

## HIGH POWER INDUCTOR

## P7611 Family

### Features

- \* Lead-free (Pb-free)
- \* RoHS compliant
- \* High Current (>50A)
- \* Low DCR (to 0.6mΩ)
- \* Foil windings
- \* Closed magnetic circuit

### Applications

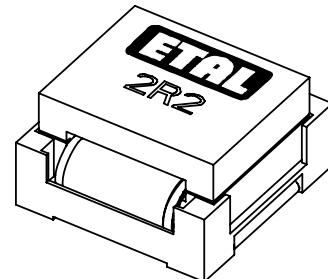
- \* DC-DC Converters
- \* Voltage Regulator Modules
- \* Distributed Power
- \* MPU power supplies
- \* Servers
- \* Workstations
- \* Telecom equipment

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### DESCRIPTION

The P7611 family comprises high-energy-density surface mount inductors. The family employs copper foil windings, giving excellent DC resistance, thermal efficiency and high frequency performance to 1MHz. The core is a closed magnetic circuit to afford magnetic shielding.

The P7611 family is compliant with RoHS Directive 2002/95/EC and supplied in tape and reel packaging, and is suitable for Pb-free and conventional placement and reflow.



## SPECIFICATIONS

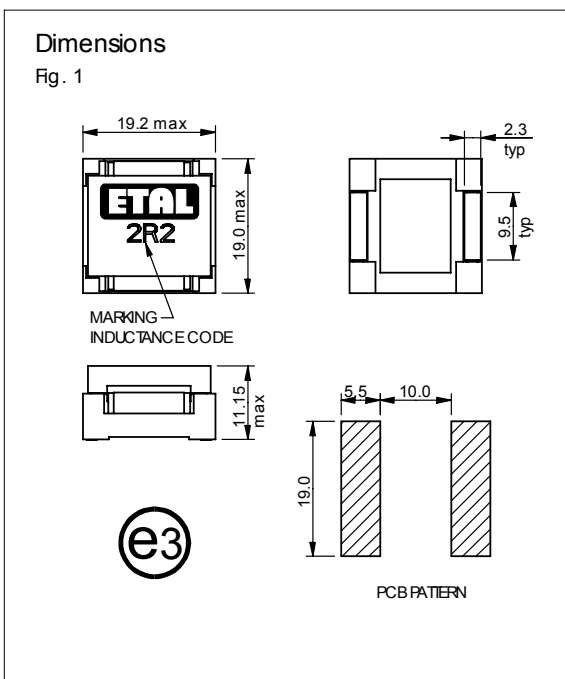
### Electrical

Part Number	Nominal Inductance ( $\mu\text{H}$ )	Inductance ( $\mu\text{H}$ ) <sup>(1)</sup>	DCR ( $\text{m}\Omega$ ) Max	Rated Current $I_{\text{RMS}}$ (A) <sup>(2)</sup>	$I_{\text{sat}}$ <sup>(2)</sup>
P7611-R47MT	0.47	0.52 $\pm$ 20%	0.6	53	64
P7611-R68MT	0.68	0.63 $\pm$ 20%	0.6	53	50
P7611-1R0MT	1.0	1.15 $\pm$ 20%	1.3	33	42
P7611-2R2MT	2.2	2.0 $\pm$ 20%	2.3	24	32
P7611-4R7MT	4.7	4.55 $\pm$ 20%	4.6	17	21
P7611-5R6MT	5.6	5.6 $\pm$ 20%	4.6	17	17

### Notes

1. Inductance measured at 300kHz, 250mV.
2. Rated current,  $I_{\text{RMS}}$ , is the current at which the temperature rise is 40°C typical.
3. Saturation Current,  $I_{\text{sat}}$ , is the DC current at which the zero-current inductance drops by 30% (typ).
4. Operating temperature -40°C to +85°C.
5. For non-standard inductance values, please contact Profec.

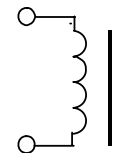
## CONSTRUCTION



### Connections

Fig. 2

#### Schematic

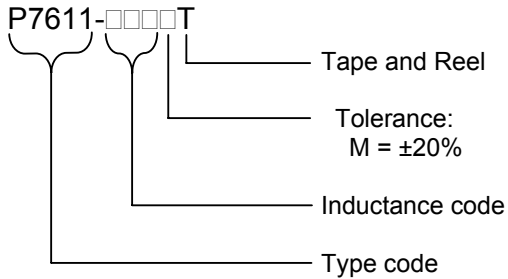


Dimensions shown are in millimetres

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.

## ORDERING CODE



## ABSOLUTE MAXIMUM RATINGS

Storage temperature	-40°C to +105°C
Operating temperature	-40°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.