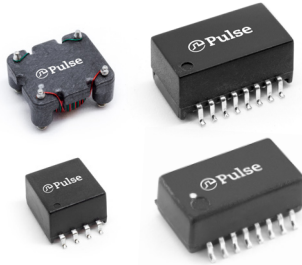


# Surface Mount Common Mode Chokes

Suited for LAN and Telecom WAN Applications



- ⊗ Open MSL1 or moulded MSL4 construction designs available
- ⊗ Reduces radiated EMI emissions and common mode EMC noise
- ⊗ Common mode attenuation from 100 KHz to 1 GHz
- ⊗ Extended Temperature operating range -40 to +85°C
- ⊗ JEDEC - IR Reflow solder peak temperature 245°C
- ⊗ Supplied in Tube or on 13" Tape and Reel

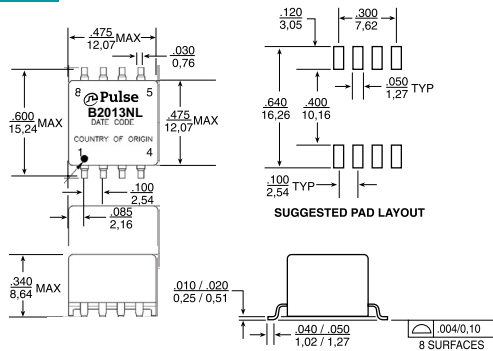
Low Frequency Chokes			Electrical Specifications @ 25°C										DCR (Ω MAX)	Primary Application
Part Number <sup>1</sup>	No. of Lines	Inductance (μH MIN)	Common Mode Attenuation (dB TYP)											
			1 KHz	10 KHz	100 KHz	1 MHz	10 MHz	30 MHz	50 MHz	80 MHz	100 MHz			
PE-65855NL	2	4,700 +/-30%	16	23	41	43	48	39	34	29	26	1.0	WAN / xDSL	
B2013NL	2	9,000 +/-30%	26	43	46	47	43	32	25	24	29	1.0	WAN / xDSL	
BX8333NL	2	16,000 +/-35%	33	36	38	36	22	15	12	10	8	1.65	WAN / xDSL	
BX8333DNL	2	33,000 +/-35%	42	48	46	22	15	12	8	7	6	2.3	WAN / xDSL	

1. For Tape & Reel packaging, add suffix "T" to the end of the part number e.g. B2013NLT  
All Parts conform to JEDEC-J-STD for Moisture Sensitivity Level 1

## MECHANICALS

## SCHEMATICS

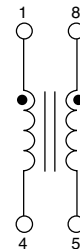
### B2013NL



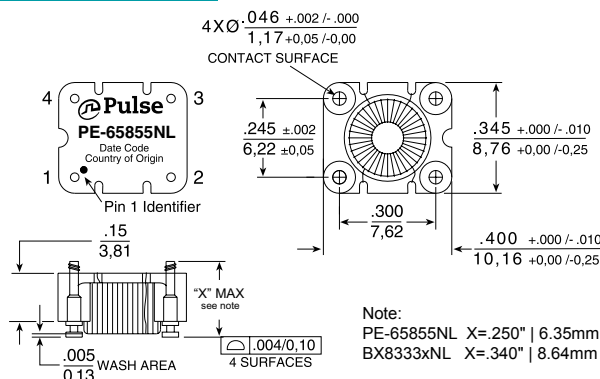
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

Weight ..... 1.28 grams  
Tape & Reel .....250/reel  
Tube .....40 pcs



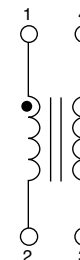
### PE-65855NL, BX8333NL, BX8333DNL



Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

Weight .....0.74 grams  
Tape & Reel .....450/reel  
Tube .....40 pcs



# Surface Mount Common Mode Chokes

Suited for LAN and Telecom WAN Applications



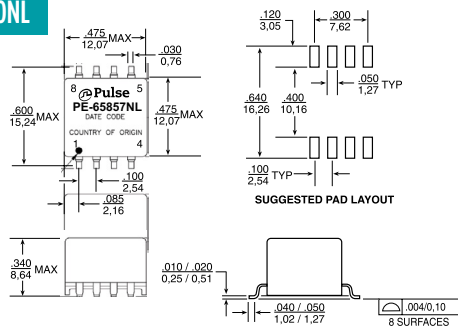
High Frequency Chokes			Electrical Specifications @ 25°C									DCR (Ω MAX)	Primary Application
Part Number <sup>1</sup>	No. of Lines	Inductance (μH MIN)	Common Mode Attenuation (dB TYP)										
			100 KHz	1 MHz	10 MHz	30 MHz	50 MHz	100 MHz	300 MHz	500 MHz	1 GHz		
PE-65857NL	4	22.5	7	20	30	37	38	34	24	13	—	0.22	LAN
T8003NL*	4	33	9	13	32	32	30	27	16	17	13	0.20	WAN
PE-67540NL	4	100	14	33	44	48	49	44	34	29	20	0.60	WAN
Z3Z104SMNL	4	68	8	22	28	28	27	25	20	15	—	0.20	LAN
Z3Z106SMNL	6	68	8	22	29	30	30	29	24	19	—	0.20	LAN
Z3Z105SMNL	8	68	8	24	30	29	27	24	16	11	—	0.20	LAN
PE-69011NL*	8	36	8	24	36	39	35	29	18	11	—	0.35	WAN

