

## APW-M Series

### Features

- Dual winding inductors that can be used as either a single inductor, or in coupled inductor/transformer applications (1: 1 turns ratio), Four sizes of shielded drum core inductors, Windings can be connected in series or parallel, offering a broad range of inductance and current ratings and current ratings.
- RoHS compliance.

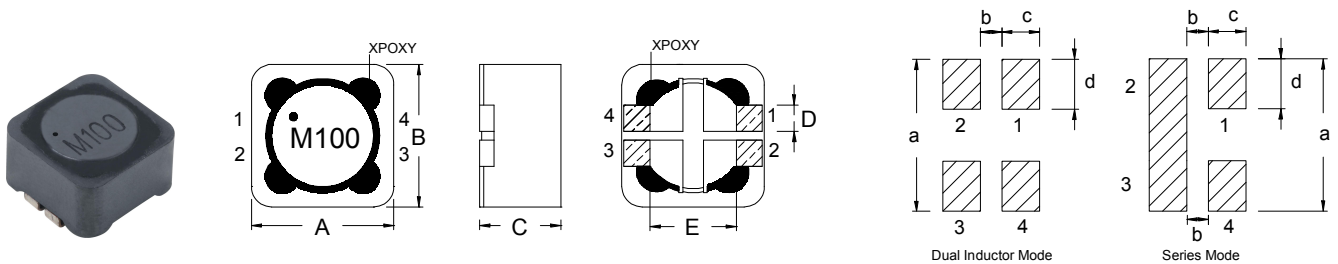
### Applications

- Excellent for Desktop and servers, DVD and media players, DC-DC Converters, VBM inductor for CPU and DDR power, Input and output filter chokes.

### Test Equipment and Conditions

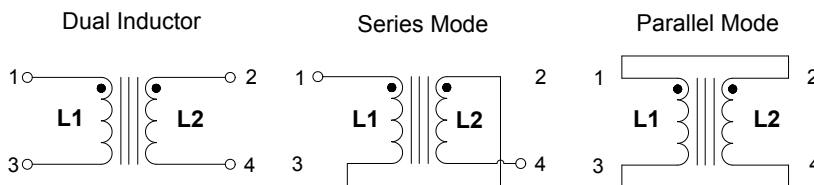
- All test data is referenced to 25°C ambient.
- Operating temperature range -40°C to +105°C. (Including self - temperature rise)
- DC current (I<sub>rms</sub>) that will cause an approximate  $\Delta T$  of 40°C.
- DC current (I<sub>sat</sub>) that will cause L<sub>0</sub> to drop approximately 35%.
- Test frequency at 100KHz, 0.25V.

### External Dimensions (Unit : m/m)



TYPE	A	B	C	D Typ.	E Typ.	a Typ.	b Typ.	c Typ.	d Typ.	Q'TY/Reel
APW07M30	7.6Max	7.6Max	3.55Max	0.6	5.4	7.9	0.4	1.0	1.73	1350
APW07M45	7.6Max	7.6Max	4.5Max	0.6	5.4	7.9	0.4	1.0	1.73	1100
APW12M60	12.5Max	12.5Max	6.0Max	2.0	8.0	13.8	0.5	2.5	3.85	600
APW12M80	12.5Max	12.5Max	8.0Max	2.0	8.0	13.8	0.5	2.5	3.85	350

### Schematics



### Part Number Code

APW 07 M 30 M R33  
 A B C D E F

- |    |                 |                  |
|----|-----------------|------------------|
| A: | Type of product | Power Inductors  |
| B: | Dimensions(mm)  | 07: 7.6 x7.6 Max |
| C: | Materials       | M Type           |
| D: | Thickness(mm)   | 30: 3.55 Max     |
| E: | Tolerance       | M: $\pm 20\%$    |
| F: | Inductance      | R33=0.33uH       |

