



Magnetics for LM258x Flyback Regulator

These standard flyback regulator transformers are designed for use with Texas Instruments 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 ±15% (µH) | Inductance at Ipk min (µH) | Volt-time product max (Vµsec) | Leakage Inductance ¹ max (µH) | DCR (Ohms) | | Turns ratio pri : sec | Output | Ipk ² (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) 0.25 (9-8) | 1:2.5 1:2.5 | 12 V, 0.35 A 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) 0.32 (6-5) | 1:2.5 1:2.5 | 12 V, 0.35 A 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) 0.011 (7-6) | 1:0.8 1:0.8 | 12 V, 1.4 A 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) 0.20 (7-6) 0.03 (4-5) | 1:0.8 1:0.8 1:0.35 | 12 V, 0.75 A 12 V, 0.75 A 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) 0.30 (9-8) 0.32 (4-5) | 1:0.5 1:1.167 1:1.167 | 5 V, 1.8 A 12 V, 0.25 A 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) 0.58 (6-5) 0.60 (3-4) | 1:0.5 1:1.167 1:1.167 | 5 V, 1.8 A 12 V, 0.25 A 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) 0.15 (9-8) | 1:1.2 1:1.2 | 12 V, 0.63 A 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) 0.24 (5-6) | 1:1.2 1:1.2 | 12 V, 0.63 A 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

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

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

Tray 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)

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 with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.



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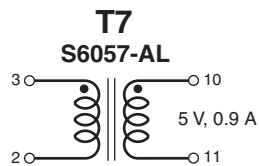
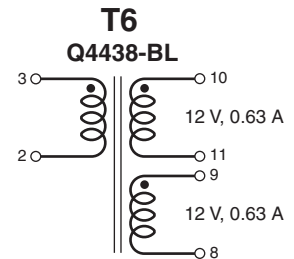
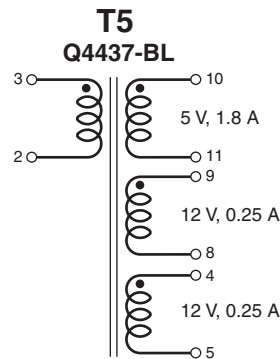
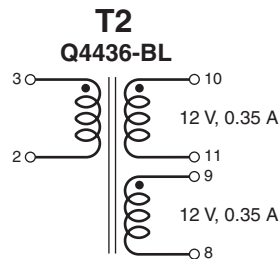
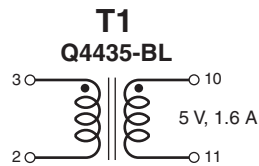
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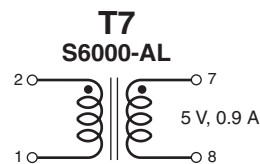
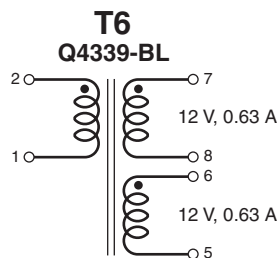
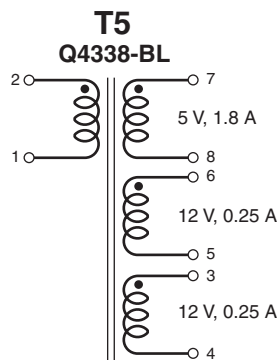
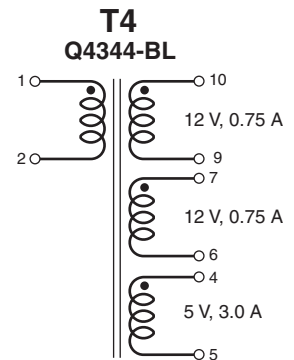
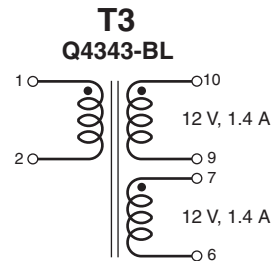
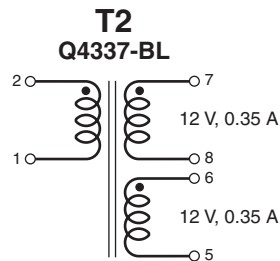
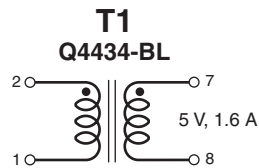


Magnetics for LM258x Flyback Regulator

Schematics – Surface Mount (SM)



