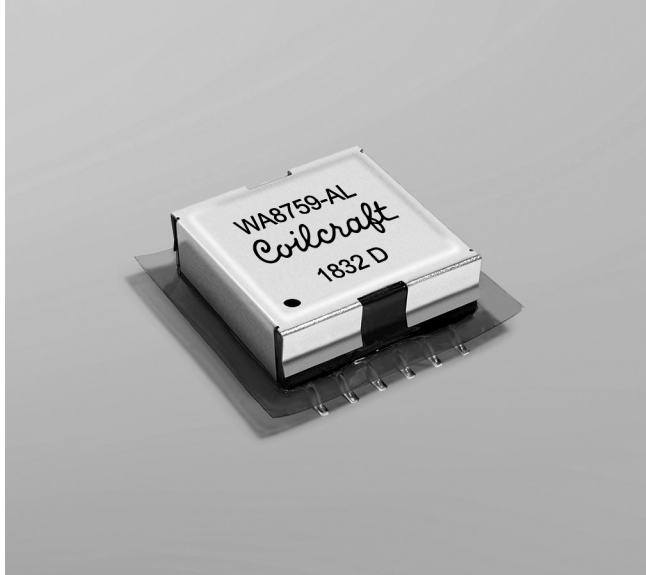


# Flyback Transformer

For Texas Instruments  
Reference Design TIDA-01505



- Designed for Texas Instruments Automotive 40 V to 1 kV Input Flyback Reference Design Supporting Regenerative Braking Safety Test
- Operates at 150 kHz with 40–1000 Volts input
- 5700 Vrms, one minute isolation (hipot) pri and aux to sec; 2000 Vrms pri to aux
- AEC-Q200 Grade 1 qualified (–40°C to +125°C ambient)

**Core material** Ferrite

**Terminations** RoHS tin-silver-copper over tin over nickel over phos bronze.

**Weight** 35.5 g

**Ambient temperature** –40°C to +125°C

**Maximum part temperature** +165°C (ambient + temp rise).

**Storage temperature** Component: –40°C to +165°C.

Tray packaging: –40°C to +80°C

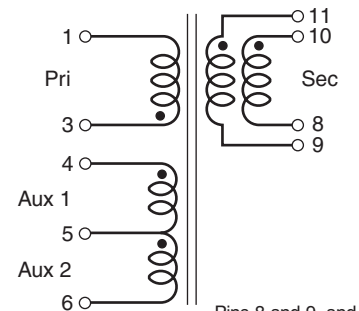
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

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

Part number	Inductance at 0A <sup>1</sup> ±10% (mH)	Inductance at Ipk <sup>2</sup> min (mH)	DCR max (Ohms)				Leakage inductance <sup>3</sup> max (µH)	Turns ratio <sup>4</sup>			Ipk <sup>2</sup> (A)	Output <sup>5</sup>
			pri	sec	aux1	aux2		pri:sec	pri:aux1	pri:aux2		
WA8759-AL	1.50	1.35	3.1	0.07	1.30	0.34	34.0	1:0.083	1:0.109	1:0.026	1.3	15 V, 4.0 A

1. Inductance is for the primary, measured at 150 kHz, 0.1 Vrms, 0 Adc.
  2. Peak primary current drawn at minimum input voltage.
  3. Leakage inductance is for the primary winding with the secondary windings shorted.
  4. Turn Ratios specified are with no core gap.
  5. Output is for the secondary. Output of Aux1 is 20 V, 35 mA; Output of Aux2 is 5 V, 35 mA.
  6. Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



Pins 8 and 9, and pins 10 and 11 to be connected on the PC board.



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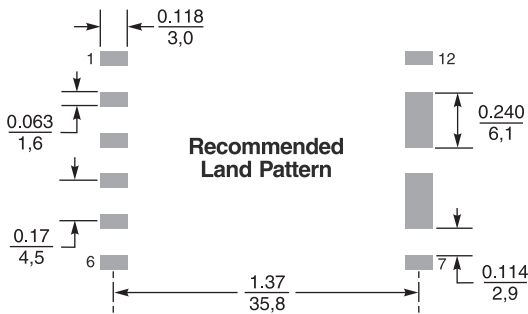
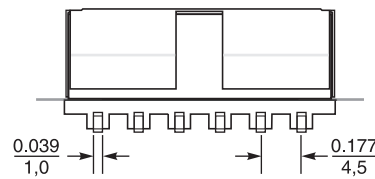
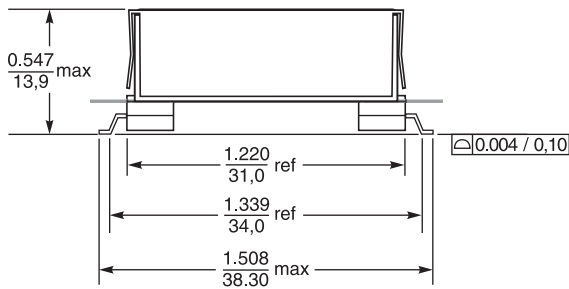
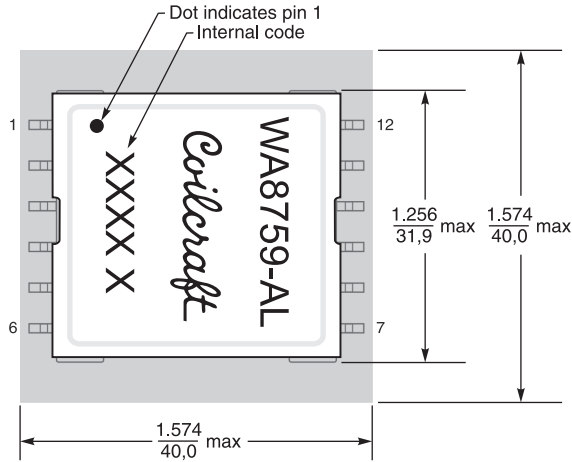
Document 1481-1 Revised 06/14/22

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# Flyback Transformer for Texas Instruments TIDA-01505



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

**Packaging** 16 per tray



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Document 1481-2 Revised 06/14/22

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