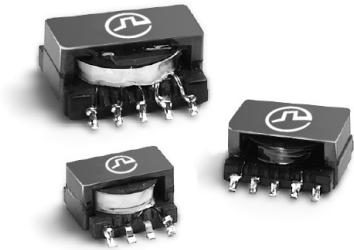






# High Frequency Wire Wound Transformers

ER Platforms - ER9.5, ER11 and ER14.5



-  Transformers and Inductors
-  Power: 1W to 9W
-  Three Different SMT Platforms
-  Custom designs available

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

| Part <sup>3,4</sup><br>Number                              | Application <sup>2</sup>   | Turns Ratio |                        |           | Primary<br>Secondary<br>Isolation | Primary<br>Inductance<br>(μH MIN) | Leakage<br>Inductance<br>(μH MAX) | DCR (mΩ MAX) |              |           |           |
|--|--|-------------|------------------------|-----------|-----------------------------------|-----------------------------------|-----------------------------------|--------------|--------------|-----------|-----------|
|  |  | Pri.        | Sec.                   | Pri. Aux. |                                   |                                   |                                   | Pri.         | Pri.<br>Aux. | Sec.<br>A | Sec.<br>B |
| <b>ER9.5 - 8 PIN SMT - (12.1mm x 10.7mm x 6.6mm MAX)</b>   |  |             |                        |           |                                   |                                   |                                   |              |              |           |           |
| <b>PB2090NL</b>  | 2.4W Flyback Transformer<br>Vin=36-72v, Freq.=200kHz<br>Vout=12v/0.2A, 12v/.05mA   | 1           | 0.33                   | 0.330     | 1500Vdc<br>Operational            | 132<br>@ 0.41A                    | 5                                 | 700          | 820          | 185       | N/A       |
| <b>PB2109NL</b>  | 1.25W Flyback Transformer<br>Vin=18-36v, Freq.=200kHz<br>Vout=5v/0.25A, 12v/50mA   | 1           | 0.714                  | 0.287     | 1500Vdc<br>Operational            | 62<br>@ 0.52A                     | 3                                 | 350          | 650          | 50        | N/A       |
| <b>PB2110NL</b>  | 2.4W Flyback Transformer<br>Vin=18-36v, Freq.=200kHz<br>Vout=12v/0.2A, 12v/50mA    | 1           | 0.68                   | 0.680     | 1500Vdc<br>Operational            | 32<br>@ 0.8A                      | 2                                 | 180          | 820          | 185       | N/A       |
| <b>PB2135NL</b>  | .5W Flyback Transformer<br>Vin=20-30v, Freq.=200kHz<br>Vout=±5v/50mA               | 1           | 0.42<br>0.42           | N/A       | 1000Vdc<br>Operational            | 814<br>@ 0.8A                     | 11                                | 5772         | N/A          | 364       | 364       |
| <b>PA0663NL</b>  | 2.6W Flyback Transformer<br>Vin=4.5-5.5v, Freq.=200kHz<br>Vout=±5v/0.5A, 6v/0.02mA | 1           | 1.11 (5v)<br>1.33 (6v) | N/A       | 2500Vdc<br>Operational            | 4.6                               | 0.15                              | 100          | N/A          | 97        | 73        |
| <b>ER11 - 10 PIN SMT - (12.7mm x 11.4mm x 6.6mm MAX)</b>   |  |             |                        |           |                                   |                                   |                                   |              |              |           |           |
| <b>PA1032NL</b>  | 5W Flyback Transformer<br>Vin=30-57v, Freq.=250kHz<br>Vout=3.3v/1.5A, 10v/15mA     | 1           | 0.166                  | 0.500     | 1500Vdc<br>Operational            | 46.6                              | 1.65                              | 380          | 250          | 15        | N/A       |
| <b>PB2162NL</b>  | 6W Flyback Transformer<br>Vin=18-36v, Freq.=200kHz<br>Vout=±12v/0.25A, 12v/20mA    | 1           | 0.393                  | 0.393     | 500Vdc<br>Operational             | 85<br>@ 0.8A                      | 2.5                               | 490          | 1100         | 298       | 298       |
| <b>ER14.5 - 10 PIN SMT - (16.5mm x 15.5mm x 7.6mm MAX)</b> |  |             |                        |           |                                   |                                   |                                   |              |              |           |           |
| <b>PA1006NL</b>  | 5W Flyback Transformer<br>Vin=30-57v, Freq.=250kHz<br>Vout=3.3v/1.5A, 10v/15mA     | 1           | 0.154                  | 0.462     | 1500Vdc<br>Operational            | 152                               | 5                                 | 670          | 750          | 21        | N/A       |
| <b>PA1026NL</b>  | 5W Flyback Transformer<br>Vin=30-57v, Freq.=250kHz<br>Vout=3.3v/1.5A, 10v/15mA     | 1           | 0.115                  | 0.500     | 1500Vdc<br>Operational            | 152                               | 5                                 | 670          | 830          | 10        | N/A       |
| <b>PA1085NL</b>  | 5W Flyback Transformer<br>Vin=30-57v, Freq.=250kHz<br>Vout=3.3v/1.5A, 10v/15mA     | 1           | 0.115                  | 0.269     | 1500Vdc<br>Operational            | 152                               | 5                                 | 670          | 450          | 10        | N/A       |