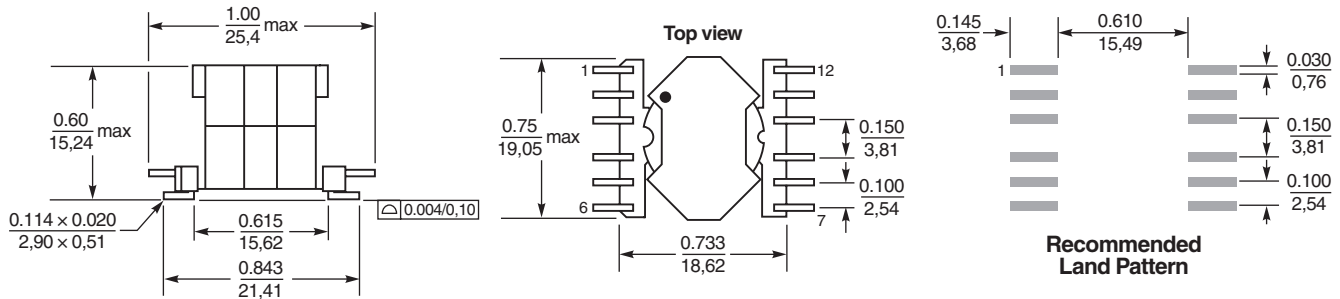
Schematics – Leaded (PC)





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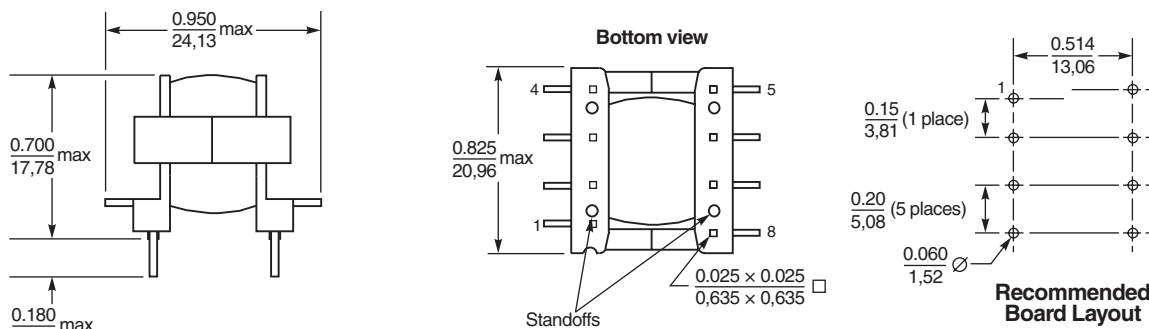
Surface Mount (Q4435-BL, Q4436-BL, Q4437-BL, Q4438-BL, S6057-AL)



Terminations RoHS tin-silver over tin over copper clad steel.
Packaged 49 parts per tray

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

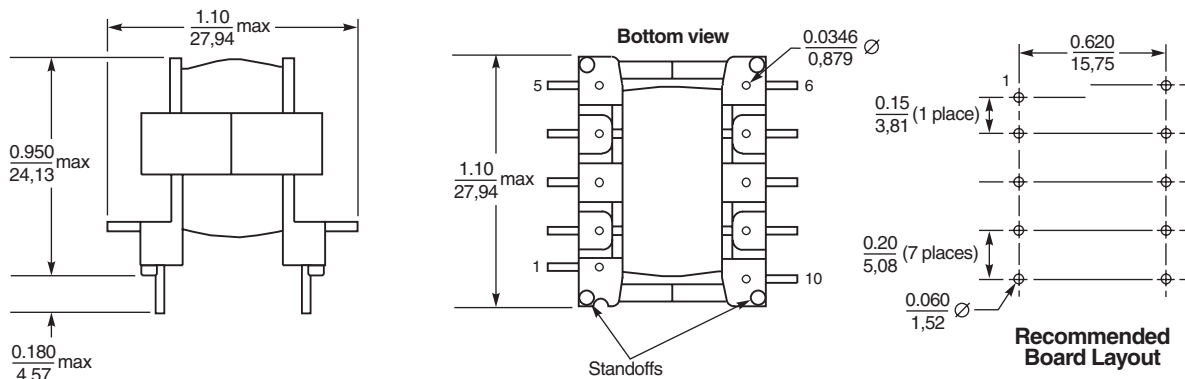
Leaded – T1, T2, T5, T6, T7 (Q4434-BL, Q4337-BL, Q4338-BL, Q4339-BL, S6000-AL)



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

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

Leaded – T3, T4 (Q4343-BL, Q4344-BL)



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

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



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