

MOULDED WIREWOUND CHIP INDUCTOR

P7101 Family

Features

- * Encapsulated
- * Lead-free (Pb-free)
- * Rugged
- * RoHS compliant
- * Industry Standard
- * Wide range (0.01 – 10,000µH)
- * E12 inductance values
- * Surface Mount
- * Flat top for pick & place

Applications

- * Television
- * Mobile radio and telephones
- * In-car entertainment systems
- * Video cameras
- * Filters
- * Hybrid ICs

DESCRIPTION

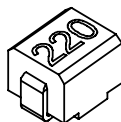
The P7101 family comprises rugged moulded inductors covering six decades of E12 standard values.

The coils are encapsulated in heat-proof thermoset resin providing resistance to shock, pressure, heat, humidity and solvents to MIL-STD-202F.

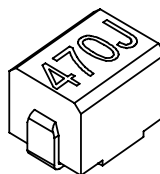
As such, these devices have wide application in consumer and industrial electronics.

Components are available in three mechanical sizes similar to EIA 1210, 1812 and 2220 covering 10nH to 10mH.

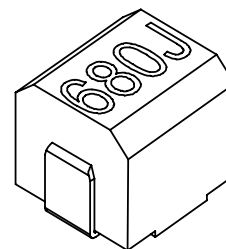
The P7101 family of components is compliant with RoHS Directive 2002/95/EC, and suitable for lead-free and conventional placement and reflow.



P7101-3225



P7101-4532



P7101-5650

SPECIFICATIONS

Electrical

3225 size (EIA 1210)

Part Number ⁽⁴⁾	Inductance (μ H)	Q min	Test frequency (MHz) ⁽¹⁾	SRF min (MHz)	DCR (Ω) Max	Rated Current ⁽²⁾ I_{DC} (mA)
P7101-3225-R10MT	0.10 $\pm$ 10%	28	100	700	0.44	450
P7101-3225-R12MT	0.12 $\pm$ 10%	30	25	500	0.22	450
P7101-3225-R15MT	0.15 $\pm$ 10%	30	25	450	0.25	450
P7101-3225-R18MT	0.18 $\pm$ 10%	30	25	400	0.28	450
P7101-3225-R22MT	0.22 $\pm$ 10%	30	25	350	0.32	450
P7101-3225-R27MT	0.27 $\pm$ 10%	30	25	320	0.36	450
P7101-3225-R33MT	0.33 $\pm$ 10%	30	25	300	0.40	450
P7101-3225-R39MT	0.39 $\pm$ 10%	30	25	250	0.45	450
P7101-3225-R47MT	0.47 $\pm$ 10%	30	25	220	0.50	450
P7101-3225-R56MT	0.56 $\pm$ 10%	30	25	180	0.55	450
P7101-3225-R68MT	0.68 $\pm$ 10%	30	25	160	0.60	450
P7101-3225-R82MT	0.82 $\pm$ 10%	30	25	140	0.65	450
P7101-3225-1R0KT	1.0 $\pm$ 10%	30	8	120	0.70	400
P7101-3225-1R2KT	1.2 $\pm$ 10%	30	8	100	0.75	390
P7101-3225-1R5KT	1.5 $\pm$ 10%	30	8	85	0.85	370
P7101-3225-1R8KT	1.8 $\pm$ 10%	30	8	80	0.90	350
P7101-3225-2R2KT	2.2 $\pm$ 10%	30	8	75	1.0	320
P7101-3225-2R7KT	2.7 $\pm$ 10%	30	8	70	1.1	290
P7101-3225-3R3KT	3.3 $\pm$ 10%	30	8	60	1.2	260
P7101-3225-3R9KT	3.9 $\pm$ 10%	30	8	55	1.3	250
P7101-3225-4R7KT	4.7 $\pm$ 10%	30	8	50	1.5	220
P7101-3225-5R6KT	5.6 $\pm$ 10%	30	8	47	1.6	200
P7101-3225-6R8KT	6.8 $\pm$ 10%	30	8	43	1.8	180
P7101-3225-8R2KT	8.2 $\pm$ 10%	30	8	40	2.0	170

Table continues on following page

Notes

1. Test frequency relates to measurement of inductance and Q.
2. Rated current, I_{DC} , is the current at which the zero-current inductance drops by 10% (max) or temperature rises by 20°C (max).
3. Operating temperature -40°C to +125°C.

