



# Magnetics for LM258X Flyback Regulator

These standard flyback regulator transformers are designed for use with National Semiconductor LM2585, LM2586, LM2587 and LM2588 **SIMPLE SWITCHER**® switching regulators.

They are available in surface mount and through hole configurations. All feature 500 V isolation between windings and a variety of available turns ratios.

| Ref. number | Part number | Input voltage (V) | Inductance at 0 Adc $\pm 15\%$ ( $\mu\text{H}$ ) | Inductance at Ipk min ( $\mu\text{H}$ ) | Volt-time product max (V $\mu\text{sec}$ ) | Leakage Inductance <sup>1</sup> max ( $\mu\text{H}$ ) | DCR (Ohms) |                                           | Turns ratio pri : sec             | Output                                     | Ipk <sup>2</sup> (A) |
|-------------|-------------|-------------------|--------------------------------------------------|-----------------------------------------|--------------------------------------------|-------------------------------------------------------|------------|-------------------------------------------|-----------------------------------|--------------------------------------------|----------------------|
|             |             |                   |                                                  |                                         |                                            |                                                       | pri        | sec                                       |                                   |                                            |                      |
| T1 (SM)     | Q4435-BL    | 4 – 6             | 22                                               | 19.0                                    | 166.5                                      | 0.7                                                   | 0.020      | 0.025                                     | 1 : 1                             | 5 V, 1.6 A                                 | 4.85                 |
| T1 (PC)     | Q4434-BL    | 4 – 6             | 22                                               | 19.8                                    | 162.0                                      | 2.0                                                   | 0.028      | 0.028                                     | 1 : 1                             | 5 V, 1.6 A                                 | 5.0                  |
| T2 (SM)     | Q4436-BL    | 4 – 6             | 22                                               | 17.6                                    | 166.5                                      | 0.5                                                   | 0.025      | 0.23 (10-11)<br>0.25 (9-8)                | 1 : 2.5<br>1 : 2.5                | 12 V, 0.35 A<br>12 V, 0.35 A               | 5.0                  |
| T2 (PC)     | Q4337-BL    | 4 – 6             | 22                                               | 19.8                                    | 162.0                                      | 2.0                                                   | 0.030      | 0.32 (8-7)<br>0.32 (6-5)                  | 1 : 2.5<br>1 : 2.5                | 12 V, 0.35 A<br>12 V, 0.35 A               | 5.0                  |
| T3 (PC)     | Q4343-BL    | 18 – 36           | 85                                               | 76.5                                    | 364.5                                      | 3.5                                                   | 0.150      | 0.011 (10-9)<br>0.011 (7-6)               | 1 : 0.8<br>1 : 0.8                | 12 V, 1.4 A<br>12 V, 1.4 A                 | 3.0                  |
| T4 (PC)     | Q4344-BL    | 18 – 36           | 85                                               | 76.5                                    | 364.5                                      | 3.5                                                   | 0.145      | 0.20 (10-9)<br>0.20 (7-6)<br>0.03 (4-5)   | 1 : 0.8<br>1 : 0.8<br>1 : 0.35    | 12 V, 0.75 A<br>12 V, 0.75 A<br>5 V, 3.0 A | 3.0                  |
| T5 (SM)     | Q4437-BL    | 18 – 36           | 55                                               | 47.3                                    | 299.7                                      | 2.0                                                   | 0.110      | 0.035 (10-11)<br>0.30 (9-8)<br>0.32 (4-5) | 1 : 0.5<br>1 : 1.167<br>1 : 1.167 | 5 V, 1.8 A<br>12 V, 0.25 A<br>12 V, 0.25 A | 3.0                  |
| T5 (PC)     | Q4338-BL    | 18 – 36           | 66                                               | 59.4                                    | 499.5                                      | 3.5                                                   | 0.090      | 0.039 (8-7)<br>0.58 (6-5)<br>0.60 (3-4)   | 1 : 0.5<br>1 : 1.167<br>1 : 1.167 | 5 V, 1.8 A<br>12 V, 0.25 A<br>12 V, 0.25 A | 3.0                  |
| T6 (SM)     | Q4438-BL    | 18 – 36           | 65                                               | 57.0                                    | 299.7                                      | 3.0                                                   | 0.065      | 0.15 (10-11)<br>0.15 (9-8)                | 1 : 1.2<br>1 : 1.2                | 12 V, 0.63 A<br>12 V, 0.63 A               | 3.0                  |
| T6 (PC)     | Q4339-BL    | 18 – 36           | 66                                               | 59.4                                    | 499.5                                      | 3.0                                                   | 0.090      | 0.20 (8-7)<br>0.24 (5-6)                  | 1 : 1.2<br>1 : 1.2                | 12 V, 0.63 A<br>12 V, 0.63 A               | 3.0                  |
| T7 (SM)     | S6057-AL    | 4 – 6             | 47                                               | 40.0                                    | 233.1                                      | 2.0                                                   | 0.065      | 0.065                                     | 1 : 1                             | 5 V, 0.9 A                                 | 3.0                  |
| T7 (PC)     | S6000-AL    | 4 – 6             | 47                                               | 40.0                                    | 212.6                                      | 2.0                                                   | 0.065      | 0.042                                     | 1 : 1                             | 5 V, 0.9 A                                 | 3.0                  |

