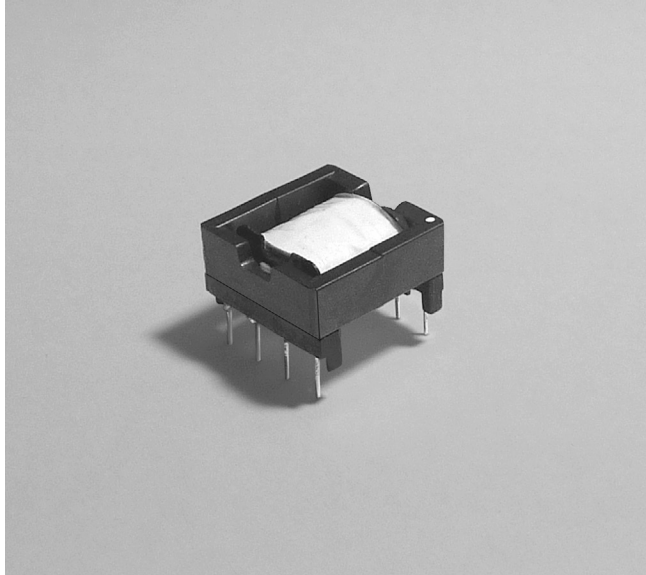


# Flyback Transformer

for NXP Semiconductor  
SSL2103 SMPS Controller



- Developed for NXP Semiconductor for use with the SSL2103 SMPS Controller for dimmable LED lighting
- Designed to operate at 100 kHz with 120 Vac input
- 2000 Vrms, one minute isolation from primary and auxiliary to secondary; 500 Vrms, one minute isolation from primary to auxiliary

**Core material** Ferrite

**Terminations** RoHS compliant tin-silver over tin over copper over steel. Other terminations available at additional cost.

**Weight** 11.8 g

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

**Maximum part temperature**  $+125^{\circ}\text{C}$  (ambient + temp rise).

**Storage temperature** Component:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

Tray packaging:  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

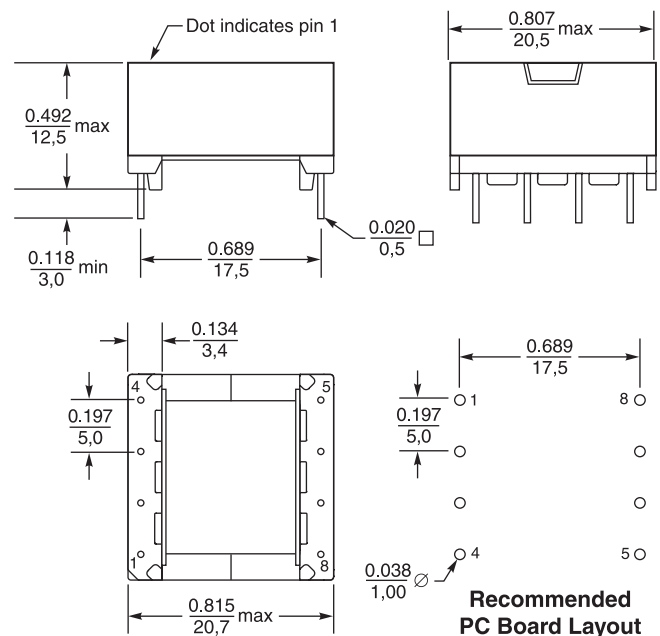
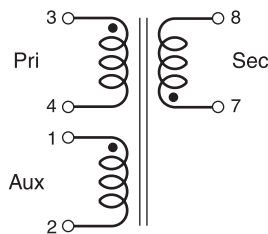
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging** 100 per tray

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

Part number	L at 0 A <sup>1</sup> $\pm 10\%$ ( $\mu\text{H}$ )	L at I <sub>pk</sub> <sup>2</sup> min ( $\mu\text{H}$ )	DCR max (Ohms) <sup>3</sup>			Leakage L <sup>4</sup> max ( $\mu\text{H}$ )	Turns ratios		I <sub>pk</sub> <sup>2</sup> (A)	Output <sup>5</sup>
			pri	sec	aux		pri : sec	pri : aux		
MA5157-AL	750	635	0.880	0.095	0.585	20.5	1 : 0.23	1 : 0.20	1.2	23 V, 0.74 A

1. Inductance is for the primary, measured at 100 kHz, 0.1 Vrms, 0 Adc.
2. I<sub>pk</sub> is peak primary current drawn at minimum input voltage.
3. DCR for the primary is measured with the windings connected in parallel.
4. Leakage inductance is for the primary winding, measured at 100 kHz, 0.1 Vrms, 0 A with secondary pins shorted.
5. Output is for the secondary. Output of the auxiliary coil is 19 V, 20 mA.
6. Electrical specifications at 25°C.



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

**Recommended  
PC Board Layout**



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