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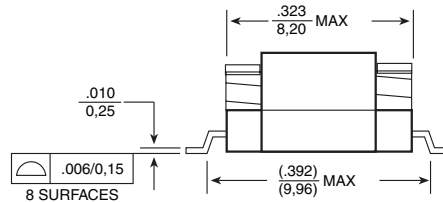
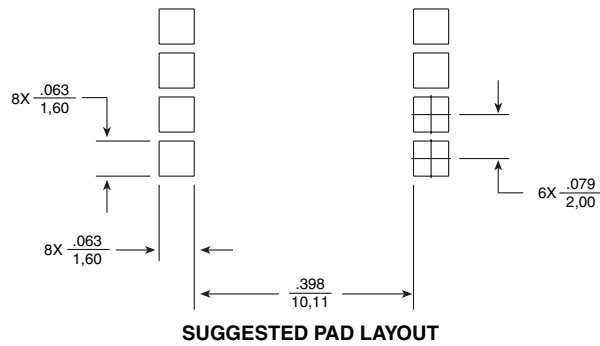
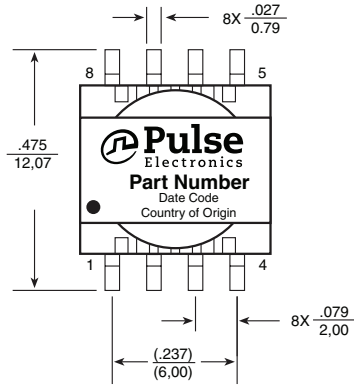
## Notes:

1. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
2. 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.

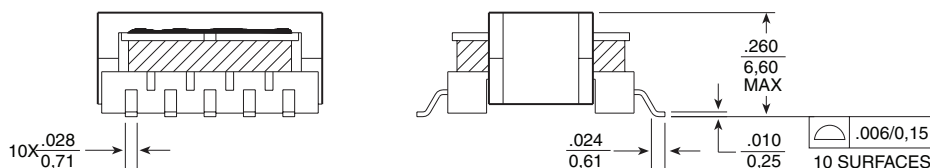
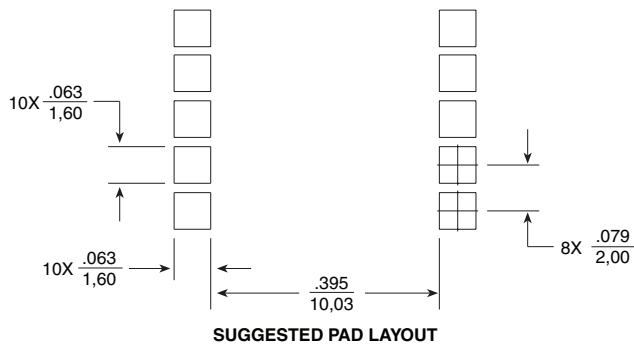
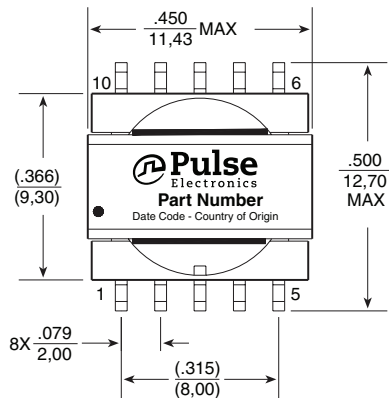
3. Add "T" suffix to the part number for Tape & Reel version (i.e. PA1032NLT).

