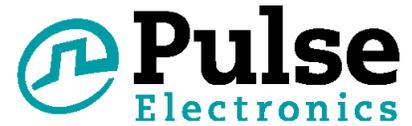


# Switch Mode Transformer for AC/DC offline Applications

EE16H, EE16V, EF20H and EF25V Platforms



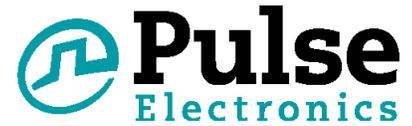
- AC/DC offline Switch Mode Transformer
- Hipot up to 3000Vrms
- Flyback Topology
- Operational Insulation
- Matched to Tiny Switch and Top Switch chipsets
- Custom Design Available: <60W with up to Reinforced Insulation

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

Model	Parameter	Value	Unit	Notes	
PH0256NL	Pri. Inductance	(3-2)	2800 $\mu\text{H} \pm 15\%$	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance w/	(4,5,8,10)	65 $\mu\text{H}$ max shorted		
	DCR	(3-2)	3.3		$\Omega$ Max
			0.02		
			0.13		
	Hi-Pot	Pri-Sec	500		Vrms
	K1 Factor		10100		
PI IC's	TNY264/274				
PH0259NL	Pri. Inductance	(4-1)	1800 $\mu\text{H} \pm 15\%$	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance w/	(5,6,7,8)	60 $\mu\text{H}$ max shorted		
	DCR	(4-1)	2.556		$\Omega$ Max
			0.0168		
			0.174		
	Hi-Pot	Pri-Sec	500		Vrms
	K1 Factor		7200		
PI IC's	TNY266/274				
PH0262NL	Pri. Inductance	(3-1)	790 $\mu\text{H} \pm 10\%$	<p>FLYBACK TRANSFORMER</p>	
	Lk. Inductance w/	(3-1), (4,5,9,10)	30 $\mu\text{H}$ max shorted		
	DCR	(3-1)	1.085		$\Omega$ Max
			0.015		
			0.026		
	Hi-Pot	Pri-Sec	3000		Vrms
	K1 Factor		4030		
PI IC's	TNY279				

# Switch Mode Transformer for AC/DC offline Applications

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PH0270NL	Pri. Inductance	(3-1)	876 $\mu$ H $\pm$ 10%		
	Lk. Inductance	(3-1) w/ (4,5,6,7,9,10)	28 $\mu$ H max shorted		
	DCR	(3-1)	0.5		$\Omega$ Max
		(5-4)	0.026		
		(6-7)	0.025		
		(9-10)	0.025		
	Hi-Pot	Pri-Sec	1500		Vrms
	K1 Factor		2900		
PI IC's	TOP244 / 245 / 246 / 254 / 264				

## Notes:

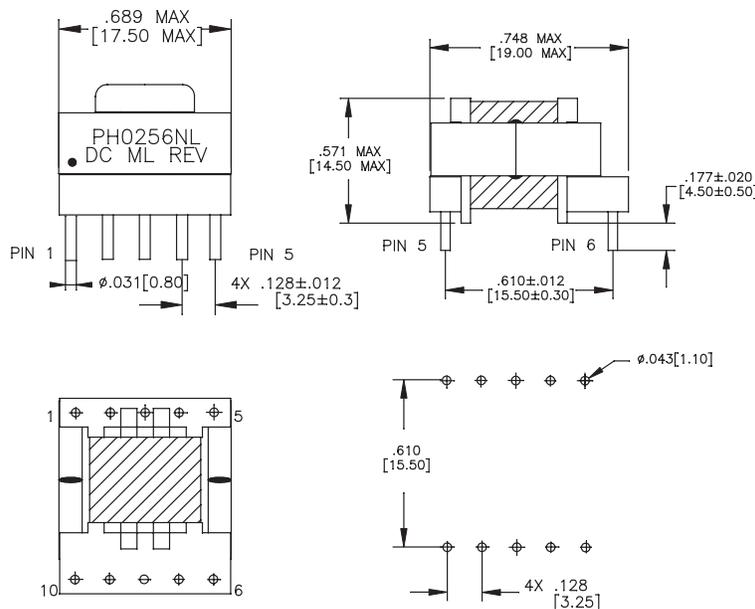
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
- The above transformers and inductors have been tested and approved by Pulse's power IC partners and are sited in the appropriate datasheet or evaluation board documentation at these companies. To determine which IC and IC partners are matched with the above Pulse part numbers please consult the IC Cross Reference on the Pulse website.
- For flyback topology applications, it is necessary to ensure that the transformer will not saturate in the application. The peak flux density (Bpk) should remain below 2700Gauss. To calculate the peak density, use the following formula:  

