-330	33.0	33.71	1.61	1.93	0.112	9.02	134.8	0.80	0.96	0.449	18.0
MOX-SMPI-3-500	50.0	49.71	1.32	1.56	0.171	11.0	198.8	0.66	0.78	0.686	21.9
MOX-SMPI-3-680	68.0	68.80	1.13	1.28	0.253	12.9	275.2	0.56	0.64	1.013	25.8
MOX-SMPI-3-101	100.0	99.07	0.94	1.05	0.379	15.5	396.3	0.47	0.53	1.514	30.9
MOX-SMPI-3-151	150.0	149.7	0.76	0.86	0.571	19.0	598.7	0.38	0.43	2.283	38.0
MOX-SMPI-3-201	200.0	198.8	0.66	0.71	0.829	21.9	795.3	0.33	0.35	3.315	43.8
MOX-SMPI-3-301	300.0	296.2	0.54	0.56	1.309	26.7	1185	0.27	0.28	5.236	53.5
MOX-SMPI-4-R33	0.33	0.313	22.5	12.2	0.0030	0.98	1.25	11.25	6.09	0.0119	1.96
MOX-SMPI-4-R68	0.68	0.744	15.0	10.6	0.0040	1.47	2.98	7.50	5.28	0.0158	2.94
MOX-SMPI-4-1R0	1.0	1.39	11.25	9.23	0.0052	1.96	5.57	5.63	4.62	0.0207	3.93
MOX-SMPI-4-2R0	2.0	2.18	9.00	8.38	0.0063	2.45	8.70	4.50	4.19	0.0251	4.91
MOX-SMPI-4-3R0	5.0	4.26	6.43	7.21	0.0085	3.44	17.05	3.21	3.61	0.0339	6.87
MOX-SMPI-4-8R0	8.0	8.70	4.50	5.49	0.015	4.91	34.80	2.25	2.74	0.059	9.81
MOX-SMPI-4-100	10.0	10.53	4.09	4.67	0.020	5.40	42.11	2.05	2.33	0.081	10.8
MOX-SMPI-4-150	15.0	14.70	3.46	3.87	0.029	6.38	58.81	1.73	1.94	0.117	12.8
MOX-SMPI-4-200	20.0	19.58	3.00	3.62	0.034	7.36	78.30	1.50	1.81	0.135	14.7
MOX-SMPI-4-250	25.0	25.14	2.65	3.02	0.048	8.34	100.51	1.32	1.51	0.193	16.7
MOX-SMPI-4-330	33.0	34.80	2.25	2.49	0.071	9.81	139.2	1.13	1.25	0.283	19.6
MOX-SMPI-4-500	50.0	50.11	1.88	2.05	0.104	11.8	200.4	0.94	1.03	0.418	23.6
MOX-SMPI-4-680	68.0	68.21	1.61	1.70	0.153	13.7	272.8	0.80	0.85	0.612	27.5
MOX-SMPI-4-101	100.0	100.57	1.32	1.37	0.235	16.7	402.3	0.66	0.69	0.939	33.4
MOX-SMPI-4-151	150.0	153.5	1.07	1.10	0.365	20.6	613.9	0.54	0.55	1.462	41.2
MOX-SMPI-4-201	200.0	200.4	0.94	0.92	0.521	23.6	801.8	0.47	0.46	2.085	47.1
MOX-SMPI-4-301	300.0	302.8	0.76	0.75	0.787	29.0	1211	0.38	0.37	3.148	57.9

- Operating temperature range: -40°C to +85°C.
- Storage temperature range: -40°C to +125°C.
- Open Circuit Inductance Test Parameters: 100kHz, 0.250 Vrms, 0.0 Adc.
- Parallel: (1,4 - 3,2) Series: (1 - 3) tie (2 - 4)
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SCHEMATICS



RECOMMENDED PCB LAYOUT

MOXIE PART NUMBER	A	B	C (4 PLACES)	D (4 PLACES)	E	F
MOXIE MOX-SMPI-1	13.00	9.96	3.68	3.05	7.04	10.72
MOXIE MOX-SMPI-2	13.00	9.96	3.68	3.05	7.04	10.72
MOXIE MOX-SMPI-3	15.54	12.50	4.06	3.05	8.84	12.50
MOXIE MOX-SMPI-4	15.54	12.50	4.06	3.05	8.84	12.50

