

Attracting Tomorrow



# Replacement of EE4.2 SMD Transformer Series

B82801A0\* (old) → B82801A1/2\* (new)

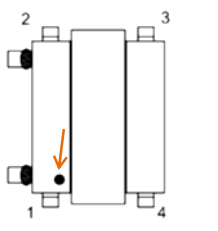
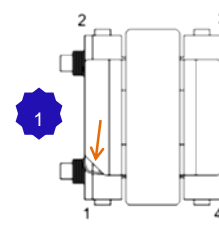
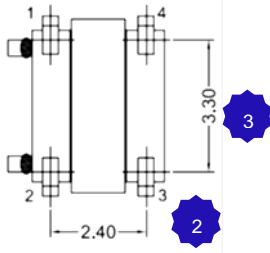
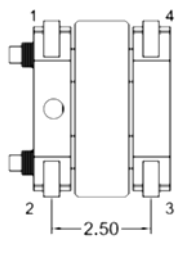
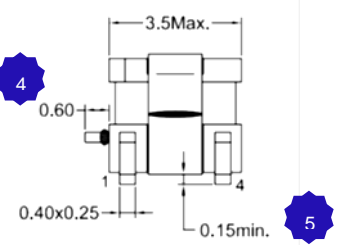
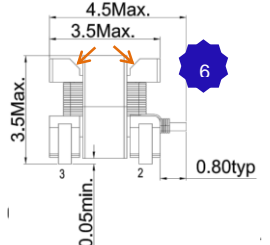
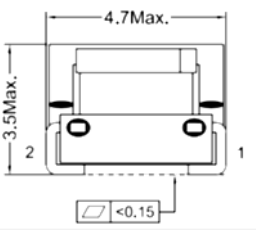
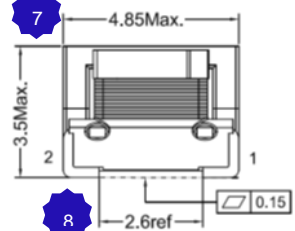
**EPCOS AG**  
A TDK Group Company  
MAG Business Group • TF T PM  
Munich, Germany  
September 04, 2018

# Replacement of Transformer Series B82801A0\* with New Series B82801A1/2\*

- Our EE4.2 SMD Current Sense Transformer series B82801A0\* must be withdrawn, because the bobbins used for this series are no longer available. As a replacement, we will introduce the new series B82801A1/2\*
- The new series B82801A1/2\* is pin-compatible with the B82801A0\* series and the majority of the electrical characteristics are unchanged. Details about mechanical and electrical differences are explained on the following slides.
- Samples of the new B82801A1/2\* series will be available in the second half of October 2018. Mass Production is expected to begin in November 2018.

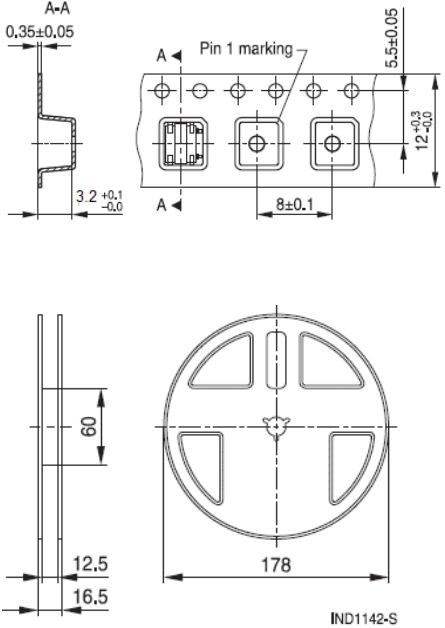
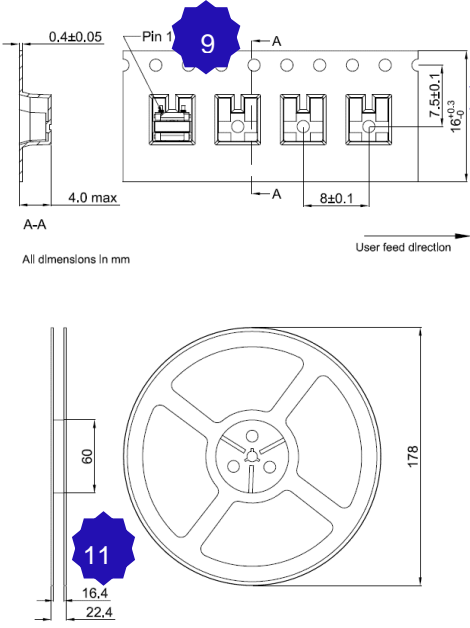
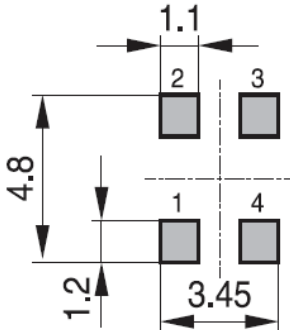
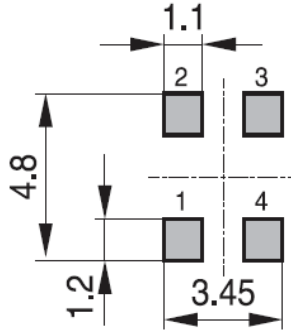
# Comparison of B82801A0\* (old) with B82801A1/2\* (new)

