

ULTRA LOW PROFILE POWER INDUCTOR

P7606 Family

Features

- * Lead-free (Pb-free)
- * RoHS compliant
- * Current handling (Saturation to 2A)
- * Ultra Low profile (to 1mm)
- * Surface Mount
- * Robust construction
- * Flat top for pick & place

Applications

- * PC Cards
- * Electroluminescent displays
- * LCD drivers
- * Hybrids
- * Daughter boards
- * Portable equipment

DESCRIPTION

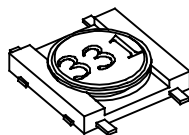
The P7606 family comprises very low profile inductors for height constrained applications.

Four sizes are available using the same PCB footprint but varying in height from 1.0 to 2.5mm.

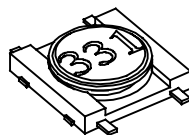
Despite their small size, these inductors are capable of being used in genuine power applications with saturation currents up to 2A.

The family covers inductance over a wide range from 2.2 μ H to 3300 μ H.

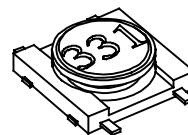
The parts are mechanically robust and are supplied with Pb-free terminations, compliant with RoHS Directive 2002/95/EC, and suitable for Pb-free and conventional placement and reflow.



P7606-5210



P7606-5212



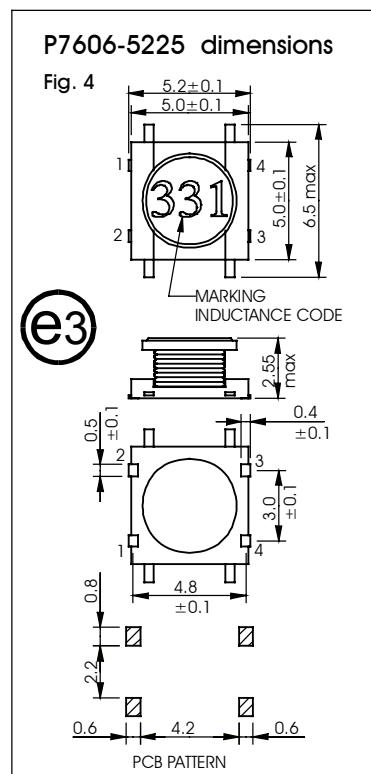
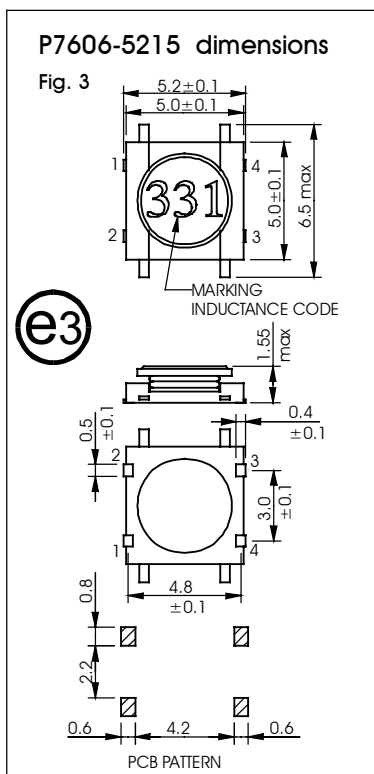
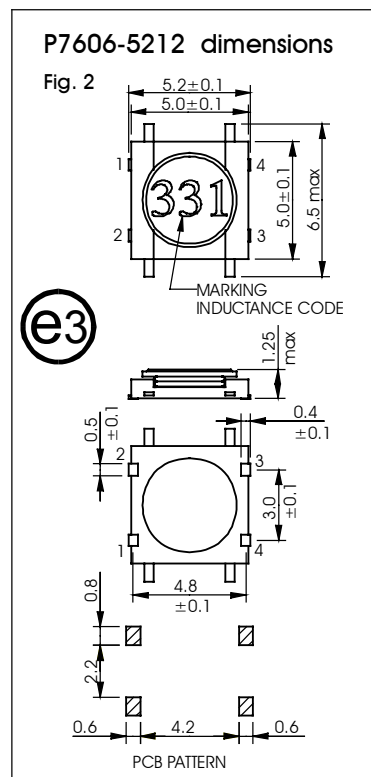
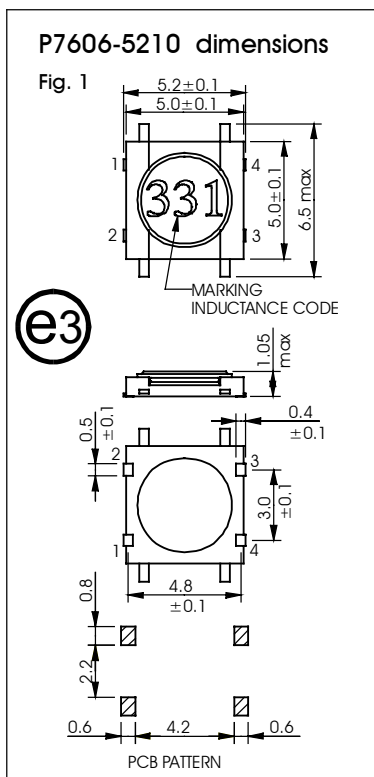
P7606-5215