1. Leakage inductance measured across the primary at 0.10 Vrms, 100 kHz.

2. DC current at which the primary inductance is measured.

3. Electrical specifications at 25° C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ferrite

**Ambient temperature** –40°C to +85°C

**Weight**

|                  |        |                  |        |
|------------------|--------|------------------|--------|
| <b>Q4337-BL:</b> | 11.4 g | <b>Q4435-BL:</b> | 9.0 g  |
| <b>Q4338-BL:</b> | 11.5 g | <b>Q4436-BL:</b> | 8.7 g  |
| <b>Q4339-BL:</b> | 11.6 g | <b>Q4437-BL:</b> | 8.2 g  |
| <b>Q4343-BL:</b> | 25.1 g | <b>Q4438-BL:</b> | 8.6 g  |
| <b>Q4344-BL:</b> | 23.1 g | <b>S6000-AL:</b> | 10.6 g |
| <b>Q4434-BL:</b> | 11.5 g | <b>S6057-AL:</b> | 8.2 g  |

**Storage temperature** Component: –40°C to +85°C.

Packaging: –40°C to +80°C

**Resistance to soldering heat (SM parts)** 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)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**PCB washing** Only pure water or alcohol recommended

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Specifications subject to change without notice.  
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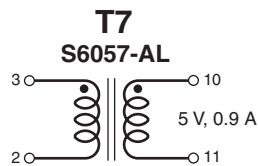
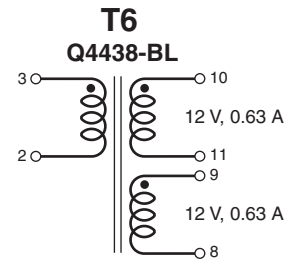
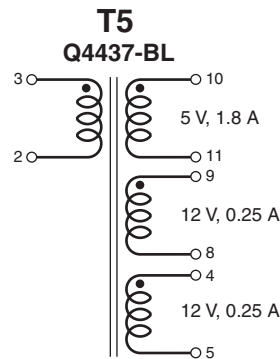
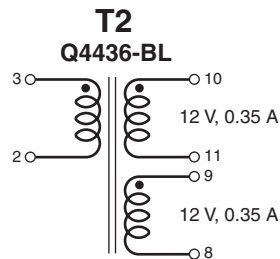
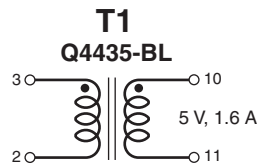
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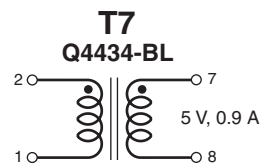
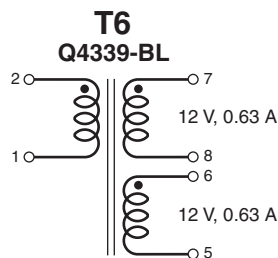
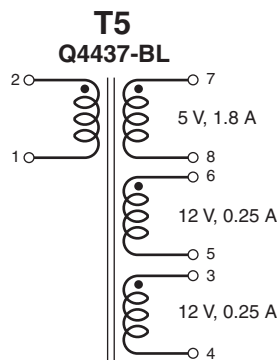
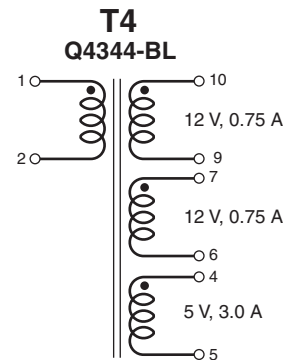
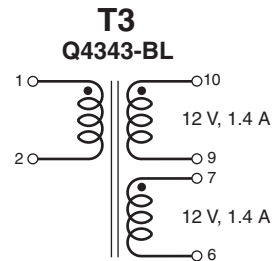
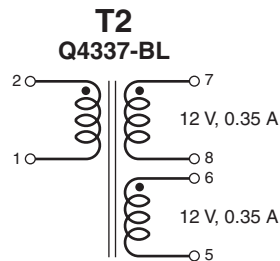
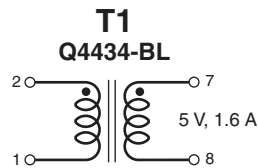


