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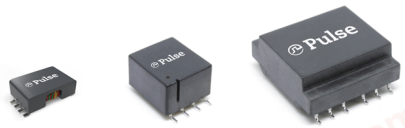
# SMT Power Line Communication (PLC) Transformers

*BX615xNL, BM615xNL and BMU6210NL*

Pulse
a YAGEO company



- *Wideband Frequency response 3~30MHz*
- *Industrial and Automotive Temperature ranges*
- *Turns ratio supports variety of PLC chipsets*
- *Designed with IEC-62368 for 250v mains supply*
- *Automotive options meet AEC-Q200 and can be converted to ISO/IATF16949 and PPAP designs.*

**Electrical Specifications @ 25°C [8,9]**

| Part[1,6,7] Number | Turns Ratio +/- 2% N1:N2:N3 | ▽ OCL[2,3] (uH Min) | ▽[3] DCR (mΩ Max) N1 | N2 | N3 | Insertion Loss[4] (dB Max) | Insulation Resistance (MΩ Min at 100V) | Leakage[5] Ind (uH Max) | Cww (pF Max) | Hi-Pot (Vac) | AEC-Q200 Qualified | Insulation[6] Class | Clearance (mm Min) | Package Size (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BX6150NL** | 1:2CT:1 | 12 | 500 | 500 | 500 | - | - | - | - | 3000 | No | Supplementary | | 13.4 x 15.0 x 6.5 |
| **BX6152NL[8]** | 1:1:2 | 7 | 250 | 250 | 500 | - | - | - | - | 3000 | No | Reinforced | | 10.3 x 14.0 x 7.6 |
| **BX6153NL[8]** | 1:1 | 7 | 500 | 500 | | - | - | - | 25 | 4000 | No | Reinforced | | 10.3 x 14.0 x 7.6 |
| **BX6158NL** | 1:1:1 | 20 | 65 | 65 | 65 | 1.2 | 1 | - | - | 3000 | No | Supplementary | | 10.4 x 15.1 x 7.3 |
| **BMU6201NL** | 1:1:1 | 5 | 500 | 500 | 500 | - | - | 0.5 | - | 500 | Yes | Functional | - | 5.0 x 8.1 x 3.9 |
| **BM6154NL** | 1:1:1 | 8 | 60 | 60 | 60 | 2.25 | 1 | - | - | 3000 | TBA | Functional | 2.5 | 10.6 x 12.4 x 10.0 |
| **BM6155NL** | 1:1:1 | 28 | 100 | 100 | 100 | 2 | 1 | - | - | 3000 | TBA | Functional | 2.5 | 10.6 x 12.4 x 10.0 |

1. Optional T&R packaging can be ordered by adding a T suffix to the part number (ie: BX6150NL becomes BX6150NLT)
2. Inductance spec is for -40°C to 125°C and measured at 100kHz, 100mVrms (BMU6201NL), 500kHz, 100mVrms (BX6150NL, BX6152NL & BX6153NL), 10kHz, 20mVrms (BM6155NL) and 100kHz, 10mVrms (BM6154NL & BX6158NL).
3. ▽ represents special characteristic per IATF16949 for AEC-Q200 qualified parts on parts listed as AEC-Q200 qualified.
4. Insertion Loss measured from 1.5MHz to 30MHz from (1-3) and (2-4) to (8-5) (BM6154NL & BM6155NL) and (1-4) to (5-8) (BX6158NL)
5. Leakage Inductance on BMU6201NL measured on (1-4) with (5-6)&(7-8) shorted at 100kHz, 100mVrms
6. Designed in accordance with EN/UL/IEC63268 (250Vrms working voltage, Material Group 3, Pollution Degree 2, Overvoltage Category 3)
7. Components are compliant to J-STD-002 (Solderability at 245°C reflow profile), J-STD-020 (Level 1, Not Moisture Sensitive) and J-STD-075 (R7, 245C Max through Reflow Sodler)
8. Operating Temperature is -40°C to 125°C on all parts except BX6152NL & BX6153NL which are -40°C to 85°C
9. Storage Temperature is -50°C to 150°C on all parts except BM6154NL & BM6155NL which are -50°C to 135°C.

