

# SMT Power Line Communication (PLC) Transformers

BX615xNL, BM615xNL and BMU6210NL



- ④ Wideband Frequency response 3~30MHz
- ④ Industrial and Automotive Temperature ranges
- ④ Turns ratio supports variety of PLC chipsets
- ④ Designed with IEC-62368 for 250v mains supply
- ④ Automotive options meet AEC-Q200 and can be converted to ISO/IATF16949 and PPAP designs.

Electrical Specifications @ 25°C <sup>8,9</sup>

Part <sup>1,6,7</sup> Number	Turns Ratio +/- 2% N1:N2:N3	OCL <sup>2,3</sup> (uH Min)	DCR (mΩ Max)			Insertion Loss <sup>4</sup> (dB Max)	Insulation Resistance (MΩ Min at 100V)	Leakage <sup>5</sup> Ind (uH Max)	Cww (pF Max)	Hi-Pot (Vac)	AEC-Q200 Qualified	Insulation <sup>6</sup> Class	Clearance (mm Min)	Package Size (mm)
			N1	N2	N3									
BX6150NL	1:2CT:1	12	500	500	500	-	-	-	-	3000	No	Supplementary	-	13.4 x 15.0 x 6.5
BX6152NL <sup>8</sup>	1:1:2	7	250	250	500	-	-	-	-	3000	No	Reinforced	-	10.3 x 14.0 x 7.6
BX6153NL <sup>8</sup>	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	Yes	Supplementary	7.8	10.6 x 12.4 x 10.0
BM6155NL	1:1:1	28	100	100	100	2	1	-	-	3000	Yes	Supplementary	7.8	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 (BMX6150NL, BX6152NL & BM6153NL), 10kHz, 20mVrms (BM6155NL) and 100kHz, 10mVrms (BM6154NL & BM6158NL).
3. ④ 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) (BM6158NL)
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 Solder)
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.

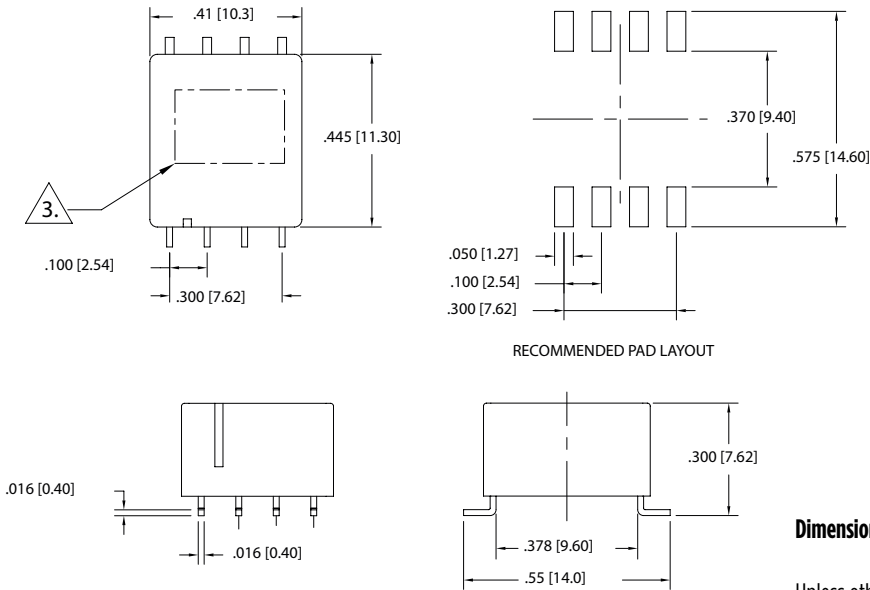
# SMT Power Line Communication (PLC) Transformers