# Magnetics for LM258X Flyback Regulator

## Schematics – Surface Mount (SM)



## Schematics – Leaded (PC)



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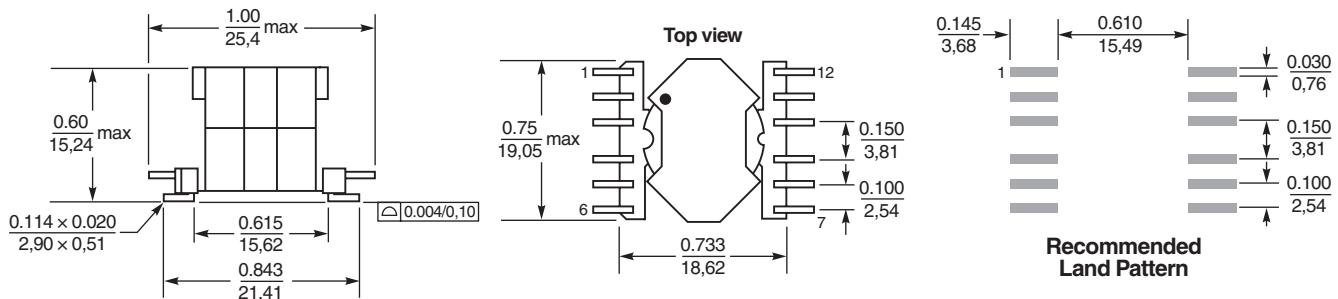
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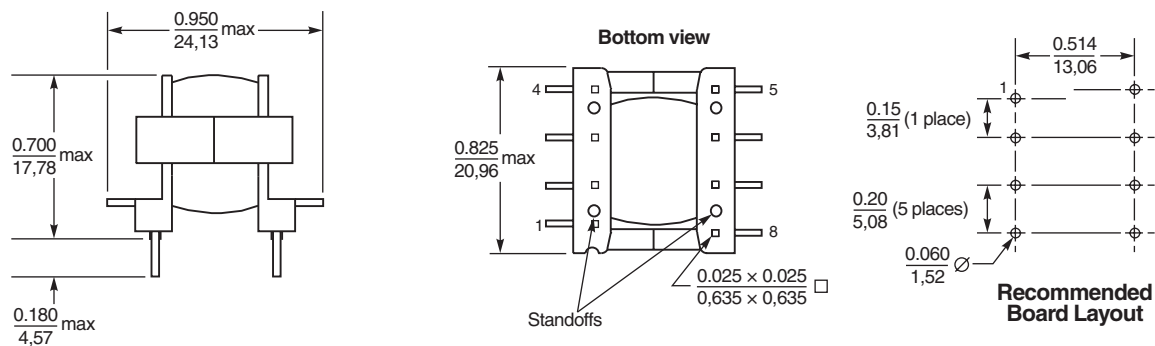
# Magnetics for LM258X Flyback Regulator

Surface Mount (Q4435-BL, Q4436-BL, Q4437-BL, Q4438-BL, S6057-AL)



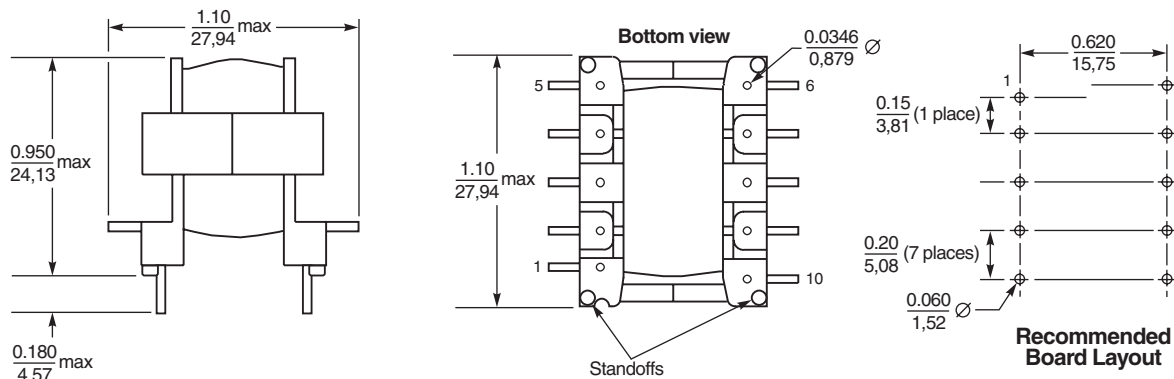
**Terminations** RoHS tin-silver over tin over nickel over phos bronze.  
Packaged 81 parts per tray

Leaded – T1, T2, T5, T6, T7 (Q4434-BL, Q4337-BL, Q4338-BL, Q4339-BL, S6000-AL)



**Terminations** RoHS tin-silver over tin over nickel over phos bronze.  
Packaged 49 parts per tray

Leaded – T3, T4 (Q4343-BL, Q4344-BL)



**Terminations** RoHS tin-silver over tin over copper.  
Packaged 30 parts per tray

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- Подбор аналогов.
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Конструкторский отдел помогает осуществить:

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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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