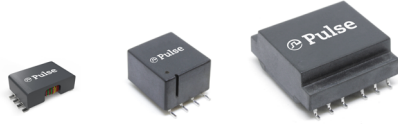


SMT Power Line Communication (PLC) Transformers

BX615xNL, BM615xNL and BMU6210NL



- 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)	DCR (mΩ Max)			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)
			N1	N2	N3									
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

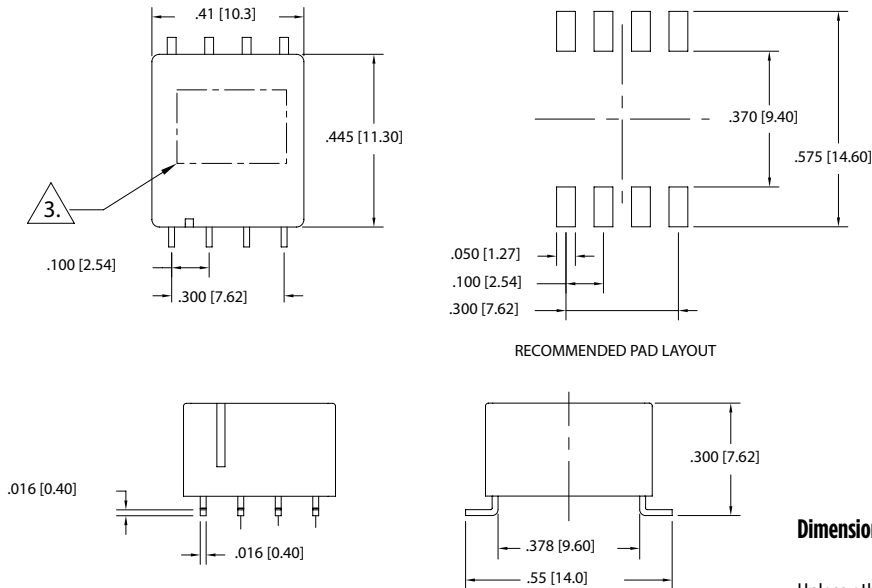
- Optional T&R packaging can be ordered by adding a T suffix to the part number (ie: BX6150NL becomes BX6150NLT)
- Inductance spec is for -40°C to 125°C and measured at 100kHz, 100mVrms (BMU6201NL), 500kHz, 100mVrms (BX6150NL, BX6152NL & BX6153NL), 10kHz, 20mVrms (BM6155NL) and 100kHz, 10mVrms (BM6154NL & BX6158NL).
- ⊗ represents special characteristic per IATF16949 for AEC-Q200 qualified parts on parts listed as AEC-Q200 qualified.
- 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)
- Leakage Inductance on BMU6201NL measured on (1-4) with (5-6)&(7-8) shorted at 100kHz, 100mVrms
- Designed in accordance with EN/UL/IEC62368 (250Vrms working voltage, Material Group 3, Pollution Degree 2, Overvoltage Category 3)
- 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)
- Operating Temperature is -40°C to 125°C on all parts except BX6152NL & BX6153NL which are -40°C to 85°C
- Storage Temperature is -50°C to 150°C on all parts except BM6154NL & BM6155NL which are -50°C to 135°C.

BX615xNL, BM615xNL and BMU6210NL

Mechanical

Schematic

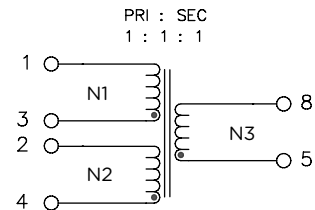
BX6152NL, BX6153NL



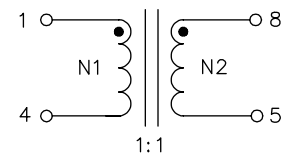
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