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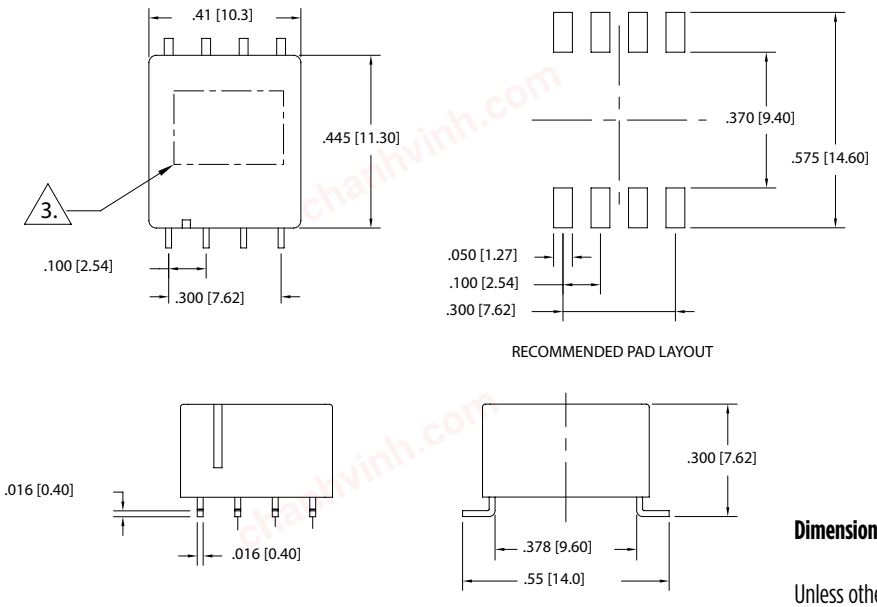
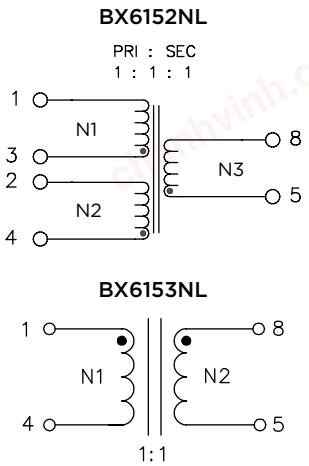
## Mechanical

## Schematic

### BX6152NL, BX6153NL



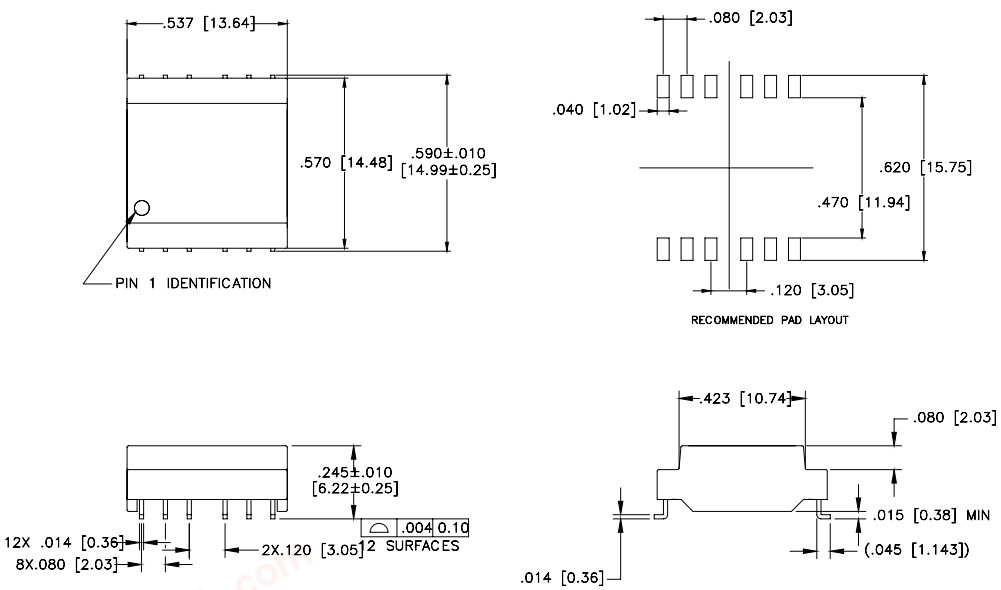

**Dimensions:** Inches / mm

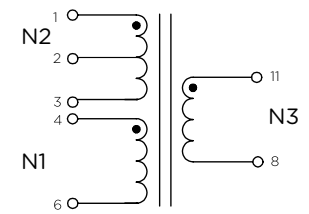
Unless otherwise specified, all tolerances are ± 0.10 / 0,25