For non-standard inductance values, please contact Profec.

3225 size (EIA 1210)

Table continued from previous page

Part Number ⁽⁴⁾	Inductance (μ H)	Q min	Test frequency (MHz) ⁽¹⁾	SRF min (MHz)	DCR (Ω) Max	Rated Current ⁽²⁾ I _{DC} (mA)
P7101-3225-100KT	10 $\pm$ 10%	30	2.5	36	2.1	150
P7101-3225-120KT	12 $\pm$ 10%	30	2.5	33	2.5	140
P7101-3225-150KT	15 $\pm$ 10%	30	2.5	28	2.8	130
P7101-3225-180KT	18 $\pm$ 10%	30	2.5	25	3.3	120
P7101-3225-220KT	22 $\pm$ 10%	30	2.5	23	3.7	110
P7101-3225-270KT	27 $\pm$ 10%	30	2.5	18	5.0	80
P7101-3225-330KT	33 $\pm$ 10%	30	2.5	17	5.6	70
P7101-3225-390KT	39 $\pm$ 10%	30	2.5	16	6.4	65
P7101-3225-470KT	47 $\pm$ 10%	30	2.5	15	7.0	60
P7101-3225-560KT	56 $\pm$ 10%	30	2.5	13	8.0	55
P7101-3225-680KT	68 $\pm$ 10%	30	2.5	12	9.0	50
P7101-3225-820KT	82 $\pm$ 10%	30	2.5	11	10	45
P7101-3225-101KT	100 $\pm$ 10%	20	0.8	10	11	40
P7101-3225-121KT	120 $\pm$ 10%	20	0.8	10	11	70
P7101-3225-151KT	150 $\pm$ 10%	20	0.8	8	15	65
P7101-3225-181KT	180 $\pm$ 10%	20	0.8	7	17	60
P7101-3225-221KT	220 $\pm$ 10%	20	0.8	7	21	50

Notes

1. Test frequency relates to measurement of inductance and Q.
2. Rated current, I_{DC}, is the current at which the zero-current inductance drops by 10% (max) or temperature rises by 20°C (max).
3. Operating temperature -40°C to +125°C.
4. For non-standard inductance values, please contact Profec.

4532 size (EIA 1812)

