

Inductors for Power Circuits Selection Guide (Commercial Grade)



Commercial Grade Wire Wound Multilayer Thin-film

Category		See here for information on various features.					
		Ferrite : No Shield	Ferrite : Resin Shield	Ferrite : Shield	Metal : Resin Shield	Metal : Shield	
High Current	Small Size	NLCV For General 0.1 to 330µH 25: 2.5x2.0mm 32: 3.2x2.5mm	VLS-CX-1 For Mobile Low Profile 0.24 to 100µH 2016xx: 2.0x1.6mm 2520xx: 2.5x2.0mm 30xx: 3.0x3.0mm 40xx: 4.0x4.0mm	MLP For Mobile Low Profile 0.47 to 10µH 1005: 1.0x0.5mm 1608: 1.6x0.8mm 2012: 2.0x1.2mm 2016: 2.0x1.6mm 2520: 2.5x2.0mm	VLS-HBX-1 For Mobile High Current Low Profile 0.33 to 22µH 2016xx: 2.0x1.6mm 2520xx: 2.5x2.0mm 30xx: 3.0x3.0mm 40xx: 4.0x4.0mm	PLEA67BBA NEW For Mobile High Current Low Profile 1.0 to 4.7µH 1.0x0.6mm	
				MLH For Mobile Low Profile 0.22µH 2012: 2.0x1.2mm		TFM-ALC/ALD For Mobile High Current Low Profile 0.47 to 1.0µH 1608xx: 1.6x0.8mm 2012xx: 2.0x1.2mm	
					VLS-HBU For Mobile High Current Step-up Converter 3.3 to 22µH 2520xx: 2.5x2.0mm	TFM-BLD For Mobile High Current Low Profile 0.11 to 0.33µH 2012xx: 2.0x1.2mm 1608xx: 1.6x0.8mm	
	Middle Size	B8247xA Wide Inductance 10 to 470µH B82471A: 6.1x5.6mm B82473A: 8.3x7.5mm	VLS-EX Wide Inductance 0.47 to 680µH 50xx: 5.0x5.0mm 60xx: 6.0x6.0mm		VLS-HBX-N High Current Low Profile 0.33 to 22µH 30xx: 3.0x3.0mm 40xx: 4.0x4.0mm	SPM-LR High Current Low Profile 0.47 to 10µH 30xx: 3.2x3.0mm 40xx: 4.4x4.1mm 50xx: 5.4x5.1mm	
			VLS-AF For D-Amp Wide Inductance 3.3 to 100µH 60xx: 6.0x6.0mm	B82472N NEW 400 V 150 to 1000µH B82472N: 7.3x7.3mm		SPM High Current 0.2 to 22µH 40xx: 4.2x4.0mm 50xx: 5.2x5.0mm 65xx: 7.1x6.5mm 100xx: 10.7x10.0mm	
						SPM-XT Super High Current 0.19 to 2.8µH 100xx: 11.5x10.0mm 125xx: 13.0x12.6mm	
	Large Size	B8247xA Wide Inductance 1 to 1,000µH B82475A: 10.4x10mm B82476A: 12.95x9.4mm B82479A: 18.54x15.24mm					
				VLB Super High Current 0.09 to 0.36µH 7050: 7.2x7.0mm 10050: 10.2x7.0mm 12065: 12.0x10.0mm			
				VLBU/VLBS NEW Super High Current 0.07 to 0.4µH 6565xxx: 6.5x6.5mm 8050xx: 8.0x5.0mm 9664xxx: 9.6x6.4mm 10060xx: 10.0x6.0mm 10070xx: 10.0x7.0mm 10246xx: 10.2x4.6mm			
			VLBUC NEW Super High Current 0.07 to 0.20µH 9694xxx: 9.6x6.4mm 12060xx: 12.0x6.0mm		SPM-CT NEW Super High Current 0.22µH 125xx: 13.0x12.6mm		

Very Large Size	<p>B82559 Super High Current 0.44 to 35µH B82559AxA013: 11.0x13.2mm B82559BxA016: 17.3x16.5mm B82559BxA019: 19.9x18.5mm B82559AxA020: 22.3x22.0mm B82559AxA024: 24.7x22.8mm B82559AxA025: 25.3x20.5mm B82559BxA027: 27.8x25.8mm</p>
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Features

Process	Wire Wound	These products have a structure consisting of a core with copper wires wound around it. The use of thick copper wires can reduce the DC resistance, making them suitable for applications with large currents. Composite-type products (SPM series), whose wire wound coils are integrally molded using magnetic metal powder, are also available, and are effective in countermeasures against coil acoustic noise.
	Multi Layer	Metal conductors are printed on sheets which are then laminated to create coils. These products are well-suited to achieving smaller product sizes and lower profiles, with excellent mass-productibility.
	Thin Film	Thin film processing is employed to make high-density pattern forming possible. Combinations with metallic magnetic materials make these products suitable for applications requiring small sizes and low profiles, as well as large currents.
Magnetic Material	Ferrite	These products have high μ and are suitable for high-inductance applications. They also possess consistent DC superimposition characteristics, demonstrating stable properties up to the magnetic saturation point.
	Metal	Since these products have small changes in inductance depending on temperature, and are less likely to experience magnetic saturation than ferrite, they possess soft saturation characteristics.
Shield Type	No Shield	A simple, open magnetic circuit type with no magnetic shielding on the coil components.
	Resin Shield	The areas around the coil are covered with resin which contains a mixture of magnetic powder such as ferrite and soft magnetic metals. Compared to shielded types, the magnetic shielding effectiveness of these products is limited, but they have good cost balance.
	Shield	Covering the areas around the coil with a shield core and molding with magnetic materials gives these products a structure similar to a closed magnetic circuit. This type has high magnetic shielding effectiveness with lower magnetic flux leakage than all other types.