

MP2A

MICRO-PAC PLUS™ Low profile toroid power inductors



Product features

- High performance, low profile, surface mount power inductors
- Small footprint and closed magnetic field construction ensure low EMI
- Low DCR and high efficiency
- Frequency range up to 500 kHz
- Molybdenum permalloy (MPP) core material

Applications

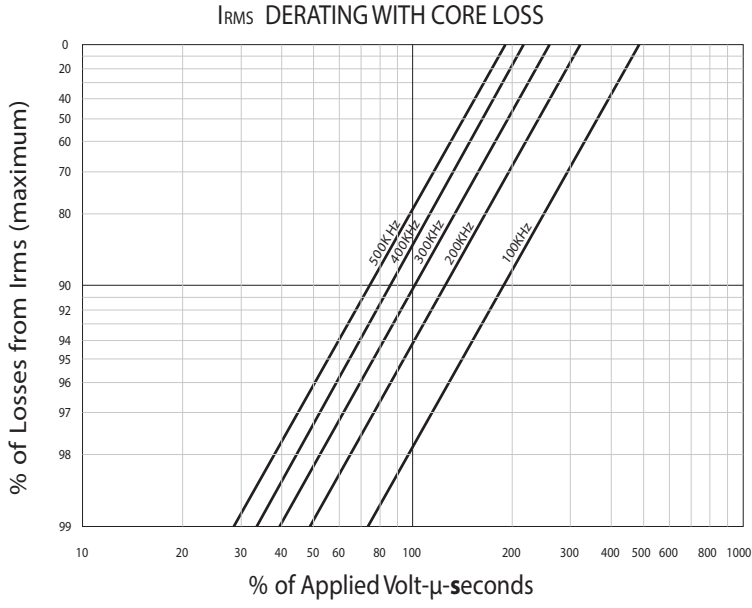
- Mobile phones
- Tablets and e-readers
- GPS systems
- Battery power devices
- Notebook and laptop power
- Hand held devices
- Media players

Environmental data

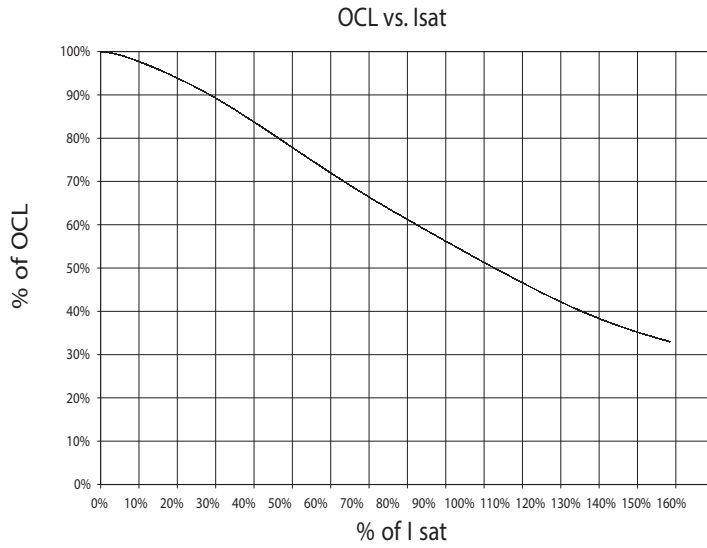
- Storage temperature range (component):
-40 °C to +125 °C
- Operating temperature range: -40 °C to +125 °C
(ambient plus self-temperature rise)
- Solder reflow temperature:
J-STD-020 (latest revision) compliant



Core loss



Inductance characteristics



Solder Reflow Profile

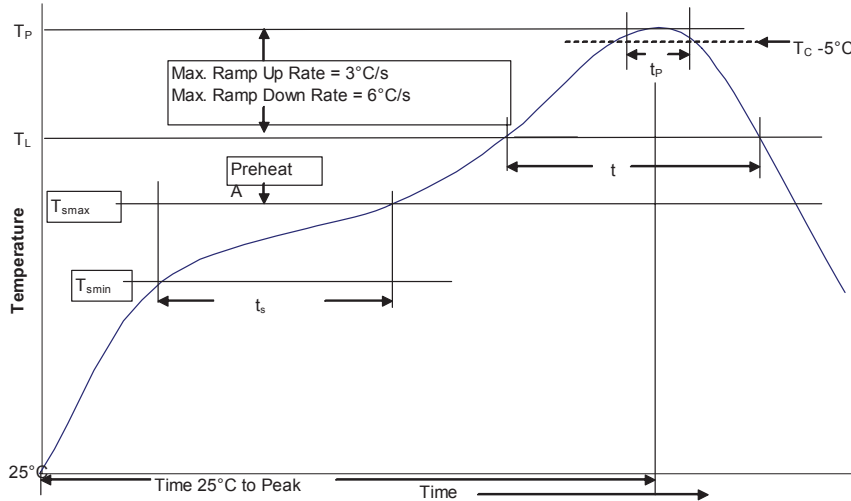


Table 1 - Standard SnPb Solder (T_c)

Package Thickness	Volume <350 mm ³	Volume ≥ 350 mm ³
<2.5 mm	235°C	220°C
≥ 2.5 mm	220°C	220°C

Table 2 - Lead (Pb) Free Solder (T_c)

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

Reference JDEC J-STD-020

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak		
• Temperature min. (T_{smin})	100°C	150°C
• Temperature max. (T_{smax})	150°C	200°C
• Time (T_{smin} to T_{smax}) (t_s)	60-120 Seconds	60-120 Seconds
Average ramp up rate T_{smax} to T_p	3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60-150 Seconds	60-150 Seconds
Peak package body temperature (T_p)*	Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_c)	20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})	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_p) is defined as a supplier minimum and a user maximum.

** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

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