Part Number ⁽⁴⁾	Inductance (μ H)	Q min	Test frequency (MHz) ⁽¹⁾	SRF min (MHz)	DCR (Ω) Max	Rated Current ⁽²⁾ I _{DC} (mA)
P7101-4532-R10MT	0.10 $\pm$ 20%	35	25	300	0.18	800
P7101-4532-R12MT	0.12 $\pm$ 20%	35	25	280	0.20	770
P7101-4532-R15MT	0.15 $\pm$ 20%	35	25	250	0.22	730
P7101-4532-R18MT	0.18 $\pm$ 20%	35	25	220	0.24	700
P7101-4532-R22MT	0.22 $\pm$ 20%	40	25	200	0.25	665
P7101-4532-R27MT	0.27 $\pm$ 20%	40	25	180	0.26	635
P7101-4532-R33MT	0.33 $\pm$ 20%	40	25	165	0.28	605
P7101-4532-R39MT	0.39 $\pm$ 20%	40	25	150	0.30	575
P7101-4532-R47MT	0.47 $\pm$ 20%	40	25	145	0.32	545
P7101-4532-R56MT	0.56 $\pm$ 20%	40	25	140	0.36	520
P7101-4532-R68MT	0.68 $\pm$ 20%	40	25	135	0.40	500
P7101-4532-R82MT	0.82 $\pm$ 20%	40	25	130	0.45	475
P7101-4532-1R0KT	1.0 $\pm$ 10%	50	8	100	0.50	450
P7101-4532-1R2KT	1.2 $\pm$ 10%	50	8	80	0.55	430
P7101-4532-1R5KT	1.5 $\pm$ 10%	50	8	70	0.60	410
P7101-4532-1R8KT	1.8 $\pm$ 10%	50	8	60	0.65	390
P7101-4532-2R2KT	2.2 $\pm$ 10%	50	8	55	0.70	380
P7101-4532-2R7KT	2.7 $\pm$ 10%	50	8	50	0.75	370
P7101-4532-3R3KT	3.3 $\pm$ 10%	50	8	45	0.80	355
P7101-4532-3R9KT	3.9 $\pm$ 10%	50	8	40	0.90	330
P7101-4532-4R7KT	4.7 $\pm$ 10%	50	8	35	1.0	315
P7101-4532-5R6KT	5.6 $\pm$ 10%	50	8	33	1.1	300
P7101-4532-6R8KT	6.8 $\pm$ 10%	50	8	27	1.2	285
P7101-4532-8R2KT	8.2 $\pm$ 10%	50	8	25	1.4	270
P7101-4532-100KT	10 $\pm$ 10%	50	2.5	20	1.6	250
P7101-4532-120KT	12 $\pm$ 10%	50	2.5	18	2.0	225
P7101-4532-150KT	15 $\pm$ 10%	50	2.5	17	2.5	200
P7101-4532-180KT	18 $\pm$ 10%	50	2.5	15	2.8	190
P7101-4532-220KT	22 $\pm$ 10%	50	2.5	13	3.2	180
P7101-4532-270KT	27 $\pm$ 10%	50	2.5	12	3.6	170
P7101-4532-330KT	33 $\pm$ 10%	50	2.5	11	4.0	160
P7101-4532-390KT	39 $\pm$ 10%	50	2.5	10	4.5	150
P7101-4532-470KT	47 $\pm$ 10%	50	2.5	10	5.0	140
P7101-4532-560KT	56 $\pm$ 10%	50	2.5	9.0	5.5	135
P7101-4532-680KT	68 $\pm$ 10%	50	2.5	9.0	6.0	130
P7101-4532-820KT	82 $\pm$ 10%	50	2.5	8.0	7.0	120
P7101-4532-101KT	100 $\pm$ 10%	40	0.8	8.0	8.0	110
P7101-4532-121KT	120 $\pm$ 10%	40	0.8	6.0	8.0	110
P7101-4532-151KT	150 $\pm$ 10%	40	0.8	5.0	9.0	105
P7101-4532-181KT	180 $\pm$ 10%	40	0.8	5.0	9.5	102
P7101-4532-221KT	220 $\pm$ 10%	40	0.8	4.0	10	100
P7101-4532-271KT	270 $\pm$ 10%	40	0.8	4.0	12	92
P7101-4532-331KT	330 $\pm$ 10%	40	0.8	3.0	14	85
P7101-4532-391KT	390 $\pm$ 10%	40	0.8	3.0	18	80
P7101-4532-471KT	470 $\pm$ 10%	40	0.8	3.0	26	62
P7101-4532-561KT	560 $\pm$ 10%	40	0.8	3.0	30	50
P7101-4532-681KT	680 $\pm$ 10%	40	0.8	3.0	30	50
P7101-4532-821KT	820 $\pm$ 10%	40	0.8	2.5	35	30
P7101-4532-102KT	1000 $\pm$ 10%	20	0.25	2.5	40	30

Notes

1. Test frequency relates to measurement of inductance and Q.
2. Rated current, I_{DC}, is the current at which the zero-current inductance drops by 10% (max) or temperature rises by 20°C (max).
3. Operating temperature -40°C to +125°C.
4. For non-standard inductance values, please contact Profec.

