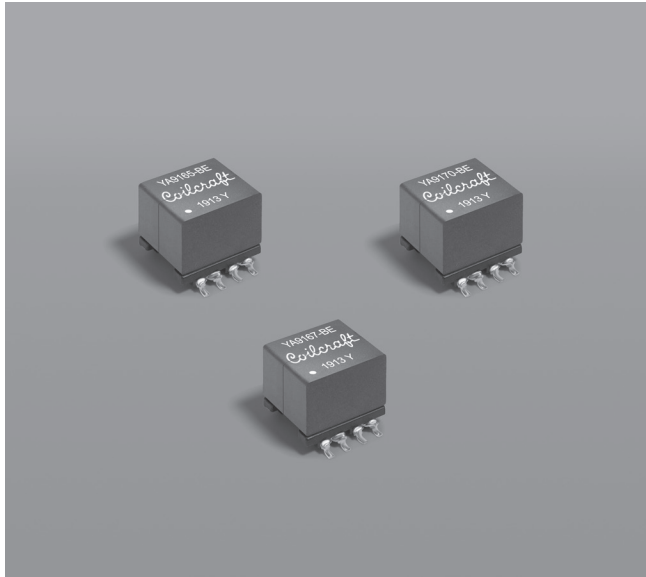


**NEW!**

# No-Opto Flyback Transformers



- Discontinuous conduction mode Flyback transformers
- Optimized for 125 – 150 kHz with 8 – 28 V or 18 – 60 V input
- 1500 Vrms, one minute isolation between primary and secondary

**Core material** Ferrite**Terminations** RoHS tin-silver-copper over tin over nickel over phosphor bronze. Other terminations available at additional cost.**Weight** 4.27 – 4.60 g**Ambient temperature** –40°C to +85°C**Max Part Temperature** +125°C (ambient + temperature rise)**Storage temperature** Component: –40°C to +125°C

Tape and reel packaging: –40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

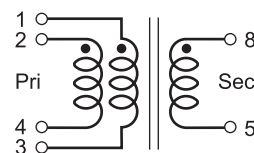
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	Inductance at 0 A <sup>2</sup> ±10% (µH)	Isat <sup>3</sup> (A)	DCR max (Ohms)		Leakage inductance max (µH) <sup>4</sup>	Turns ratio pri : sec	Isolation <sup>5</sup> (Vrms)	Power (W)	Output
			pri	sec					
<b>8 – 28 V input</b>									
YA9165-BED	4.0	13.0	0.0156	0.0144	0.15	1 : 0.70	1500	12	5 V, 2.40 A
YA9166-BED	4.0	13.0	0.0156	0.0598	0.12	1 : 1.60	1500	12	12 V, 1 A
YA9167-BED	4.0	13.0	0.0156	0.1900	0.12	1 : 3.14	1500	12	24 V, 0.50 A
<b>18 – 60 V input</b>									
YA9168-BED	20.0	4.7	0.0360	0.0120	0.40	1 : 0.31	1500	12	5 V, 2.40 A
YA9169-BED	20.0	4.7	0.0380	0.0540	0.28	1 : 0.71	1500	12	12 V, 1 A
YA9170-BED	20.0	4.7	0.0360	0.1950	0.28	1 : 1.39	1500	12	24 V, 0.50 A

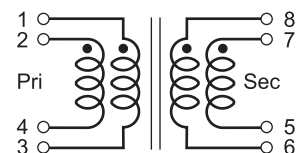
- Packaging:** D = 13" machine-ready reel. EIA-481 embossed plastic tape. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).
  - Inductance is for the primary, measured at 150 kHz, 0.1 Vrms, 0 Adc.
  - DC current that causes the primary inductance drop 30% from its value without current. [Click for temperature derating information.](#)
  - Leakage Inductance is for the primary, measured with secondary windings shorted together.
  - 1500 Vrms, one minute isolation (hipot) between windings.
  - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

## Schematics

YA9165, YA9166,  
YA9167, YA9170

\*Connect pin 1 to 2 and pin 3 to 4 on the PC board

YA9168, YA9169



\*Connect pin 1 to 2, 3 to 4, 5 to 6, and pin 7 to 8 on the PC board



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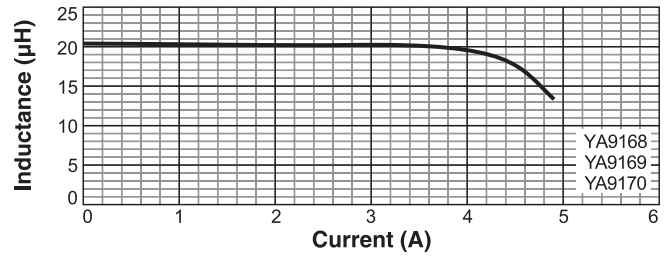
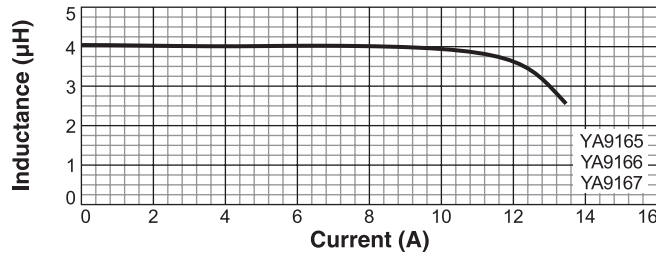
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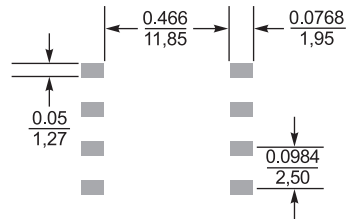
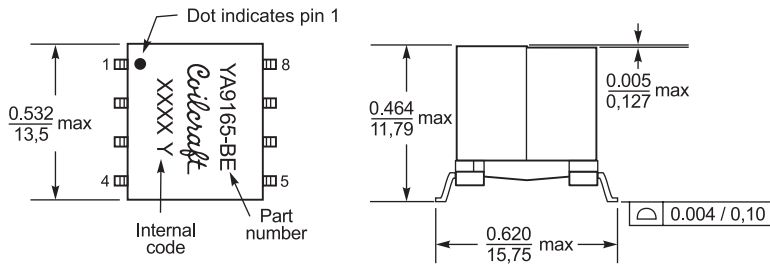


# No-opto Flyback Transformers

## L vs Current



## Dimensions



### Recommended Land Pattern

Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

**Packaging** 200/13" reel Plastic tape: 32 mm wide, 0.50 mm thick, 24 mm pocket spacing, 12 mm pocket depth



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