## Mechanical

## Schematic

### BX6150NL

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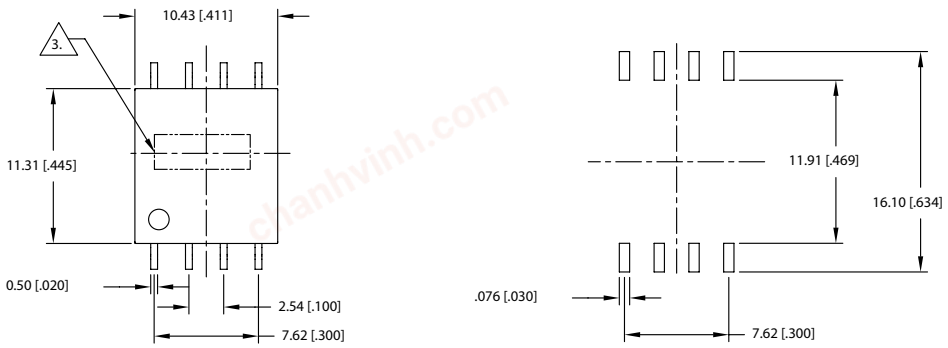
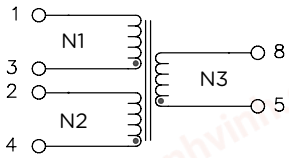
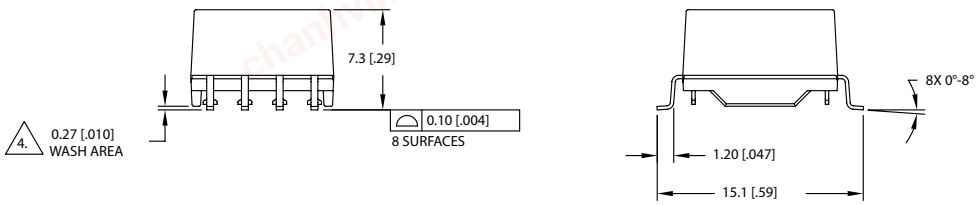
## Mechanical

## Schematic

### BX6158NL

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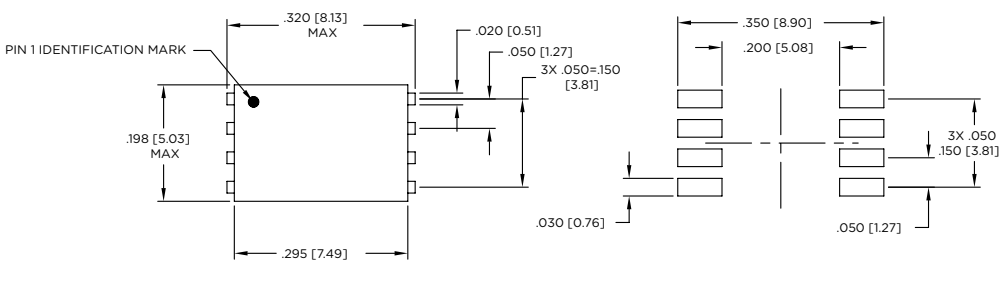
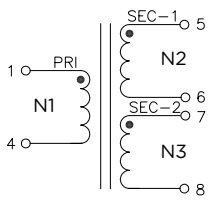
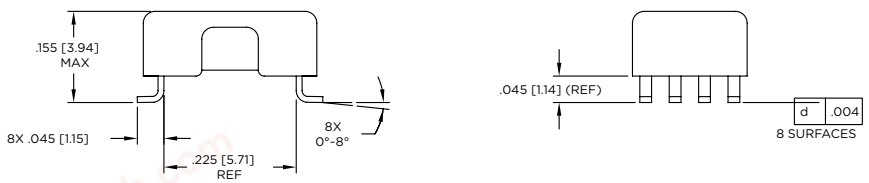
## Mechanical

## Schematic

### BMU6201NL

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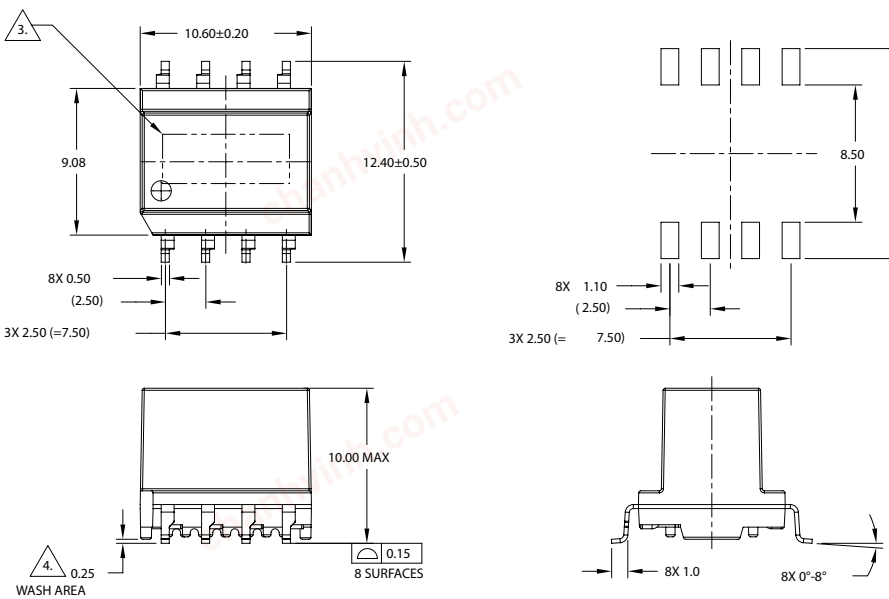
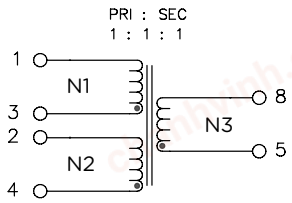
## Mechanical

### BM6154NL, BM6155NL




## Schematic

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**For More Information:**

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