$$B_{pk} \text{ (Gauss)} = K1\_Factor * I_{pk} \text{ (A)}$$
- In high volt-sec applications, it is important to calculate the core loss of the transformer. Approximate transformer core loss can be calculated as:  

$$CoreLoss \text{ (W)} = 3.6E-14 * (Freq\_kHz)^{1.63} * (\Delta B\_Gauss)^{2.63}$$
 where  $\Delta B$  can be calculated as:  
 For Flyback Topology:  $\Delta B = K1\_Factor * \Delta(A)$   
 For Forward Topology:  $\Delta B = K1\_Factor * Volt\text{-}\mu\text{sec}$
- 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.

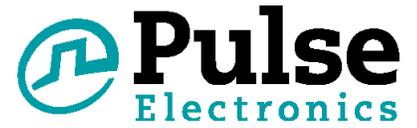
## Mechanical

### PH0256NL



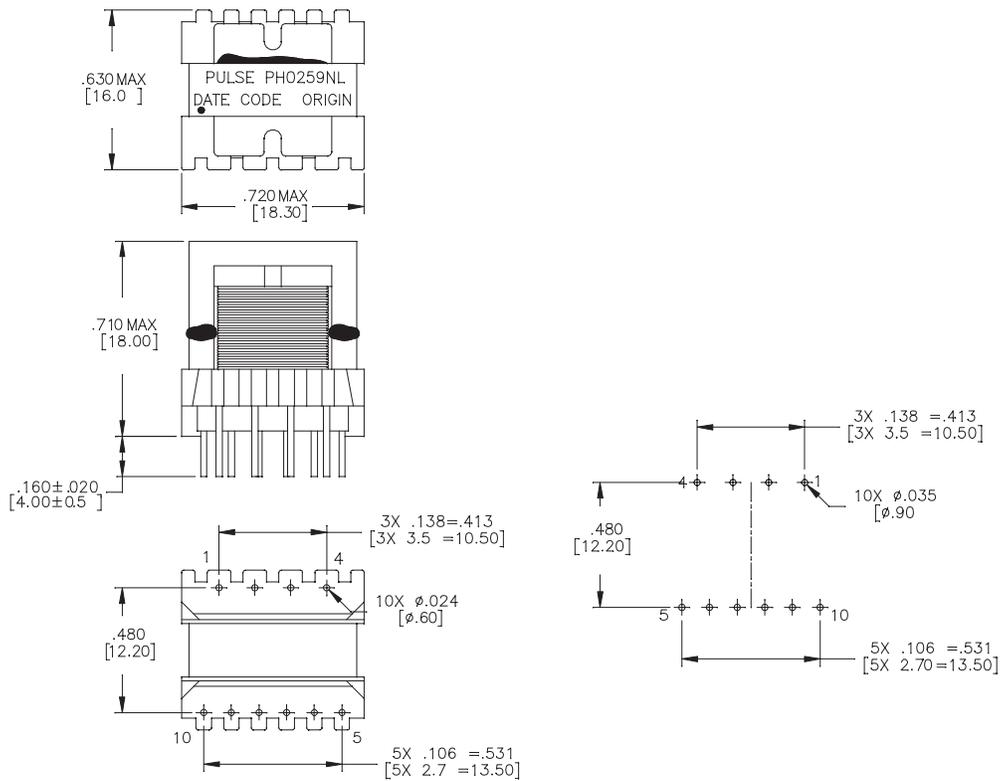
# Switch Mode Transformer for AC/DC offline Applications