BX615xNL, BM615xNL and BMU621ONL

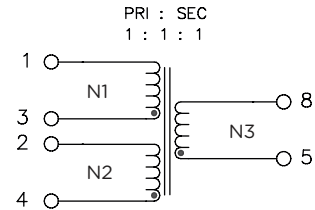
## Mechanical

## Schematic

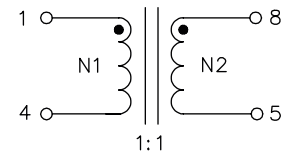
### BX6152NL, BX6153NL



### BX6152NL



### BX6153NL



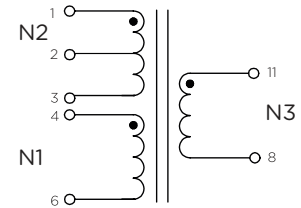
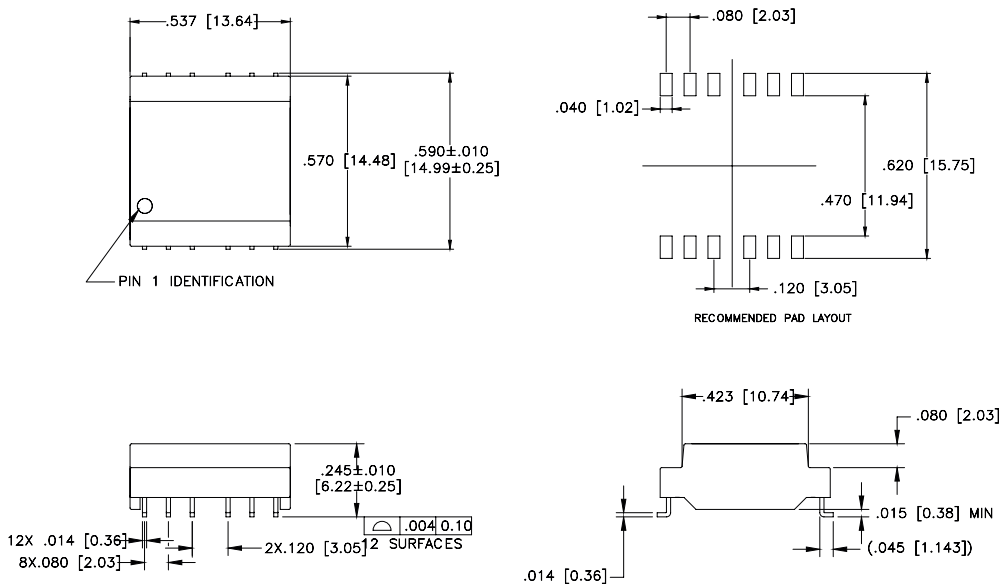
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{0.10}{0.25}$

## Mechanical

## Schematic

### BX6150NL



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{0.10}{0.25}$

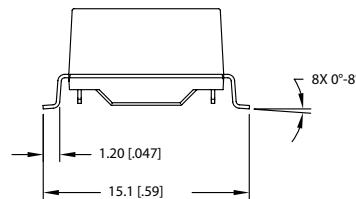
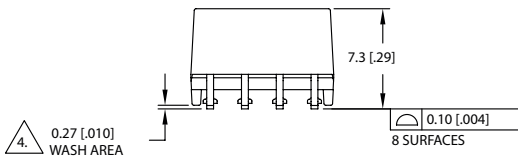
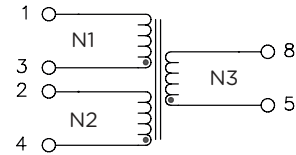
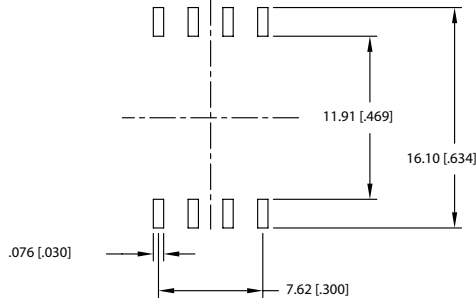
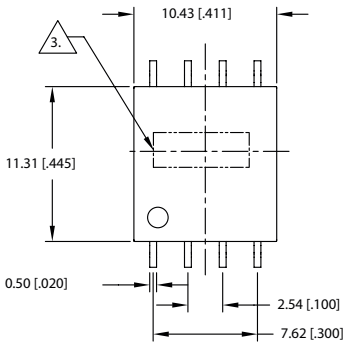
# SMT Power Line Communication (PLC) Transformers

