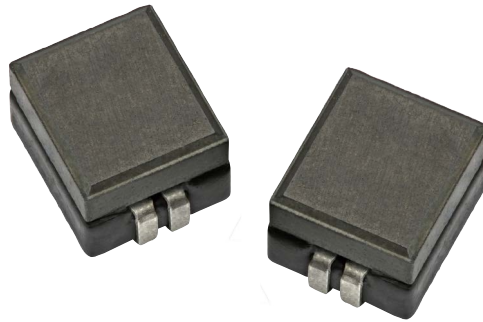


# FPT705

## Dual conductor, high current power inductors



### Product features

- Dual conductor, two-turn construction
- Magnetically shielded
- 8.3 mm x 7.5 mm footprint surface mount package in a 5.35 mm height
- Ferrite core material

### Applications

- Compatible with Picor® Cool-Power® ZVS Buck and Buck-Boost Regulator Families (Picor part number series PI33xx and PI34xx)

### Environmental Data

- Storage temperature range (component): -55 °C to +125 °C
- Operating temperature range: -55 °C to +125 °C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020 (latest revision) compliant

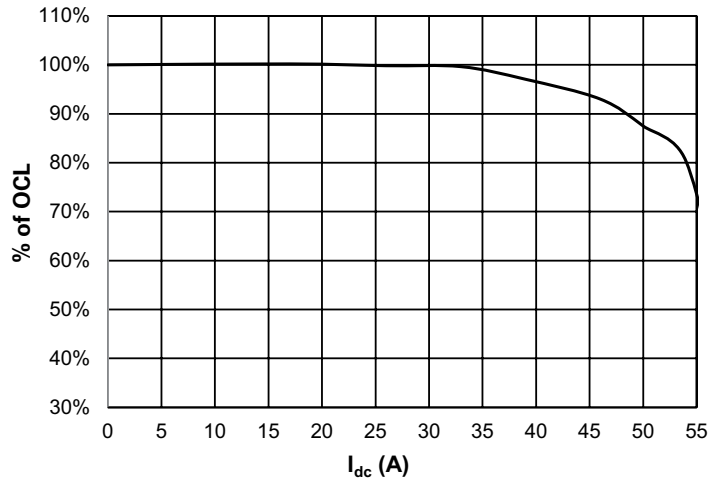


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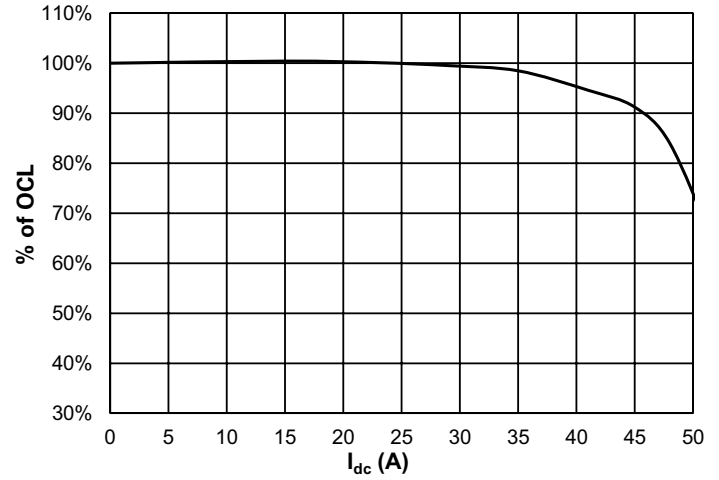


