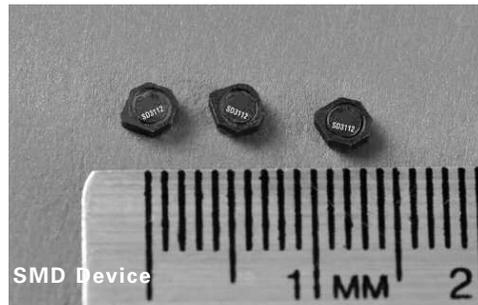


SD3112

Low profile metalized shielded drum core power inductors



Applications

- Mobile phones
- Digital cameras
- Media players
- Small LCD displays
- LED driver and LED flash circuits
- Hard disk drives
- LCD Backlighting

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

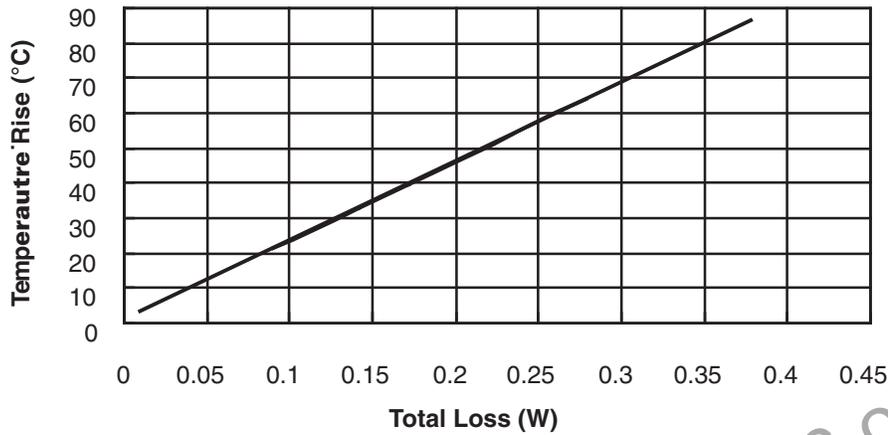
Product features

- 3.1 mm x 3.1 mm x 1.2 mm shielded drum core
- Ferrite core material
- Inductance range from 1.0 nH to 220 uH
- Current range from 1.65 A to 0.113 A
- Frequency range up to 4 MHz

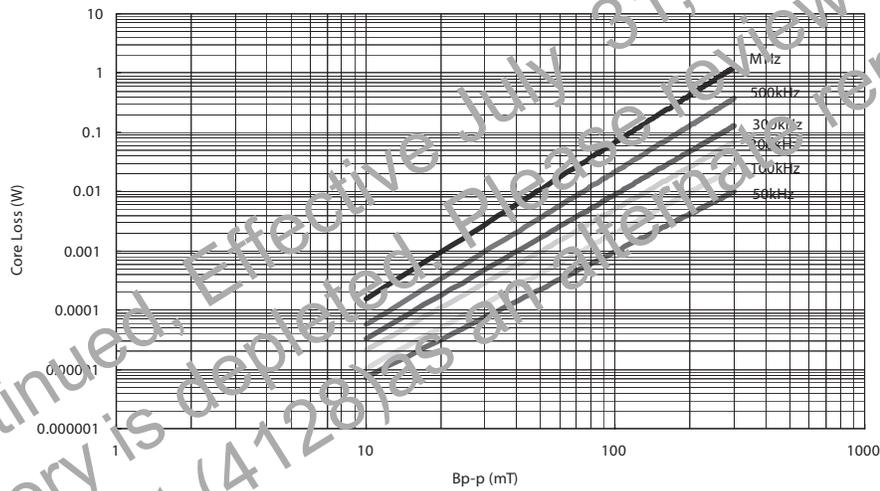
RoHS

Discontinued, Effective July 31, 2016 or until inventory is depleted. Please review SD3114 data sheet (4128) as an alternate replacement.

