



**THE DATASHEET OF
PG1054.400NL**



Switching Mode Transformers

EEL12 Platforms - THT



- LED Lighting T8/T10 Solution
- AC/DC Switching Transformers
- Reinforced Insulation
- 3000Vrms Hi-Pot
- Topology: PFC Flyback

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

PG1054.400NL Chipset: TI UCC28810	Pri. Inductance	(2 - 1)	545 μ H +/- 15%		85-264VAC 80KHz MIN 12V, 100mA
	Lk. Inductance	(2 - 1)	6.5 μ H MAX		
	Turn Ratio	(2-1):(4-5)	6.80		
		(2-1):(8-9)	2.83		
	DCR	(2-1)	1.20	Ω Max	
		(4-5)	0.33		
		(8-9)	0.20		
Hi-Pot	Pri-Sec	3000 Vrms			
K1 Factor	2162.7				
PG1054.404NL Chipset: Fairchild FL7930C	Pri. Inductance	(2 - 1)	545 μ H +/- 15%		85-264VAC 70KHz MIN 12V, 100mA
	Lk. Inductance	(2 - 1)	14.0 μ H MAX		
	Turn Ratio	(2-1):(4-5)	9.250		
		(2-1):(8-9)	2.846		
	DCR	(2-1)	1.30	Ω Max	
		(4-5)	0.23		
		(8-9)	0.22		
Hi-Pot	Pri-Sec	3000 Vrms			
K1 Factor	2338.1				
PG1054.500NL Chipset: PI LNK406EG	Pri. Inductance	(2 - 1)	715 μ H +/- 15%		20V, 0.1A 85-264VAC 65KHz
	Lk. Inductance	(2 - 1)	32.0 μ H MAX		
	Turn Ratio	(2-1):(4-5)	3.55		
		(2-1):(9-8)	1.77		
	DCR	(2-1)	1.65	Ω Max	
		(4-5)	0.70		
		(9-8)	0.80		
Hi-Pot	Pri-Sec	3000 Vrms			
K1 Factor	2473.6				
PG1054.501NL Chipset: Intersil ISL6745A	Pri. Inductance	(3 - 1)	280 μ H +/- 15%		90-265VAC 100KHz 14.7V, 0.05A
	Lk. Inductance	(3 - 1)	6.0 μ H MAX		
	Turn Ratio	(3-1):(5-4)	6.500		
		(3-1):(7-6)	1.625		
		(3-1):(9-8)	6.500		
	DCR	(3-1)	0.95	Ω Max	
		(5-4)	0.42		
(7-6)		0.55			
(9-8)		0.16			
Hi-Pot	Pri-Sec	3000 Vrms			
K1 Factor	1709.4				

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

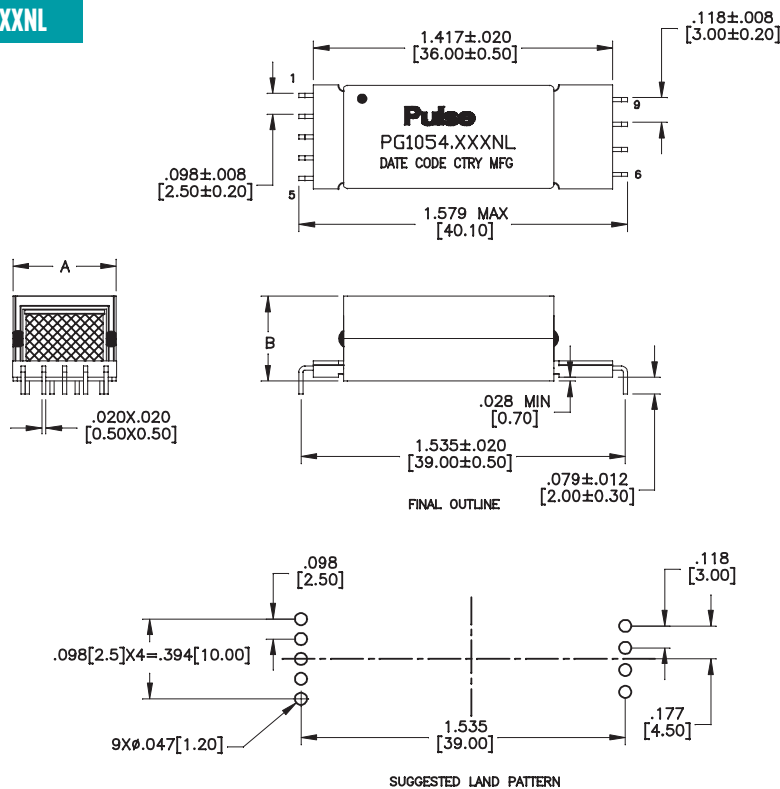
Taiwan 886 3 4356768

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Mechanicals

PG1054.XXXNL



PART NO	A	B	PIN DESCRIPTION
PG1054.400NL	.512 MAX [13.00]	.413 MAX [10.50]	REMOVE PIN 6,7
PG1054.404NL	.531 MAX [13.50]	.453 MAX [11.50]	REMOVE PIN 6,7
PG1054.500NL	.512 MAX [13.00]	.413 MAX [10.50]	REMOVE PIN 6,7
PG1054.501NL	.512 MAX [13.00]	.413 MAX [10.50]	FULL PINS

NOTES:

- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- For flyback technology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 2700 Gauss. To calculate the peak flux density, use the following formula:

$$B_{pk} \text{ (Gauss)} = K1_Factor * I_{pk}(A)$$
- In high volt-μsec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:

$$\text{CoreLoss (W)} = 1.98E-07 \times (\text{Freq_kHz})^{1.38} \times (\text{DB_Gauss})^{2.86}$$

where DB can be calculated as:

$$\text{For Flyback Topology: } DB = K1_Factor * 0.59I_{pk}(A)$$

- The "NL" suffix indicates an RoHS-compliant part number. Non-NL suffixed parts are not necessarily RoHS compliant, but are electrically and mechanically equivalent to NL versions. If a part number does not have the "NL" suffix, but an RoHS-compliant version is required, please contact Pulse for availability.
- Full pins is available.

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