

POWER TRANSFORMERS OVERVIEW



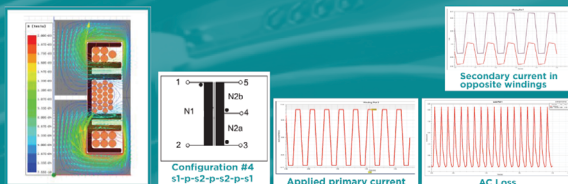
Power Transformers are used to convert voltages and isolate signals for functionality and safety. Our broad line of catalog (up to 800W) and custom (up to 22kW) solutions are used in multiple topologies including flyback, forward, push-pull, resonant, LLC and phase shifted full bridges. Typical operating frequencies are between 80-500kHz but solutions can be adapted for greater than 1MHz operation.

Our designs include surface mount, through hole and pin-in-paste terminations using a wide range of winding technologies including wire-wound, flat wire, foil, copper plate and PCB constructions. Our catalog and customer solutions include Class B (130C), Class F (155C) and Class H (180C) insulation systems for functional, basic and reinforced safety isolation requirements complying to the latest safety standards.

With local technical support in all regions, advance simulation tools and an experienced design team we can help to optimize your power solutions.

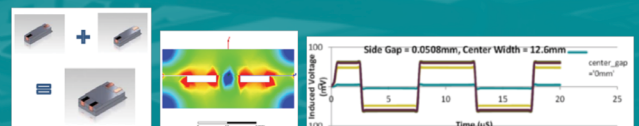
AC Proximity Analysis

❖ Simulate all AC losses associated with fringing and proximity and running optimization.



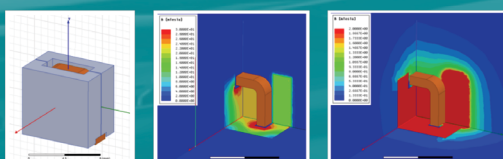
Component Integration Analysis

❖ Enables Integration while ensuring minimized coupling



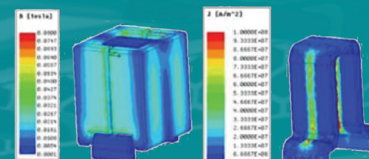
Radiated Field Analysis

❖ Ability to 'look' at the radiated field and make appropriate modifications during the design process.



AC Gap Losses






























❖ Ability to visualize and predict gap losses.



POWER TRANSFORMERS OVERVIEW

FOR SWITCH MODE POWER APPLICATIONS

PRODUCT OVERVIEW: SMT POWER TRANSFORMERS

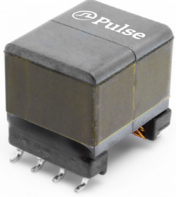
Power Transformer Platform	Safety Insulation	Dimensions (mm Max)			Power Level		
		L	W	H	1W	10W	100W
 Mini-Drum	Functional	6.4	6.2	3.6			
 Shasta	Functional	9.0	8.6	7.6			
	ER7.5	9.5	8.0	6.0			
	ER9.5	12.1	10.7	6.6			
	ER11	12.7	11.4	6.6			
	ER14	16.5	15.5	7.6			
 	EP7	13.4	10.7	9.3			
	EP9	10.3	10.5	12.5			
	EP10	15.2	13.1	11.5			
	EP13	17.7	14.0	12.7			
	EP13R	17.7	13.5	16.0			
	EP7+	13.6	11.0	13.5			
	EP10+	15.5	13.0	15.5			
	EP13+	17.7	14.5	14.0			
	EFD15	22.2	17.2	8.4			
	EFD15+	22.3	16.5	10.5			
	EFD20	29.2	21.6	11.4			
	EFD25	32.0	26.4	13.7			
	ER19	24.7	21.6	9.1			
	ER25	29.5	25.4	9.1			
	ER25+	33.5	26.4	18.3			

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Optimized Power Transformers

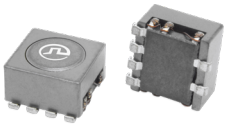
PNs PA5099, PA5100, PA5130, PA5131, PA3855, PA3856



- EP7+ (13.6x11.0x15.5mm), EP10+ (15.1x13.0x15.0mm) and EP13+ (17.7x14.5x14.0mm) platforms
- Designed for Active Clamp and CM Flyback Topologies
- 2X Power Density in Industry Standard Footprint
- 9-57v & 33-57v inputs
- 3.3v to 24v outputs up to 27W

Mini-Drum Flyback Transformers

PH9585



- 6.4 x 6.2 x 3.6mm
- Up to 3W
- 36-72v Input
- 6v, 12v & 24v Outputs
- 430kHz Operating Frequency

Planar Transformer Platforms

PA08xx, PH08xx, PA09xx, PH09xx, PH9278



- 160W, 250W and 800W Solutions
- Low Profile
- Active Clamp Forward, Bridge and Push-pull Topologies
- Multiple turns ratio for 12v to 80v input & 3.3v to 24v output