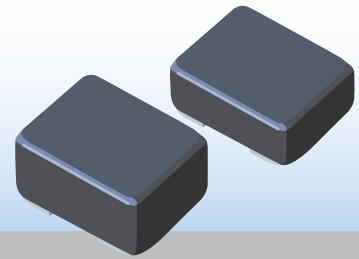


Bourns SRP2512CL and SRP3212CL Series Shielded Power Inductors



NEW PRODUCT BRIEF

INTRODUCTION

Bourns is introducing two new shielded power inductor series specifically developed for the power management requirements of DDR5 systems. The SRP2512CL and SRP3212CL Series feature low ACR and low DCR to deliver reduced losses and high efficiency that meet the latest DDR5 memory technology requirements. Both series are manufactured with a shielded construction for low magnetic field radiation and a nanocrystalline core to support high current with low buzz noise. In addition, these new power inductors have an operating temperature range of -40 to +125 °C, and an inductance range of up to 1.5 microhenries (μH). They are available in surface mount 3225 and 2520 package sizes.

MARKET TRENDS

With the transition from DDR4 to DDR5 memory, JEDEC has moved power management onto the memory module to optimize system performance and efficiency. By localizing power delivery, it ensures the highest voltage is supplied directly to the endpoint where power is consumed, improving overall system power. This also reduces noise during signal transmission, enhancing stability in high-speed operations. Additionally, relocating power management to the memory module lowers system design costs, as the power supply budget is no longer tied to the number of DIMM slots, preventing over-design and enabling more cost-effective solutions. Therefore, inductors play a crucial role in the system module. Using Bourns® inductors in combination with the corresponding PMIC helps designers achieve the conversion efficiency required by JEDEC specifications.

FEATURES

- Shielded construction
- Nanocrystalline core
- Operating temp. range of -40 to +125 °C
- Inductance range up to 1.5 μH
- Offered in 3225 & 2520 SMD package sizes
- RoHS compliant* and halogen Free**



BENEFITS

- Ultra-low buzz noise solution
- Highly efficient operation
- Supports high current
- Low ACR and DCR that reduce losses
- Compact footprint
- Low magnetic field radiation

APPLICATIONS

- DDR5 Memory module
- Desktop PCs, laptops, tablets
- Gaming and high-performance computing applications

ELECTRICAL CHARACTERISTICS

Series	Photo	Size (mm)	Inductance (μH)	DCR (mΩ)	Heating Current I_{rms} (A)	Saturation Current I_{sat} (A)	Operating Temperature (°C)
SRP2512CL		2.5 x 2 x 1	1 - 1.5	20 - 36	4.2 - 5	3.8 - 4.5	-40 to +125
SRP3212CL		3.2 x 2.5 x 1	0.47 - 1	9 - 22	5.5 - 8	5.0 - 7.5	-40 to +125

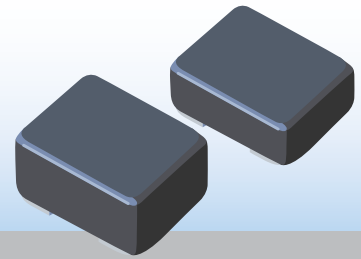
For full characteristics, see data sheet

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

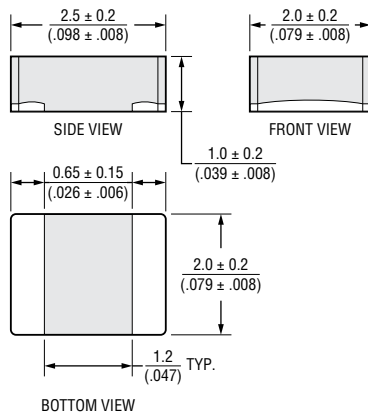
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NEW PRODUCT BRIEF



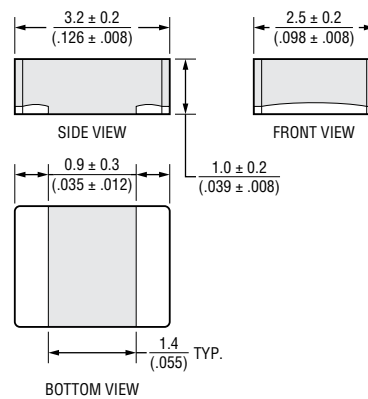
PRODUCT DIMENSIONS

SRP2512CL

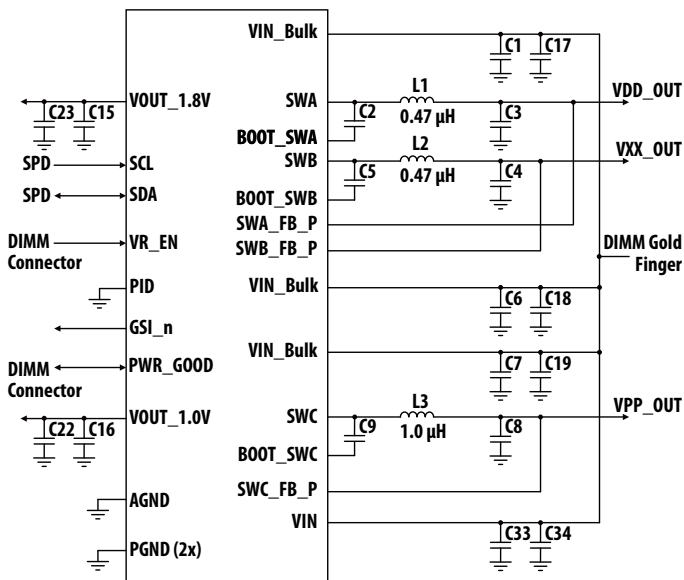


DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

SRP3212CL



SINGLE PHASE REGULATOR - DDR5 PMIC SCHEMATIC



DUAL PHASE REGULATOR - DDR5 DIMM SCHEMATIC