BX615xNL, BM615xNL and BMU6210NL

## Mechanical

## Schematic

### BX6158NL



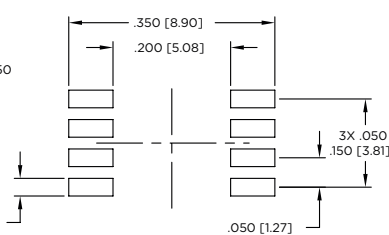
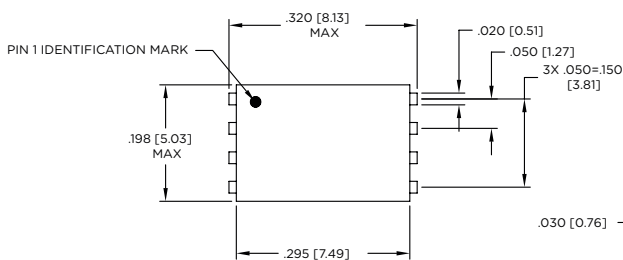
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all tolerances are  $\pm \frac{0.10}{0,25}$

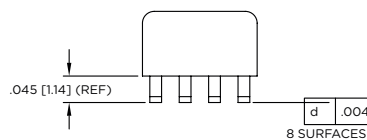
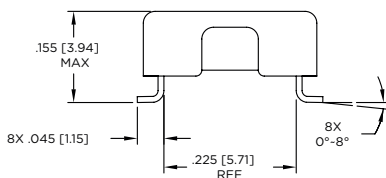
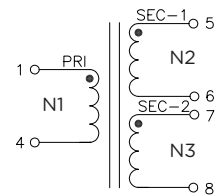
## Mechanical

## Schematic

### BMU6201NL



SUGGESTED LAND PATTERN



Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

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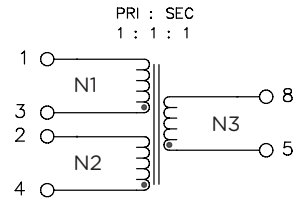
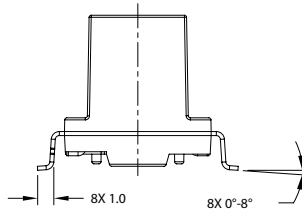
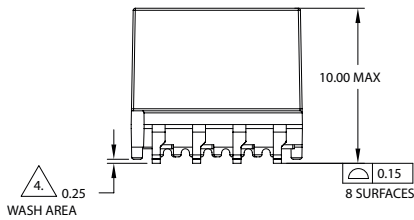
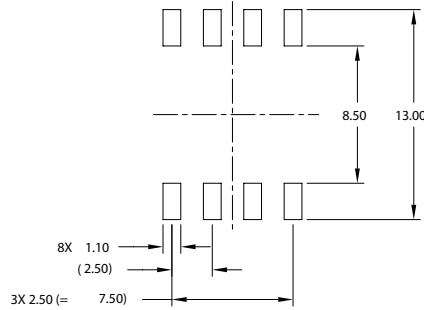
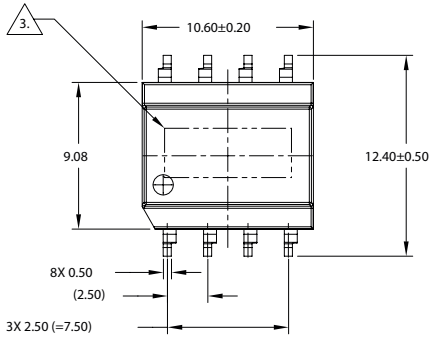
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BX615xNL, BM615xNL and BMU6210NL

## Mechanical

## Schematic

### BM6154NL, BM6155NL



**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$

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### For More Information:

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