



## POWER TRANSFORMER OVERVIEW

### FOR SWITCH MODE POWER APPLICATIONS

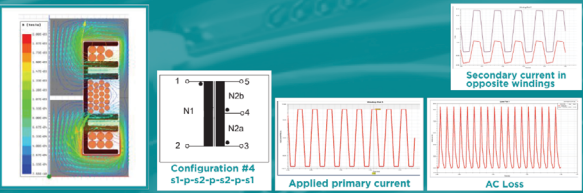
Power Transformers are used to convert voltages and isolate signals for functionality and safety. Our broad line of catalog (up to 800W) and custom (up to 10kW) solutions are used in multiple topologies including flyback, forward, push-pull, resonant, LLC and phase shifted full bridges. Typical operating 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.

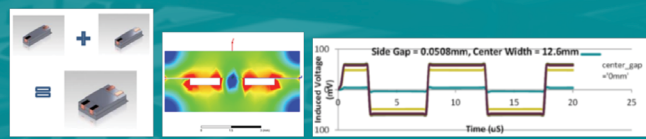
#### AC Proximity Analysis

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



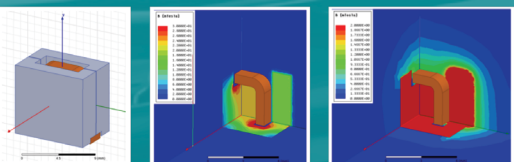
#### Component Integration Analysis

❖ Enables Integration while ensuring minimized coupling



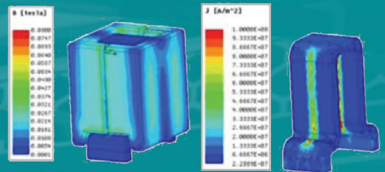
#### Radiated Field Analysis

❖ 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.



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## 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	1W		
 Shasta	Functional	9.0	8.6	7.6	1W		
	ER7.5	Functional	9.5	8.0	6.0	1W	
	ER9.5	Functional	12.1	10.7	6.6	1W	
	ER11	Functional	12.7	11.4	6.6	1W	
	ER14	Functional	16.5	15.5	7.6	1W	
	EP7	Functional	13.4	10.7	9.3		10W
	EP9	Basic CR 2.9mm	10.3	10.5	12.5	1W	
	EP10	Functional	15.2	13.1	11.5		10W
	EP13	Functional	17.7	14.0	12.7		10W
	EP13R	Reinforced CR 8mm	17.7	13.5	16.0		10W
	EP7+	Functional	13.6	11.0	13.5		10W
	EP10+	Functional	15.5	13.0	15.5		10W
	EP13+	Functional	17.7	14.5	14.0		10W
	EFD15	Functional	22.2	17.2	8.4		10W
	EFD20	Functional	29.2	21.6	11.4		10W
	EFD25	Functional	32.0	26.4	13.7		100W
	ER19	Functional	24.7	21.6	9.1		100W
	ER25	Functional	29.5	25.4	9.1		100W
	ER25+	Functional	33.5	26.4	18.3		100W

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## Optimized Power Transformers

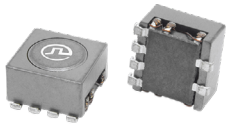
PNs PA5099, PA5100, PA5130, PA5131, PA3855, PA3856



- 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