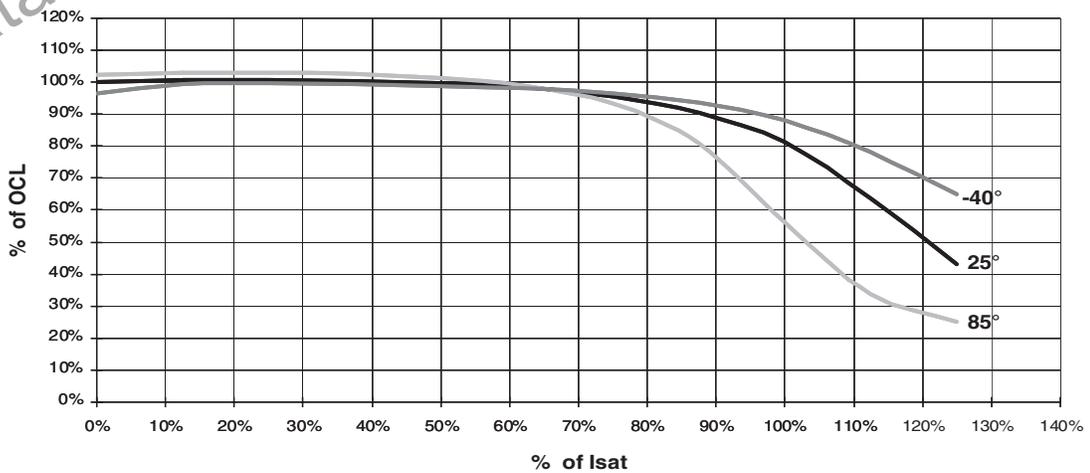
Temperature rise vs total loss



Core loss vs Bp-p



Inductance characteristics



Solder Reflow Profile

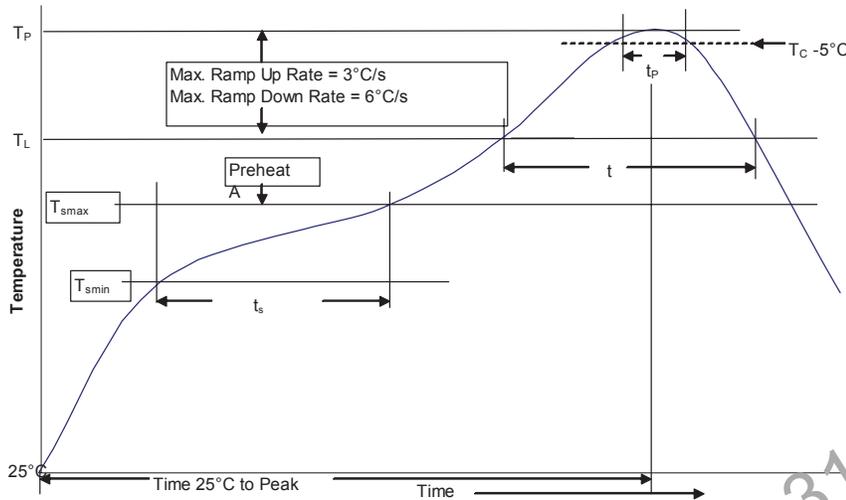


Table 1 - Standard SnPb Solder (T_C)

Package Thickness	Volume mm^3 <350	Volume mm^3 ≥ 350
<2.5mm	235°C	220°C
$\geq 2.5\text{mm}$	220°C	220°C

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

Package Thickness	Volume mm^3 <350	Volume mm^3 350 - 2000	Volume mm^3 >2000
<1.6mm	260°C	260°C	260°C
1.6 - 2.5mm	260°C	250°C	245°C
$\geq 2.5\text{mm}$	250°C	245°C	245°C

Reference JDEC J-STD-020

Profile Feature	Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak	<ul style="list-style-type: none"> Temperature min. (T_{smin}) 100°C Temperature max. (T_{smax}) 150°C Time (T_{smin} to T_{smax}) (t_s) 60-120 Seconds 	<ul style="list-style-type: none"> 150°C 200°C 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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