Inductance characteristics

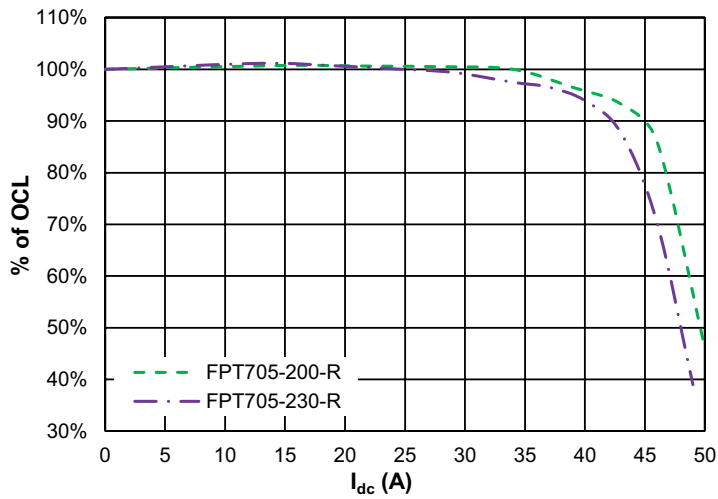
FPT705-170-R



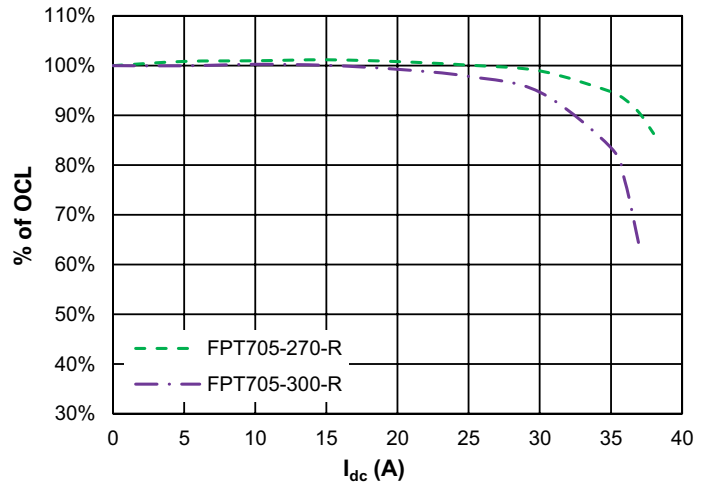
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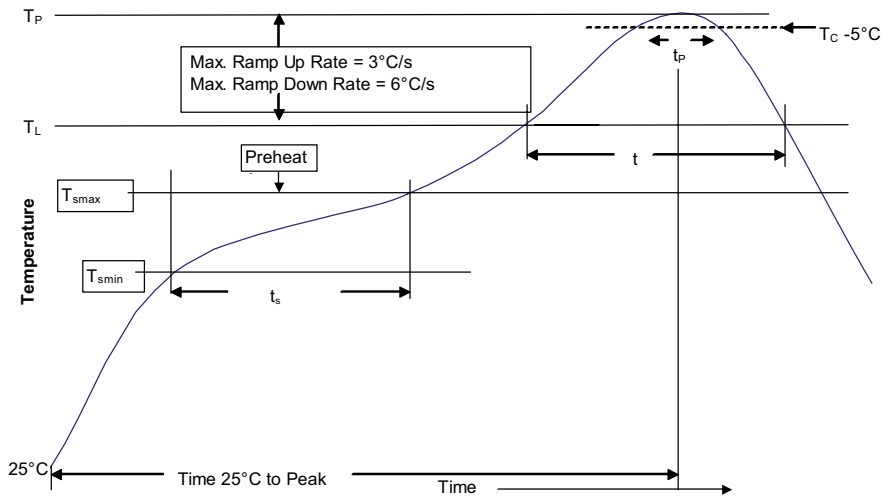
FPT705-200-R, FPT705-230-R



FPT705-270-R, FPT705-300-R



**Solder reflow profile**



**Table 1 - Standard SnPb Solder (T<sub>c</sub>)**

Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> ≥350
<2.5mm)	235°C	220°C
≥2.5mm	220°C	220°C

**Table 2 - Lead (Pb) Free Solder (T<sub>c</sub>)**

Package Thickness	Volume mm <sup>3</sup> <350	Volume mm <sup>3</sup> 350 - 2000	Volume mm <sup>3</sup> >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

**Reference JDEC J-STD-020D**

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak		
• Temperature min. (T <sub>smin</sub> )	100°C	150°C
• Temperature max. (T <sub>smax</sub> )	150°C	200°C
• Time (T <sub>smin</sub> to T <sub>smax</sub> ) (t <sub>s</sub> )	60-120 Seconds	60-120 Seconds
Average ramp up rate T <sub>smax</sub> to T <sub>p</sub>	3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T <sub>L</sub> )	183°C	217°C
Time at liquidous (t <sub>L</sub> )	60-150 Seconds	60-150 Seconds
Peak package body temperature (T <sub>p</sub> )*	Table 1	Table 2
Time (t <sub>p</sub> )** within 5 °C of the specified classification temperature (T <sub>c</sub> )	20 Seconds**	30 Seconds**
Average ramp-down rate (T <sub>p</sub> to T <sub>smax</sub> )	6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature	6 Minutes Max.	8 Minutes Max.

\* Tolerance for peak profile temperature (T<sub>p</sub>) is defined as a supplier minimum and a user maximum.

\*\* Tolerance for time at peak profile temperature (t<sub>p</sub>) is defined as a supplier minimum and a user maximum.

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**Eaton**  
Electronics Division  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
www.eaton.com/electronics

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