EE16H, EE16V, EF20H and EF25V Platforms

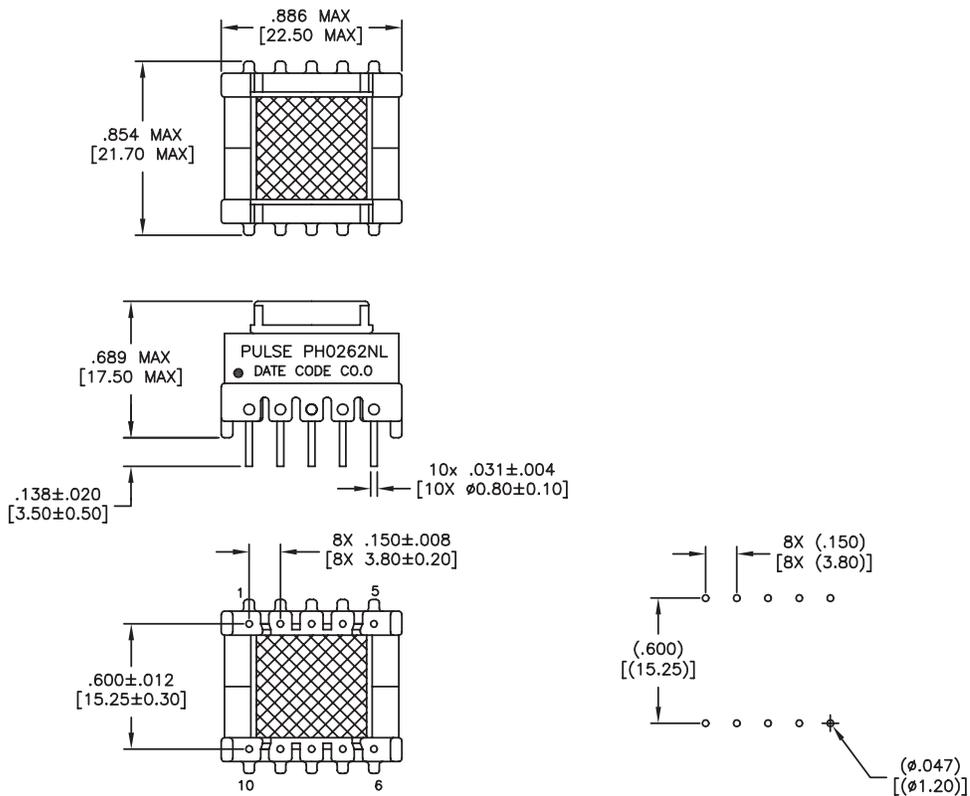


## Mechanical

### PH0259NL



### PH0262NL

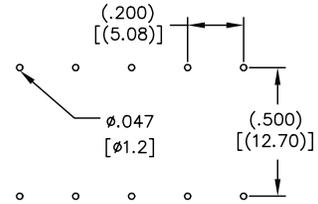
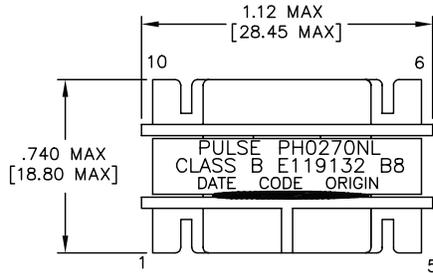


# Switch Mode Transformer for AC/DC offline Applications

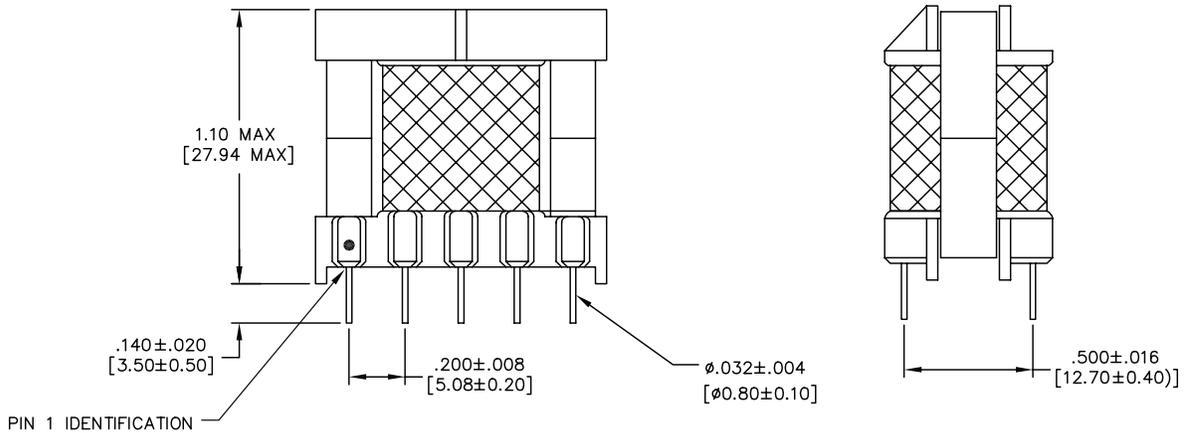
EE16H, EE16V, EF20H and EF25V Platforms

## Mechanical

PH0270NL



SUGGESTED LAND PATTERN



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