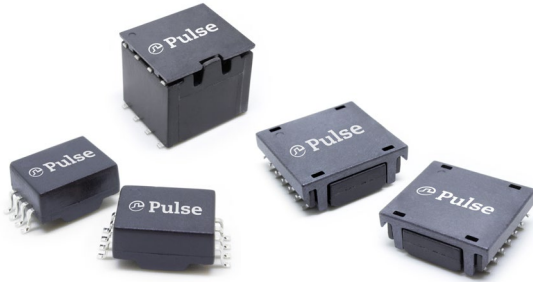


SMT Power Line Communication (PLC) Transformers for Automotive use

BM6210HL, BM6220NL and BM6230HL



Features and Benefits:

- ⊕ Wideband Frequency response 3~30MHz
- ⊕ Industrial and Automotive Temperature range from -40°C to +125°C
- ⊕ Eco-friendly - Halogen Free options
- ⊕ Turns ratio supports variety of PLC chipsets
- ⊕ Supports IEC-62368 for off-line 16Vdc and 500Vdc supply lines
- ⊕ Automotive designs meet AEC-Q200 and covered by ISO/IATF16949 and PPAP on request

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

Part Number BM6210HL ⁹	Turns Ratio +/- 2% (N1:N2:N3)	OC1 ^{2,3} (uH Min)	DCR (mΩ Max)			Insertion Loss ⁴ (dB Max)	Leakage ⁵ Inductance (uH Max)	Hi-Pot (Vac)	AEC-Q200 Qualified	Insulation ⁶ Class	Working Voltage	Clearance (mm Min)	Package Size (mm)
			N1	N2	N3								
BM6210HL ⁹	1:1:1	5	500	500	500	-	0.5	500	Yes	Functional	500Vdc	-	6.9 x 12.0 x 5.0
BM6220NL	1:1	12	500	500	500	-1.0	0.25	500	Yes	Functional	16V	-	9.5 x 12.0 x 10.0
BM6230HL ⁹	1:1:1	28	250	250	250	2.25	-	3000	Yes	Reinforced	500Vdc	-	14.6 x 16.15 x 6.0

Notes:

1. Optional T&R packaging can be ordered by adding a T suffix to the part number (ie: BM6220NL becomes BM6220NLT)
2. Inductance spec is for -40°C to +125°C and measured at 100kHz, 100mVrms (BM6210HL), 2MHz, 100mVrms (BM6220NL), 100kHz, 10mVrms (BM6230HL)
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 across (1-4) for BM6220NL and (1-3) for BM6230HL
5. Leakage Inductance on BM6210HL measured on (1-4) with (5-6)&(7-8) shorted at 100kHz, 100mVrms, BM6220HL measured on(1-4) with (8-5) shorted at 2MHz, 100mVrms
6. Designed in accordance with EN/UL/IEC63268 (250Vrms working voltage unless stated, Material Group 3, Pollution Degree 2, Overvoltage Category 3)
7. Components are compliant to:
 - a. J-STD-002 (Solderability at 245°C reflow profile)
 - b. J-STD-020 (Level 1, Not Moisture Sensitive)
 - c. J-STD-075 (R7, 245C Max through Reflow Solder)
8. Operating Temperature is -40°C to 125°C and Storage Temperature is -50°C to 125°C on all parts
9. RoHS and Halogen Free design
10. Non-Automotive designs can be created for residential PLC solutions - parts ordering prefix code letters changes from BM to BX - discuss with FAE and Sales.