### APW-M Series

Part Number	Rated Inductance (µH)	Parallel Ratings				Series Ratings			
		OCL ±20% (µH)	Irms (A)	Isat (A)	DCR (Ω) Typ	OCL ±20% (µH)	Irms (A)	Isat (A)	DCR (Ω) Typ
APW07M30MR33	0.33	0.306	6.25	14.51	0.0073	1.224	3.13	7.25	0.0293
APW07M30M1R0	1.0	0.992	5.30	8.10	0.0101	3.968	2.66	4.07	0.0405
APW07M30M1R5	1.5	1.482	4.69	6.60	0.0131	5.928	2.32	3.29	0.0522
APW07M30M2R2	2.2	2.070	4.14	5.55	0.0165	8.280	2.08	2.79	0.0661
APW07M30M3R3	3.3	3.540	3.31	4.25	0.0256	14.16	1.68	2.13	0.1025
APW07M30M4R7	4.7	4.422	3.15	3.82	0.0294	17.69	1.57	1.91	0.1178
APW07M30M6R8	6.8	6.480	2.55	3.15	0.0430	25.92	1.29	1.58	0.1726
APW07M30M8R2	8.2	8.930	2.22	2.66	0.0586	35.70	1.10	1.33	0.2345
APW07M30M100	10	10.30	2.11	2.50	0.0650	41.20	1.05	1.25	0.2600
APW07M30M150	15	15.01	1.85	2.05	0.0841	60.04	0.925	1.04	0.3356
APW07M30M220	22	22.65	1.64	1.69	0.1065	90.60	0.819	0.84	0.425
APW07M30M330	33	34.41	1.31	1.35	0.1653	137.6	0.660	0.69	0.661
APW07M30M470	47	48.62	1.10	1.15	0.2390	194.5	0.547	0.57	0.956
APW07M30M680	68	68.91	0.90	0.96	0.3559	275.6	0.448	0.48	1.42
APW07M30M820	82	80.37	0.86	0.90	0.3816	321.5	0.434	0.44	1.52
APW07M30M101	100	101.4	0.73	0.79	0.5246	405.6	0.371	0.39	2.09
APW07M30M151	150	150.9	0.59	0.66	0.8485	603.6	0.290	0.32	3.38
APW07M30M221	220	223.3	0.53	0.53	1.0420	893.2	0.263	0.28	4.16
APW07M30M331	330	325.5	0.42	0.44	1.57	1302	0.213	0.23	6.30
APW07M30M471	470	465.8	0.36	0.37	2.34	1863	0.175	0.18	9.35
APW07M30M681	680	676.5	0.29	0.32	3.44	2706	0.145	0.16	13.75
APW07M30M821	820	821.7	0.27	0.28	3.89	3287	0.135	0.15	15.55
APW07M30M102	1000	995.0	0.26	0.26	4.3	3980	0.129	0.13	17.19
APW07M45MR33	0.33	0.294	6.27	18.60	0.0073	1.176	3.14	9.28	0.0292
APW07M45M1R0	1.0	0.952	5.34	10.30	0.0099	3.808	2.69	5.15	0.0396
APW07M45M1R5	1.5	1.422	5.01	8.45	0.0113	5.688	2.50	4.21	0.0457
APW07M45M2R2	2.2	1.986	4.71	7.15	0.0129	7.944	2.35	3.57	0.0516
APW07M45M3R3	3.3	3.396	3.98	5.43	0.0181	13.58	1.99	2.75	0.0725
APW07M45M4R7	4.7	5.182	3.36	4.40	0.0251	20.73	1.69	2.21	0.1010
APW07M45M6R8	6.8	7.344	2.63	3.70	0.0414	29.38	1.30	1.86	0.1653
APW07M45M8R2	8.2	8.566	2.56	3.45	0.0437	34.26	1.29	1.72	0.1756
APW07M45M100	10	9.882	2.41	3.20	0.0484	39.53	1.20	1.60	0.1940
APW07M45M150	15	16.09	2.13	2.51	0.0632	64.36	1.06	1.25	0.2525
APW07M45M220	22	21.73	1.77	2.15	0.0918	86.92	0.883	1.08	0.3675
APW07M45M330	33	33.01	1.42	1.73	0.1420	132.0	0.716	0.88	0.5692
APW07M45M470	47	49.64	1.17	1.42	0.2140	198.6	0.579	0.72	0.8580
APW07M45M680	68	69.67	1.03	1.20	0.2625	278.7	0.522	0.61	1.05
APW07M45M820	82	80.95	0.93	1.11	0.3416	323.8	0.458	0.56	1.37
APW07M45M101	100	101.6	0.88	0.99	0.3795	406.4	0.435	0.50	1.52
APW07M45M151	150	150.0	0.69	0.82	0.5851	600.0	0.349	0.42	2.35
APW07M45M221	220	227.0	0.56	0.67	0.9	908.0	0.282	0.34	3.60