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

BX6152NL



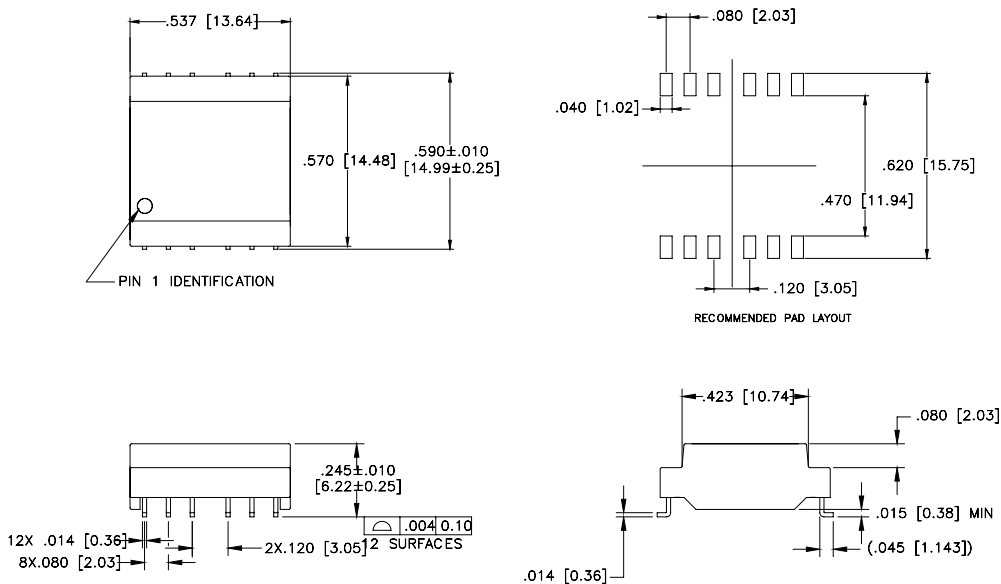
BX6153NL



Mechanical

Schematic

BX6150NL



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

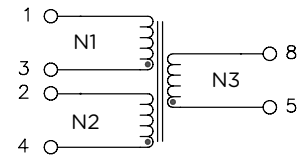
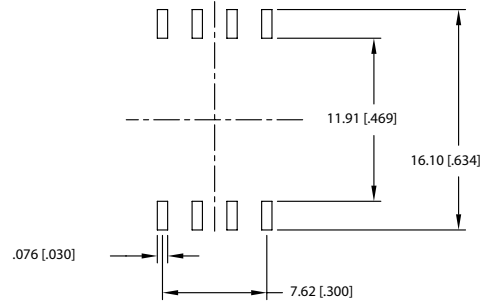
Unless otherwise specified,
all tolerances are $\pm \frac{0.10}{0.25}$

BX615xNL, BM615xNL and BMU6210NL

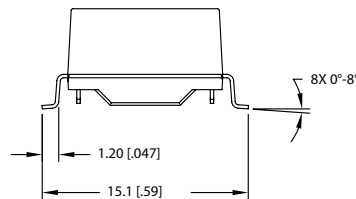
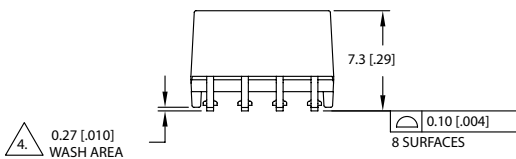


Schematic

Technical drawing of a rectangular component with dimensions and crystallographic orientations. The drawing includes a top view and a side view. The top view shows a rectangle with a dashed line indicating a central feature. The side view shows a rectangle with a dashed line indicating a central feature. Dimensions are given in millimeters and crystallographic orientations in brackets. The dimensions are: 10.43 [411] (top width), 11.31 [445] (left height), 0.50 [020] (bottom left width), 2.54 [100] (bottom right width), and 7.62 [300] (bottom right length). A callout '3.' points to a feature on the top left corner.



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



Schematic

PIN 1 IDENTIFICATION MARK

.320 [8.13] MAX

.020 [0.51]

.050 [1.27]

3X .050=.150 [3.81]

.198 [5.03] MAX

.295 [7.49]

.350 [8.90]

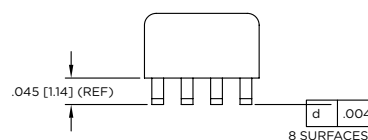
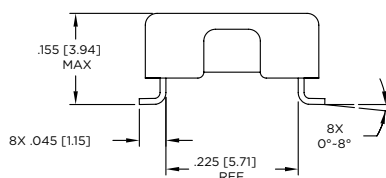
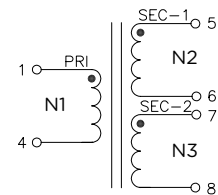
.200 [5.08]

.030 [0.76]

3X .050=.150 [3.81]

.050 [1.27]

SUGGESTED LAND PATTERN



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

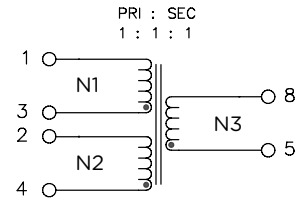
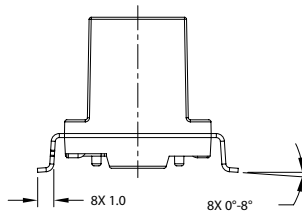
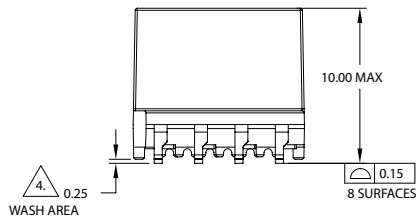
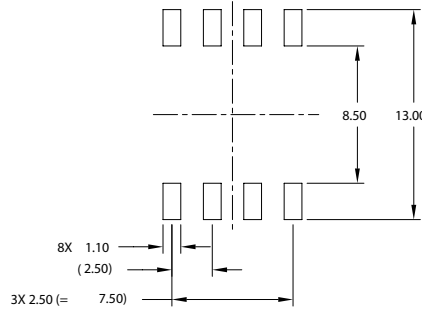
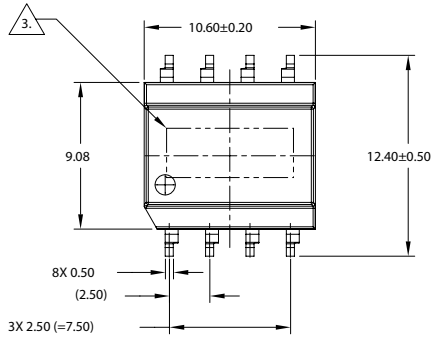
SMT Power Line Communication (PLC) Transformers

BX615xNL, BM615xNL and BMU6210NL

Mechanical

Schematic

BM6154NL, BM6155NL



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

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

For More Information:

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[BX6158NLT](#) [BM6154NL](#) [BM6154NLT](#) [BM6155NL](#) [BM6155NLT](#)