P7606-5225



CONSTRUCTION



Dimensions shown are in millimetres.

Connection is made using pins 1 and 3.

Terminal plating JESD97 category = e3.

Recommended reflow solder profile: 2 minutes @ 150-200°C, 10 seconds @ 260°C; time above 217°C 60 seconds maximum.

SPECIFICATIONS

Electrical

5210 size

Part Number	Inductance (μH) ⁽¹⁾	DCR (Ω) Max	I_{RMS1} (A) ⁽²⁾	I_{RMS2} (A) ⁽²⁾	I_{sat} (A) ⁽³⁾
P7606-5210-2R2M	2.2±20%	0.18	0.51	0.76	1.7
P7606-5210-3R3M	3.3±20%	0.22	0.46	0.69	1.5
P7606-5210-4R7M	4.7±20%	0.28	0.41	0.61	1.3
P7606-5210-6R8M	6.8±20%	0.38	0.35	0.52	1.1
P7606-5210-100M	10±20%	0.61	0.27	0.41	0.90
P7606-5210-150M	15±20%	0.82	0.24	0.35	0.73
P7606-5210-220M	22±20%	1.1	0.20	0.31	0.62
P7606-5210-330M	33±20%	1.9	0.15	0.23	0.52
P7606-5210-470M	47±20%	2.4	0.14	0.21	0.42

5212 size

Part Number	Inductance (μH) ⁽¹⁾	DCR (Ω) Max	I_{RMS1} (A) ⁽²⁾	I_{RMS2} (A) ⁽²⁾	I_{sat} (A) ⁽³⁾
P7606-5212-2R2M	2.2±20%	0.18	0.55	0.82	2.0
P7606-5212-3R3M	3.3±20%	0.22	0.50	0.74	1.8
P7606-5212-4R7M	4.7±20%	0.27	0.45	0.67	1.5
P7606-5212-6R8M	6.8±20%	0.37	0.38	0.57	1.3
P7606-5212-100M	10±20%	0.48	0.33	0.50	1.1
P7606-5212-150M	15±20%	0.62	0.29	0.44	0.95
P7606-5212-220M	22±20%	1.0	0.23	0.35	0.77
P7606-5212-330M	33±20%	1.4	0.19	0.29	0.60
P7606-5212-470M	47±20%	2.2	0.15	0.23	0.51