## Mechanical Characteristics

Comparison item	B82801A0*	B82801A1/2* (new)	Remarks
Pin 1 indicator			1. Add pin 1 indicator instead of marking a pin 1 dot.
Pin pitch			2. Pin pitch between Pin(1/2-3/4) is 2.50mm, 2.40 is a mistake in the old datasheet (no product change). 3. Redundant info on pitch between Pin(2/3-1/4) removed from drawing, refer to item 7 below (no product change).
Terminal pin length Chamfer on bobbin Wash area			4. Change 0.60 to 0.80 based (laser welding) This leads to overall 4.5max. 5. Change 0.15min to 0.05min 6. Add chamfer to bobbin
Distance between pin end to end			7. Change 4.7Max. to 4.85Max. 8. Add 2.6 ref. dimension to data sheet (no product change)

# Comparison of B82801A0\* (old) with B82801A1/2\* (new)

## Packing and PCB Layout

Comparison item	B82801A0*	B82801A1/2* (new)	Remarks
Packaging quantity per reel	 <p>IND1142-S</p>	 <p>All dimensions in mm</p>	<p>9. Change packing orientation in cavity for packing quality improvement.</p> <p>11. Change bilster tape width to 16 mm from 12 mm.</p> <p>11. Change net width of reel to 16.4 mm from 12.5 mm.</p> <p>Packing unit unchanged</p>
PCB Layout			<p>12. No change.</p>

# Comparison of B82801A0\* (old) with B82801A1/2\* (new)

## Electrical Characteristics and Ordering Codes

### B82801A0\* (old):

L <sub>min</sub> μH	Turns ratio N <sub>p</sub> : N <sub>s</sub>	DC resistance R <sub>max</sub> (mΩ)		Voltage-time product V · μs	Recomm. R <sub>T</sub>	Ordering code
		primary	secondary			
33	1 : 20	2.5	320	5.76	20	B82801A0333A020
74	1 : 30	2.5	800	8.6	30	B82801A0743A030
132	1 : 40	2.5	1300	11.5	40	B82801A0134A040
205	1 : 50	2.5	2200	14.4	50	B82801A0214A050
295	1 : 60	2.5	3600	17.3	60	B82801A0304A060
400	1 : 70	2.5	4600	20.0	70	B82801A0404A070
820	1 : 100	2.5	8700	28.8	100	B82801A0824A100
1280	1 : 125	2.5	13000	36.0	125	B82801A0135A125
1840	1 : 150	2.5	21000	43.2	150	B82801A0185A150

### B82801A1/2\* (new):

L <sub>min</sub> (1-2) μH	Number of turns n <sub>p</sub> : n <sub>s</sub>	DC resistance R <sub>max</sub> [mΩ]		Voltage-time product at n <sub>s</sub> (1) V · μs	Recomm. R <sub>T</sub> [Ω]	Ordering code
		Primary	Secondary			
33	1 : 20	2.5	390	5.76	20	B82801A1333A020
74	1 : 30	2.5	920	8.6	30	B82801A1743A030
132	1 : 40	2.5	1500	11.5	40	B82801A1134A040
205	1 : 50	2.5	2400	14.4	50	B82801A1214A050
295	1 : 60	2.5	3600	17.3	60	B82801A1304A060
400	1 : 70	2.5	4600	20.0	70	B82801A1404A070
820	1 : 100	2.5	9700	28.8	100	B82801A1824A100
1280	1 : 125	2.5	15000	36.0	125	B82801A1135A125
1840	1 : 150	2.5	22700	43.2	150	B82801A1185A150

(1) The Maximum volt-sec rating limits the peak flux density to 200 mT when used in a unipolar drive application. For bi-polar drive applications, a maximum volt-sec of two times is acceptable.

Electrical characteristics unchanged, except for secondary DC resistance



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