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		OCL ±20% (μH)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DCR (Ω) Typ	OCL ±20% (μH)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DCR (Ω) Typ
APW07M45M331	330	335.6	0.45	0.55	1.39	1342	0.226	0.27	5.6
APW07M45M471	470	465.3	0.40	0.46	1.72	1861	0.204	0.23	6.9
APW07M45M681	680	671.2	0.34	0.38	2.55	2685	0.168	0.20	10.1
APW07M45M821	820	812.7	0.31	0.35	2.92	3251	0.158	0.17	11.6
APW07M45M102	1000	1009	0.28	0.31	3.85	4036	0.136	0.16	15.44
APW12M60MR47	0.47	0.456	17.80	33.40	0.0018	1.824	8.900	16.70	0.0077
APW12M60M1R0	1.0	0.894	15.20	23.85	0.0023	3.576	7.590	11.90	0.0095
APW12M60M1R5	1.5	1.478	13.95	18.50	0.0029	5.912	6.960	9.25	0.0112
APW12M60M2R2	2.2	2.208	11.00	15.20	0.0044	8.832	5.520	7.60	0.0180
APW12M60M3R3	3.3	3.084	9.35	12.80	0.0062	12.34	4.680	6.40	0.0250
APW12M60M4R7	4.7	5.274	7.25	9.80	0.0104	21.10	3.630	4.90	0.0415
APW12M60M6R8	6.8	6.588	6.70	8.75	0.0121	26.35	3.350	4.40	0.0488
APW12M60M8R2	8.2	8.068	5.60	7.94	0.0174	32.19	2.800	3.97	0.0700
APW12M60M100	10	9.654	5.50	7.25	0.0188	38.62	2.690	3.63	0.0750
APW12M60M150	15	15.35	4.31	5.75	0.0296	61.40	2.150	2.88	0.1190
APW12M60M220	22	22.36	3.75	4.75	0.0392	89.44	1.860	2.38	0.1575
APW12M60M330	33	33.74	3.31	3.88	0.0501	135.0	1.660	1.95	0.2009
APW12M60M470	47	47.47	2.75	3.27	0.0735	189.9	1.360	1.65	0.2940
APW12M60M680	68	67.91	2.22	2.75	0.1000	271.6	1.130	1.35	0.4360
APW12M60M820	82	86.89	2.07	2.41	0.1270	347.6	1.040	1.20	0.5100
APW12M60M101	100	102.7	1.80	2.23	0.1685	410.8	0.900	1.15	0.6752
APW12M60M151	150	151.1	1.50	1.83	0.2460	604.4	0.745	0.915	0.9810
APW12M60M221	220	216.8	1.20	1.53	0.38	867.2	0.599	0.760	1.52
APW12M60M331	330	332.6	1.07	1.23	0.48	1330	0.535	0.615	1.91
APW12M60M471	470	473.1	0.89	1.03	0.71	1892	0.440	0.515	2.84
APW12M60M681	680	679.8	0.71	0.86	1.09	2719	0.350	0.430	4.38
APW12M60M821	820	828.0	0.60	0.77	1.47	3312	0.304	0.385	5.9
APW12M60M102	1000	1008	0.58	0.72	1.67	4032	0.285	0.355	6.7
APW12M80MR47	0.47	0.419	18.10	56.60	0.00193	1.676	9.00	28.30	0.0078
APW12M80M1R0	1.0	0.821	15.70	40.40	0.00258	3.284	7.80	20.00	0.0102
APW12M80M1R5	1.5	1.357	13.65	31.42	0.00338	5.428	6.84	15.80	0.0136
APW12M80M2R2	2.2	2.027	12.65	25.80	0.00369	8.108	6.30	12.80	0.0159
APW12M80M3R3	3.3	2.831	10.50	21.72	0.00561	11.32	5.29	10.90	0.0226
APW12M80M4R7	4.7	4.841	8.33	16.67	0.00908	19.36	4.18	8.35	0.0363
APW12M80M6R8	6.8	7.387	7.40	13.45	0.0114	29.55	3.70	6.75	0.0460
APW12M80M8R2	8.2	8.861	6.39	12.35	0.0155	35.44	3.20	6.15	0.0620
APW12M80M100	10	10.47	6.10	11.32	0.0170	41.88	3.05	5.65	0.0680
APW12M80M150	15	14.09	5.08	9.76	0.0244	56.36	2.51	4.90	0.0980
APW12M80M220	22	22.93	4.05	7.65	0.0388	91.72	2.05	3.80	0.1554
APW12M80M330	33	33.92	3.26	6.29	0.0594	135.7	1.63	3.15	0.2390
APW12M80M470	47	47.05	2.98	5.33	0.0711	188.2	1.47	2.66	0.2853

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		OCL ±20% (μH)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DCR (Ω) Typ	OCL ±20% (μH)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)	DCR (Ω) Typ
APW12M80M680	68	66.48	2.45	4.48	0.1040	265.9	1.235	2.240	0.417
APW12M80M820	82	79.75	2.15	4.11	0.1415	319.0	1.050	2.050	0.568
APW12M80M101	100	99.31	1.98	3.67	0.1615	397.2	0.980	1.850	0.645
APW12M80M151	150	144.9	1.60	3.05	0.2445	579.6	0.805	1.530	0.979
APW12M80M221	220	221.5	1.32	2.45	0.3725	886.0	0.650	1.230	1.49
APW12M80M331	330	323.6	1.06	2.05	0.57	1294	0.527	1.010	2.27
APW12M80M471	470	467.1	0.87	1.70	0.856	1868	0.430	0.845	3.4
APW12M80M681	680	676.7	0.78	1.40	1.07	2707	0.385	0.705	4.28
APW12M80M821	820	818.1	0.66	1.27	1.45	3272	0.328	0.640	5.84
APW12M80M102	1000	1005	0.63	1.15	1.65	4020	0.310	0.575	6.58