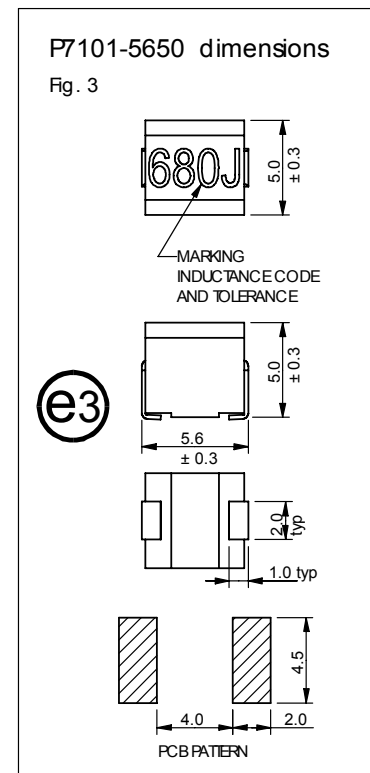
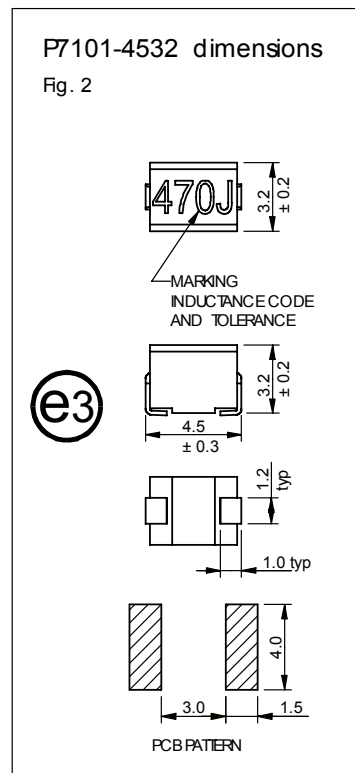
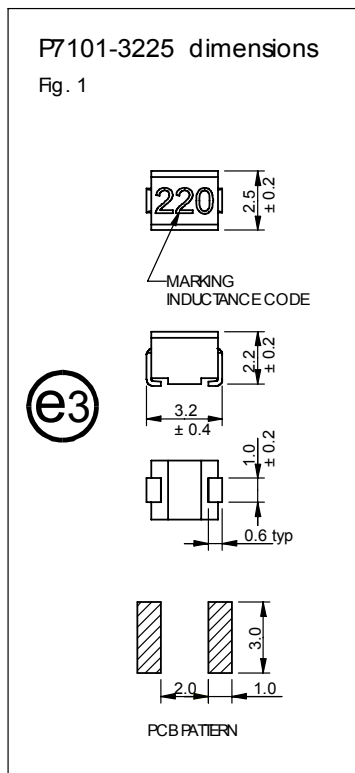
5650 size (EIA 2220)