## Mechanicals

### ER9.5



### ER11

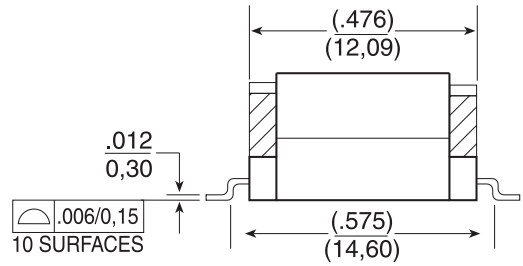
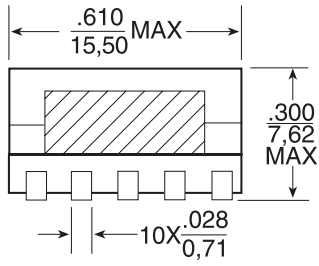
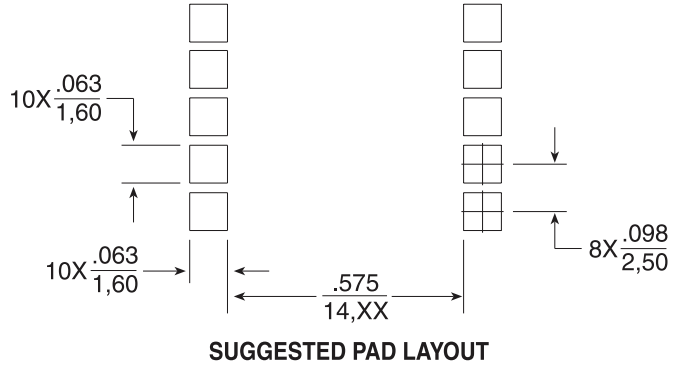
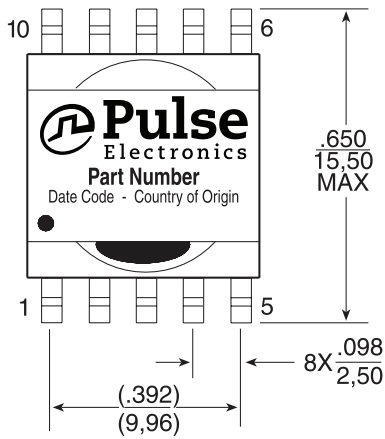


# High Frequency Wire Wound Transformers

ER Platforms - ER9.5, ER11 and ER14.5

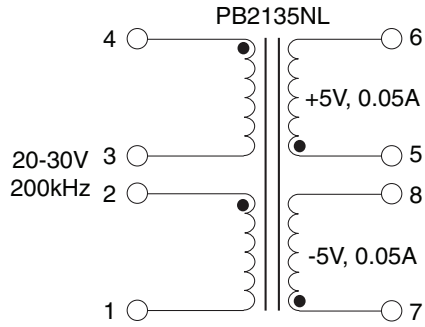
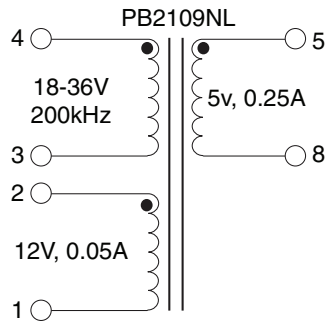
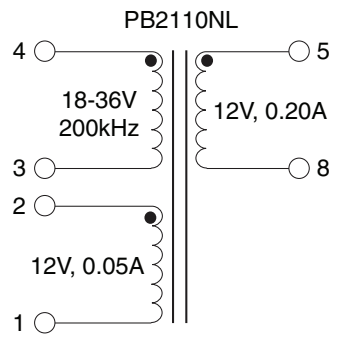
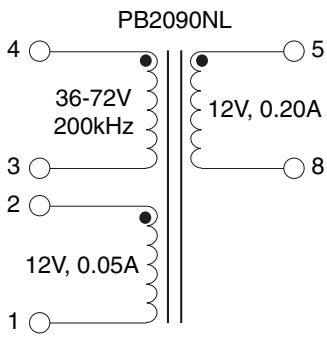
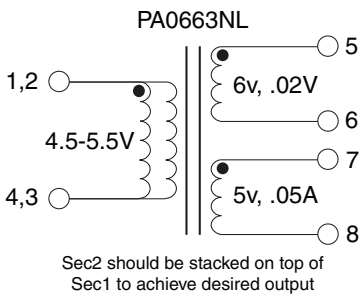
## Mechanical (continued)

### ER14.5



## Schematics

### ER9.5



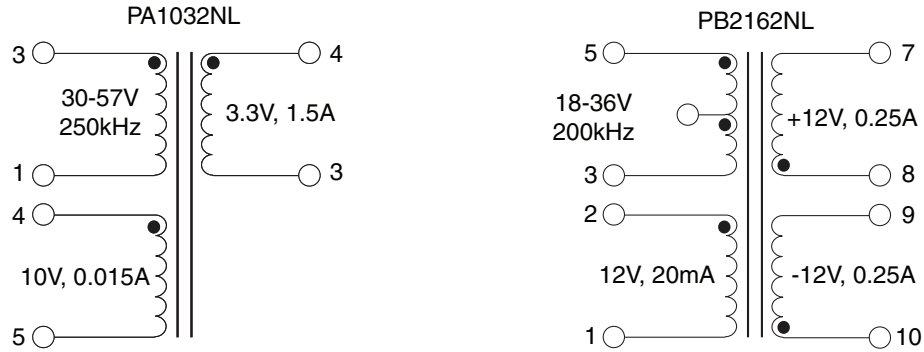
Connect pins 2 and 3 on PCB to complete Primary

# High Frequency Wire Wound Transformers

ER Platforms - ER9.5, ER11 and ER14.5

## Schematics (continued)

### ER11



### ER14.5