5215 size

Part Number	Inductance (μH) ⁽¹⁾	DCR (Ω) Max	I_{RMS1} (A) ⁽²⁾	I_{RMS2} (A) ⁽²⁾	I_{sat} (A) ⁽³⁾
P7606-5215-101M	100±20%	3.2	0.16	0.24	0.50
P7606-5215-151M	150±20%	5.0	0.13	0.19	0.35
P7606-5215-221M	220±20%	6.5	0.11	0.17	0.30
P7606-5215-331M	330±20%	12	0.085	0.12	0.22
P7606-5215-471M	470±20%	22	0.060	0.090	0.17
P7606-5215-631M	630±20%	27	0.055	0.080	0.15
P7606-5215-102M	1000±20%	33	0.050	0.075	0.13

Notes

1. Inductance measured at 100kHz, 1V.
2. I_{RMS1} and I_{RMS2} are the currents at which the temperature rises 20°C and 40°C typical respectively.
3. Saturation Current, I_{sat} , is the DC current at which the zero current inductance drops by 10% (typ).
4. Operating temperature -25°C to +85°C.
5. For non-standard inductance values, please contact Profec.

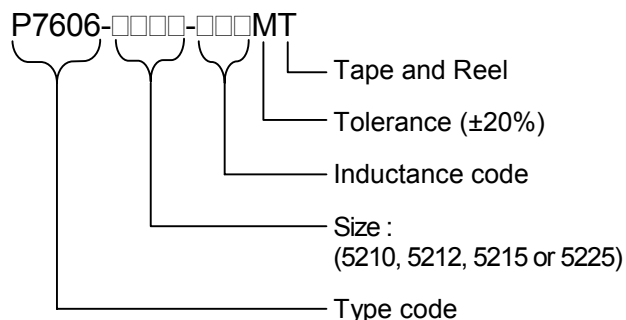
5225 size

Part Number	Inductance (μH) ⁽¹⁾	DCR (Ω) Max	I_{RMS1} (A) ⁽²⁾	I_{RMS2} (A) ⁽²⁾	I_{sat} (A) ⁽³⁾
P7606-5225-101M	100 \pm 20%	1.6	0.24	0.36	0.45
P7606-5225-151M	150 \pm 20%	2.5	0.19	0.29	0.35
P7606-5225-221M	220 \pm 20%	3.8	0.16	0.23	0.30
P7606-5225-331M	330 \pm 20%	5.9	0.13	0.19	0.25
P7606-5225-471M	470 \pm 20%	7.5	0.11	0.17	0.22
P7606-5225-681M	680 \pm 20%	12	0.090	0.13	0.18
P7606-5225-102M	1000 \pm 20%	20	0.070	0.10	0.14
P7606-5225-152M	1500 \pm 20%	25	0.060	0.090	0.12
P7606-5225-222M	2200 \pm 20%	45	0.045	0.065	0.09
P7606-5225-332M	3300 \pm 20%	60	0.040	0.060	0.08

Notes

1. Inductance measured at 100kHz, 1V.
2. I_{RMS1} and I_{RMS2} are the currents at which the temperature rises 20°C and 40°C typical respectively.
3. Saturation Current, I_{sat} , is the DC current at which the zero current inductance drops by 10% (typ).
4. Operating temperature -25°C to +85°C.
5. For non-standard inductance values, please contact Profec.

ORDERING CODE



ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40°C to +105°C
Operating temperature	-25°C to +85°C
Soldering temperature profile peak	260°C 10s
Handle in accordance with IPC/JEDEC J-STD-033 procedure for components classified as IPC/JEDEC J-STD-020 Moisture Sensitivity Level 2.	

PROFEC
TRANSFORMING THE FUTURE



Profec Technologies Ltd., 10 Betts Avenue, Martlesham Heath, Ipswich, IP5 3RH, England

Telephone: +44 (0) 1473 611422

Fax: +44 (0) 1473 611919

Website: www.profec.com

Email: info@profec.co.uk, sales@profec.com