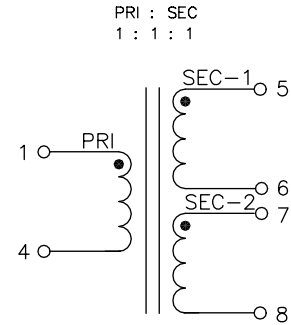
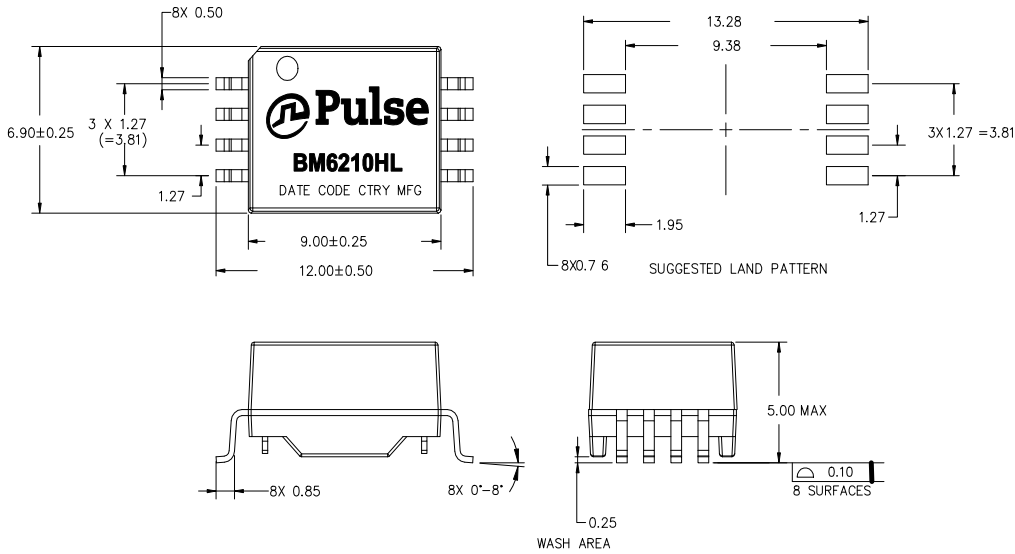
SMT Power Line Communication (PLC) Transformers for Automotive use

BM6210HL, BM6220NL and BM6230HL

MECHANICAL

SCHEMATIC

BM6210HL



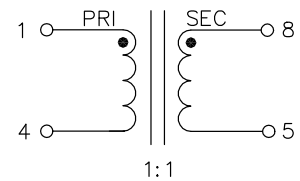
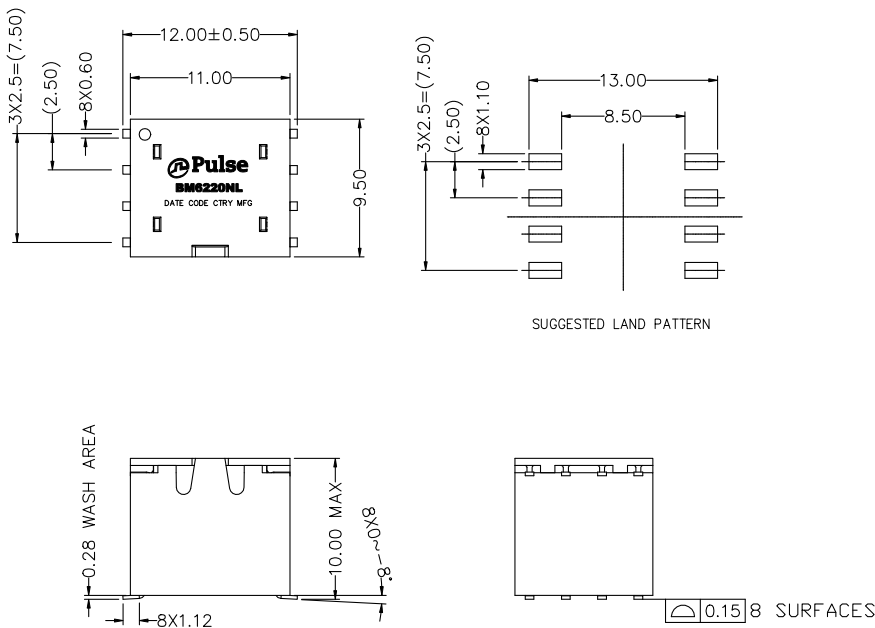
SCHEMATIC

