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) pri	DCR (Ohms) sec	Turns ratio pri : sec	Output	Ipk[2] (A)
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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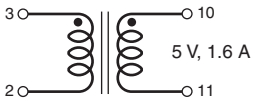
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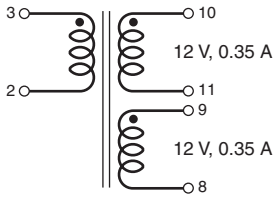
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Schematics – Surface Mount (SM)

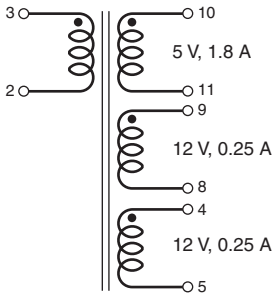
T1
Q4435-BL



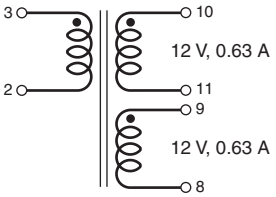
T2
Q4436-BL



T5
Q4437-BL



T6
Q4438-BL

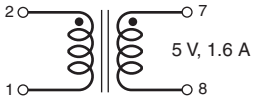


T7
S6057-AL

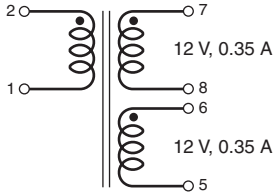


Schematics – Leaded (PC)

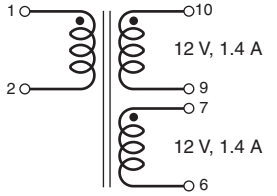
T1
Q4434-BL



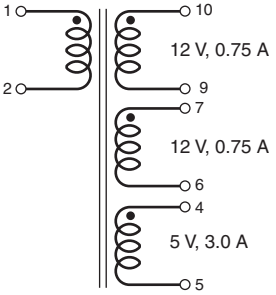
T2
Q4337-BL



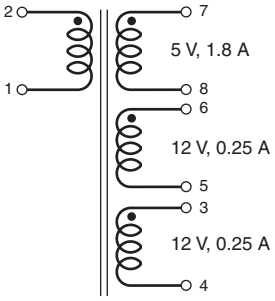
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Q4343-BL



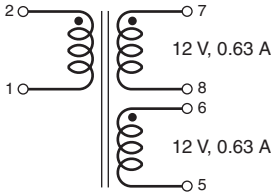
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Q4344-BL



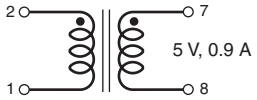
T5
Q4338-BL



T6
Q4339-BL



T7
S6000-AL



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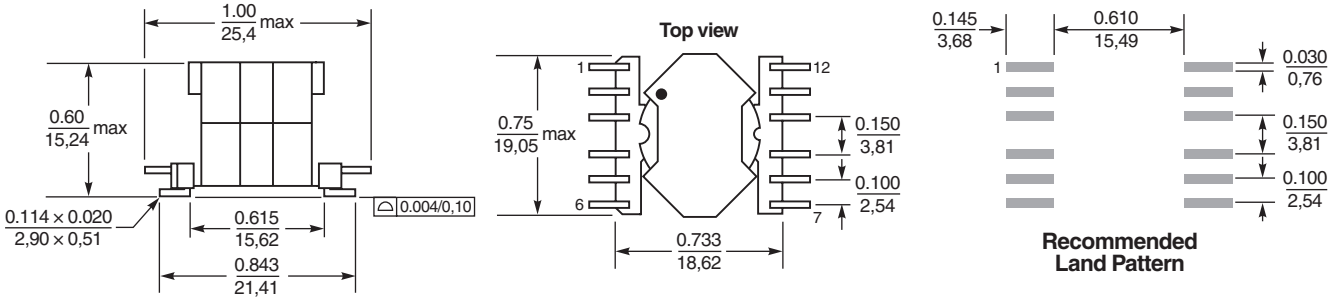
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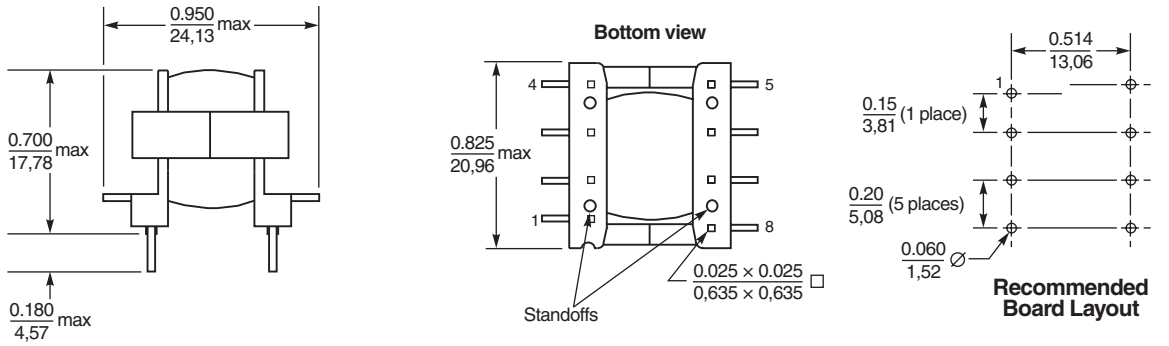
Surface Mount (Q4435-BL, Q4436-BL, Q4437-BL, Q4438-BL, S6057-AL)



Dimensions are in inches / mm

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

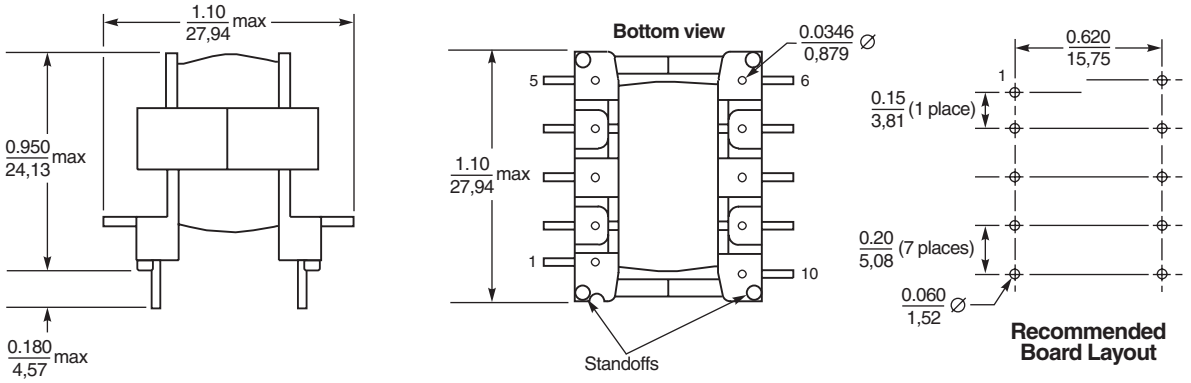
Leaded – T1, T2, T5, T6, T7 (Q4434-BL, Q4337-BL, Q4338-BL, Q4339-BL, S6000-AL)



Dimensions are in inches / mm

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

Leaded – T3, T4 (Q4343-BL, Q4344-BL)



Dimensions are in inches / mm

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

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