1. For Tape & Reel packaging, add suffix "T" to the end of the part number e.g. T8003NLT the exception is Z3Z106SMNL-T  
 \* All Parts conform to JEDEC-J-STD for Moisture Sensitivity Level 1 with the exception of T8003NL and PE-69011NL which are MSL4

## MECHANICALS

## SCHEMATICS

### PE-65857NL, PE-67540NL

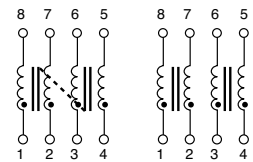


Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

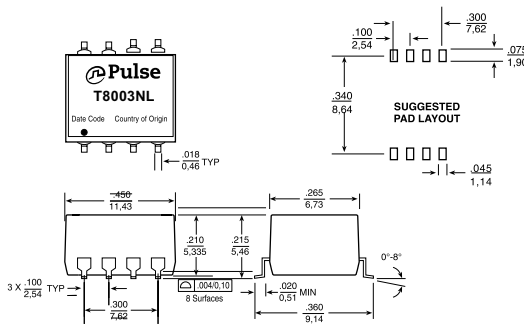
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

Weight ..... 1.28 grams  
 Tape & Reel ..... 250/reel  
 Tube ..... 40 pcs

### PE-65857NL PE-67540NL



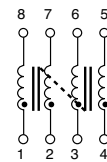
### T8003NL



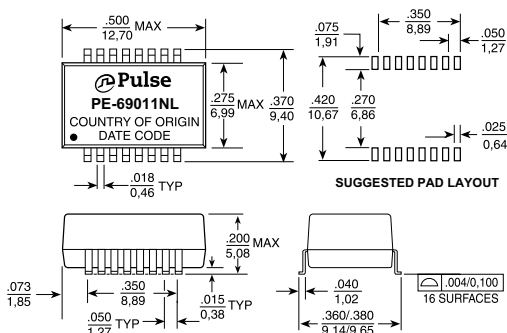
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

Weight ..... 0.89 grams  
 Tape & Reel ..... 750/reel  
 Tube ..... 40 pcs



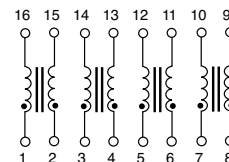
### PE-69011NL



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

Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

Weight ..... 0.89 grams  
 Tape & Reel ..... 850/reel  
 Tube ..... 40 pcs



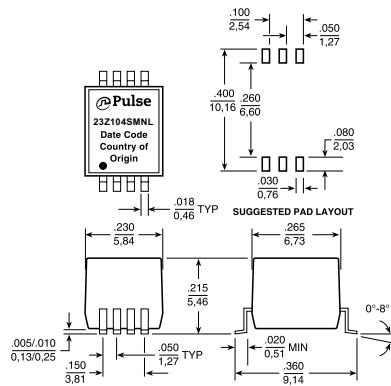
# Surface Mount Common Mode Chokes

Suited for LAN and Telecom WAN Applications

## MECHANICALS

## SCHEMATICS

### 23Z104SMNL



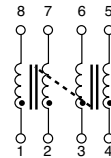
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

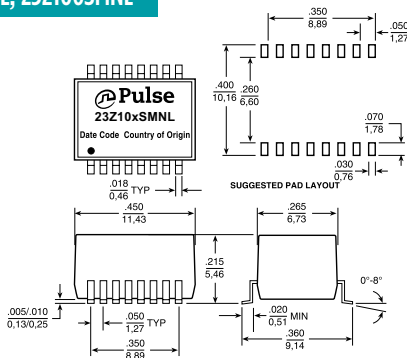
Weight ..... 0.30 grams

Tape & Reel ..... 750/reel

Tube ..... 85 pcs



### 23Z105SMNL, 23Z106SMNL



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

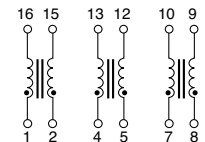
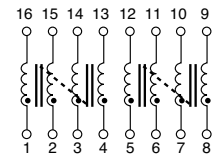
Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

Weight ..... 0.60 grams

Tape & Reel ..... 750/reel

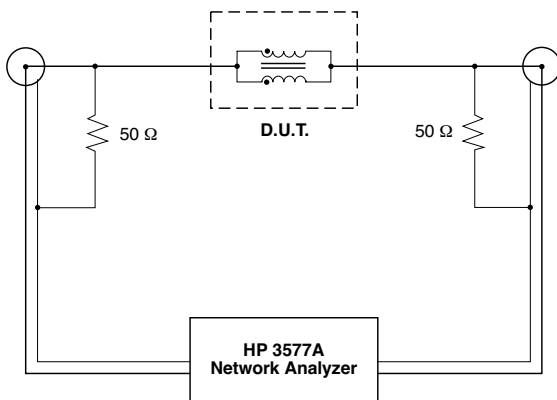
Tube ..... 40/tray

### 23Z105SMNL



### 23Z106SMNL

## COMMON MODE TEST CIRCUIT FOR SURFACE MOUNT AND THROUGH HOLE



### Test Notes:

1. Network analyzer calibrated to compensate for 50  $\Omega$  resistors.
2. All windings on a core are connected in parallel for the test.
3. For multi-core chokes, test data is for one core only. The windings on the other core(s) are left unconnected (i.e. open).

### For More Information:

Americas - [prodinfinetworkamericas@yageo.com](mailto:prodinfinetworkamericas@yageo.com) | Europe - [prodinfinetworkemea@yageo.com](mailto:prodinfinetworkemea@yageo.com) | Asia - [prodinfinetworkapac@yageo.com](mailto:prodinfinetworkapac@yageo.com)

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