Dimensions: mm
Unless otherwise specified,
all tolerances are ± 0,25

MECHANICAL

SCHEMATIC

BM6220NL



SCHEMATIC

Dimensions: mm
Unless otherwise specified,
all tolerances are ± 0,25

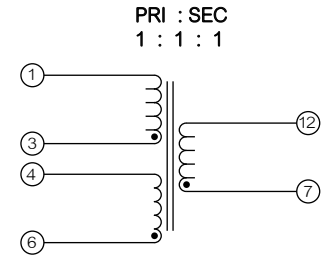
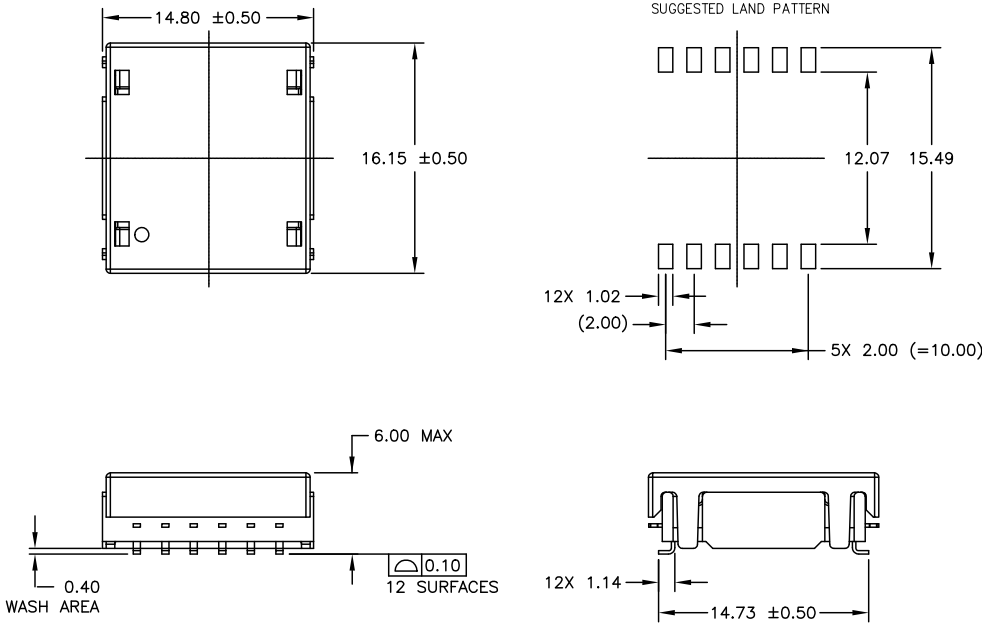
SMT Power Line Communication (PLC) Transformers for Automotive use