Part Number ⁽⁴⁾	Inductance (μ H)	Q min	Test frequency (MHz) ⁽¹⁾	SRF min (MHz)	DCR (Ω) Max	Rated Current ⁽²⁾ I _{DC} (mA)
P7101-5650-1R0KT	1.0 $\pm$ 10%	10	8	95	0.030	1800
P7101-5650-1R2KT	1.2 $\pm$ 10%	10	8	70	0.035	1700
P7101-5650-1R5KT	1.5 $\pm$ 10%	10	8	55	0.040	1600
P7101-5650-1R8KT	1.8 $\pm$ 10%	10	8	47	0.050	1400
P7101-5650-2R2KT	2.2 $\pm$ 10%	10	8	42	0.060	1300
P7101-5650-2R7KT	2.7 $\pm$ 10%	10	8	37	0.070	1200
P7101-5650-3R3KT	3.3 $\pm$ 10%	10	8	34	0.080	1120
P7101-5650-3R9KT	3.9 $\pm$ 10%	10	8	32	0.090	1050
P7101-5650-4R7KT	4.7 $\pm$ 10%	10	8	29	0.11	950
P7101-5650-5R6KT	5.6 $\pm$ 10%	10	8	26	0.13	880
P7101-5650-6R8KT	6.8 $\pm$ 10%	10	8	24	0.15	810
P7101-5650-8R2KT	8.2 $\pm$ 10%	10	8	22	0.18	750
P7101-5650-100KT	10 $\pm$ 10%	10	2.5	19	0.21	690
P7101-5650-120KT	12 $\pm$ 10%	10	2.5	17	0.25	630
P7101-5650-150KT	15 $\pm$ 10%	10	2.5	16	0.30	580
P7101-5650-180KT	18 $\pm$ 10%	10	2.5	14	0.36	530
P7101-5650-220KT	22 $\pm$ 10%	10	2.5	13	0.43	480
P7101-5650-270KT	27 $\pm$ 10%	10	2.5	11.5	0.52	440
P7101-5650-330KT	33 $\pm$ 10%	10	2.5	10.5	0.62	400
P7101-5650-390KT	39 $\pm$ 10%	10	2.5	9.5	0.72	370
P7101-5650-470KT	47 $\pm$ 10%	10	2.5	8.5	0.85	340
P7101-5650-560KT	56 $\pm$ 10%	10	2.5	7.8	1.0	310
P7101-5650-680KT	68 $\pm$ 10%	10	2.5	7.0	1.2	290
P7101-5650-820KT	82 $\pm$ 10%	10	2.5	6.4	1.4	270
P7101-5650-101KT	100 $\pm$ 10%	20	0.8	6.0	1.6	250
P7101-5650-121KT	120 $\pm$ 10%	20	0.8	5.4	1.9	230
P7101-5650-151KT	150 $\pm$ 10%	20	0.8	4.8	2.2	210
P7101-5650-181KT	180 $\pm$ 10%	20	0.8	4.4	2.8	190
P7101-5650-221KT	220 $\pm$ 10%	20	0.8	3.9	3.4	170
P7101-5650-271KT	270 $\pm$ 10%	20	0.8	3.6	4.2	155
P7101-5650-331KT	330 $\pm$ 10%	20	0.8	3.2	4.9	140
P7101-5650-391KT	390 $\pm$ 10%	20	0.8	2.9	5.8	130
P7101-5650-471KT	470 $\pm$ 10%	20	0.8	2.6	7.0	120
P7101-5650-561KT	560 $\pm$ 10%	20	0.8	2.4	8.5	110
P7101-5650-681KT	680 $\pm$ 10%	20	0.8	2.2	10	100
P7101-5650-821KT	820 $\pm$ 10%	20	0.8	2.0	13	90
P7101-5650-102KT	1000 $\pm$ 10%	20	0.25	1.8	15	85
P7101-5650-122JT	1200 $\pm$ 5%	30	0.25	1.5	17	75
P7101-5650-152JT	1500 $\pm$ 5%	30	0.25	1.4	20	70
P7101-5650-182JT	1800 $\pm$ 5%	30	0.25	1.3	30	60
P7101-5650-222JT	2200 $\pm$ 5%	30	0.25	1.2	35	55
P7101-5650-272JT	2700 $\pm$ 5%	30	0.25	1.1	55	45
P7101-5650-332JT	3300 $\pm$ 5%	30	0.25	1.0	60	40
P7101-5650-392JT	3900 $\pm$ 5%	30	0.25	1.0	70	38
P7101-5650-472JT	4700 $\pm$ 5%	30	0.25	0.9	78	36
P7101-5650-562JT	5600 $\pm$ 5%	30	0.25	0.8	85	33
P7101-5650-682JT	6800 $\pm$ 5%	30	0.25	0.7	110	30
P7101-5650-822JT	8200 $\pm$ 5%	30	0.25	0.6	125	28
P7101-5650-103JT	10000 $\pm$ 5%	20	0.08	0.5	150	25

Notes

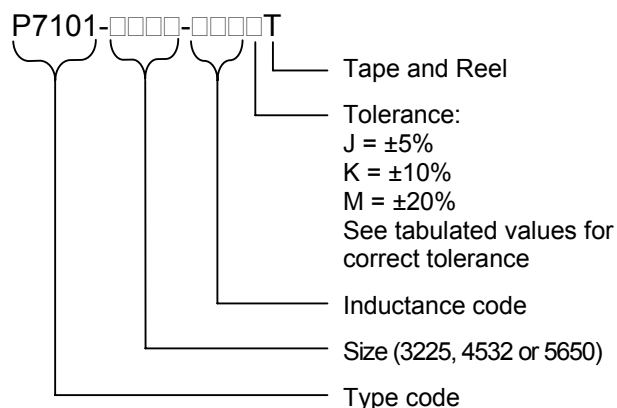
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3. Operating temperature -40°C to +125°C.
4. For non-standard inductance values, please contact Profec.

CONSTRUCTION



Dimensions shown are in millimetres
Terminal plating JESD97 Category = e3. Terminal strength 5N minimum.
Recommended reflow solder profile: 2 minutes @ 150-200°C, 10 seconds @ 260°C; time above 217°C 60 seconds maximum.

ORDERING CODE



ABSOLUTE MAXIMUM RATINGS

Storage temperature -40°C to +125°C

Operating temperature -40°C to +125°C

Soldering temperature profile 260°C 10s peak

Handle in accordance with IPC/JEDEC J-STD-033 procedure for components classified as IPC/JEDEC J-STD-020 Moisture Sensitivity Level 2.