BM6210HL, BM6220NL and BM6230HL

MECHANICAL

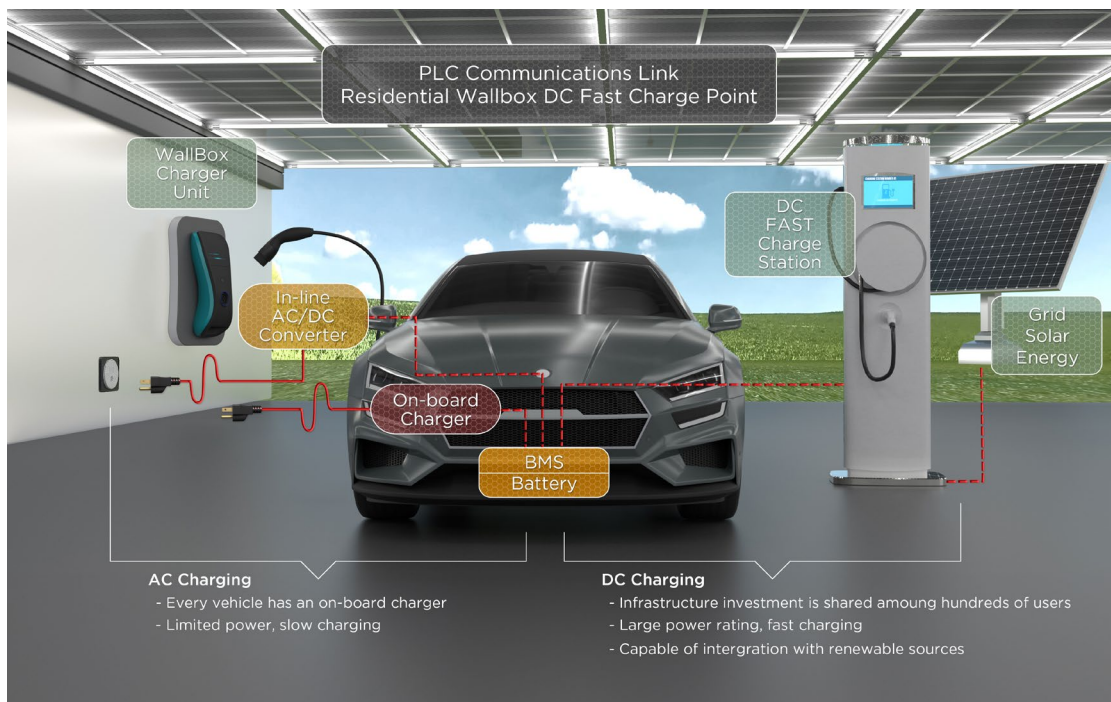
SCHEMATIC

BM6230HL



Dimensions: mm
Unless otherwise specified,
all tolerances are $\pm 0,25$

APPLICATION OF POWER LINE COMMUNICATION IN EV CHARGING

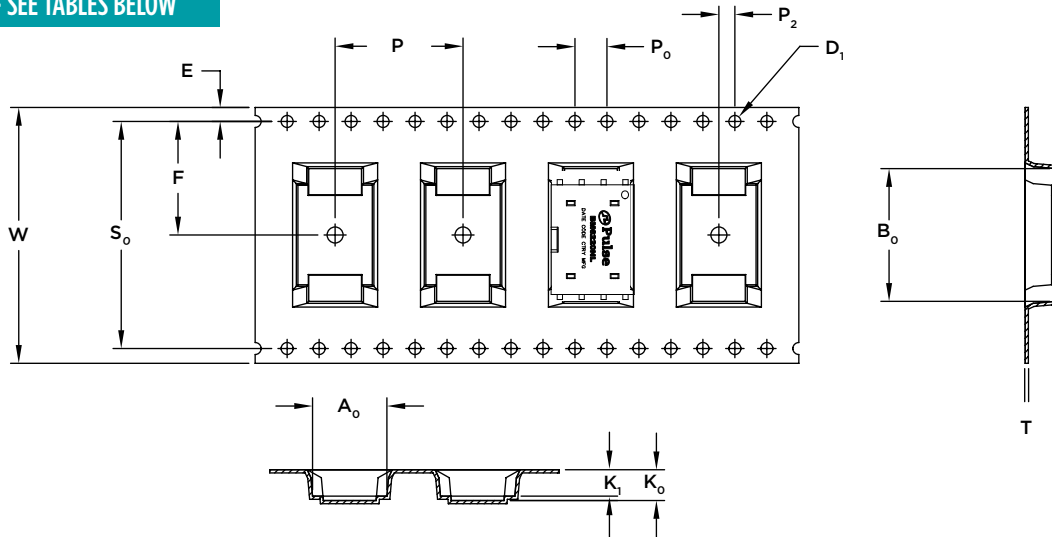


SMT Power Line Communication (PLC) Transformers for Automotive use

BM6210HL, BM6220NL and BM6230HL

TAPE and REEL

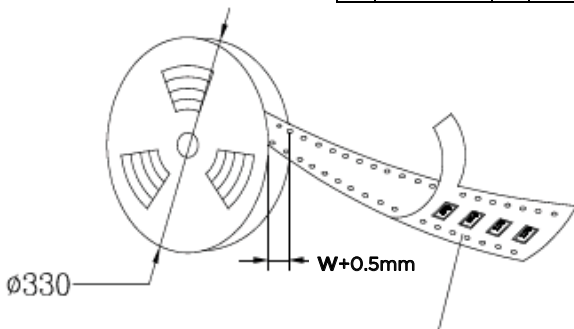
CARRIER TAPE - SEE TABLES BELOW



BM6210HLT						
W	24.0+/-0.30	P	16.00	A_0	7.01+/-0.10	B_0 12.61+/-0.10
S_0	No 2nd row feeder holes	P_0	4.00	A_1	-----	B_1 -----
E	1.75 +/-0.10	P_2	2.00	A_2	-----	B_2 -----
F	11.50+/-0.10	D_0	-----	K_0	5.35	K_1 3.91
T	0.40±0.05	D_1	1.50 $\begin{smallmatrix} \pm 0.10 \\ -0.00 \end{smallmatrix}$	QUANTITY PER REEL		650 pieces

BM6220NLT						
W	24.0+/-0.30	P	20.00	A_0	9.80+/-0.10	B_0 12.4+/-0.10
S_0	No 2nd row feeder holes	P_0	4.00	A_1	-----	B_1 -----
E	1.75 +/-0.10	P_2	2.00	A_2	-----	B_2 -----
F	11.50+/-0.10	D_0	-----	K_0	10.40	K_1 -----
T	0.50±0.05	D_1	1.50 $\begin{smallmatrix} \pm 0.10 \\ -0.00 \end{smallmatrix}$	QUANTITY PER REEL		250 pieces

BM6230HLT						
W	32.0+/-0.30	P	24.00	A_0	16.10+/-0.10	B_0 15.10+/-0.10
S_0	28.4+/-0.30	P_0	4.00	A_1	-----	B_1 -----
E	1.75 +/-0.10	P_2	2.00	A_2	-----	B_2 -----
F	14.20+/-0.10	D_0	-----	K_0	7.00	K_1 -----
T	0.50±0.05	D_1	1.50 $\begin{smallmatrix} \pm 0.10 \\ -0.00 \end{smallmatrix}$	QUANTITY PER REEL		360 pieces



All Dimensions meet EIA-481-D requirements.

Component

1. Material: Black Conductive Polystyrene
2. Components per Reel: see table
3. Quantity per carton:

24mm Tape = 6x full reels
32mm Tape = 5x full reels

For More Information:

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