

COMMON MODE CHOKE CATALOG

Suited for LAN and Telecom Applications



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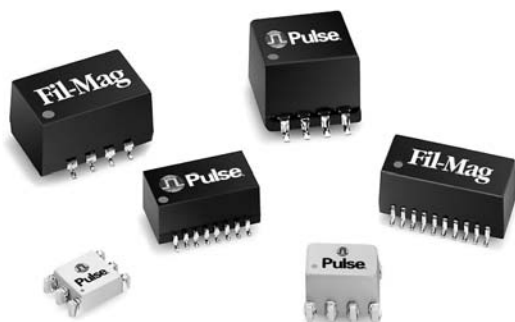
Common Mode Chokes for Datacom Applications

Surface Mount Common Mode Chokes2-6

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SURFACE MOUNT COMMON MODE CHOKES

Suited for LAN and Telecom Applications



- Reduces radiated EMI emissions
- Filters common mode noise for EMI reduction
- Common mode attenuation from 100 kHz to 1 GHz
- Tape & Reel packaging available for surface mount parts*

Electrical Specifications @ 25°C

| Part Number | No. of Lines | Primary Inductance OCL (µH MIN) | Common Mode Attenuation (dB TYP) | | | | | | | | | DCR (Ω MAX) | Page Number of Mech. & Schem. |
|-------------|--------------|---------------------------------|----------------------------------|-------|--------|--------|--------|---------|---------|---------|-------|-------------|-------------------------------|
| | | | 100 KHz | 1 MHz | 10 MHz | 30 MHz | 50 MHz | 100 MHz | 300 MHz | 500 MHz | 1 GHz | | |
| PE-68624 | 2 | 47 | 11 | 27 | 40 | 44 | 42 | 36 | 26 | 17 | — | 0.40 | 2 |
| PE-65855 | 2 | 4700 | 41 | 43 | 49 | 39 | 34 | 26 | 20 | 20 | 12 | 1.0 | 4 |
| B2013 | 2 | 6300 | 46 | 47 | 43 | 32 | 25 | 29 | 21 | 14 | 16 | 1.0 | 3 |
| B4003 | 2 | 4700 | 42 | 41 | 48 | 38 | 33 | 21 | 22 | 23 | 17 | 1.0 | 6 |
| R0003 | 3 | 20 | 6 | 14 | 27 | 30 | 30 | 30 | 30 | 28 | 25 | 0.40 | 2 |
| 23Z87SM | 3 | 69 | 9 | 24 | 31 | 30 | 29 | 27 | 21 | 16 | — | 0.20 | 4 |
| PE-65857 | 4 | 22.5 | 7 | 20 | 30 | 37 | 38 | 34 | 24 | 13 | — | 0.22 | 4 |
| PE-68627 | 4 | 24 | 8 | 21 | 32 | 36 | 37 | 36 | 30 | 20 | — | 0.25 | 4 |
| T8003 | 4 | 33 | 9 | 13 | 32 | 32 | 30 | 27 | 16 | 17 | 13 | 0.20 | 6 |
| 23Z4000SMD | 4 | 36 | 7 | 23 | 35 | 38 | 38 | 36 | 29 | 24 | — | 0.50 | 5 |
| PE-65738 | 4 | 37 | 8 | 21 | 28 | 28 | 28 | 27 | 25 | 22 | — | 0.30 | 3 |
| PE-65854 | 4 | 47 | 3 | 19 | 32 | 36 | 35 | 29 | 12 | 6 | — | 0.40 | 3 |
| 23Z104SM | 4 | 68 | 8 | 22 | 28 | 28 | 27 | 25 | 20 | 15 | — | 0.20 | 5 |
| PE-67540 | 4 | 100 | 14 | 33 | 44 | 48 | 49 | 44 | 34 | 29 | 20 | 0.60 | 4 |
| PE-65853 | 4 | 4700 | 40 | 51 | 38 | 30 | 25 | 20 | 14 | 13 | — | 1.20 | 3 |
| PE-68602 | 6 | 21 | 6 | 19 | 28 | 34 | 35 | 36 | 34 | 29 | 1 | 0.35 | 3 |
| 23Z106SM | 6 | 68 | 8 | 22 | 29 | 30 | 30 | 29 | 24 | 19 | — | 0.20 | 5 |
| PE-69011 | 8 | 36 | 8 | 24 | 36 | 39 | 35 | 29 | 18 | 11 | — | 0.35 | 3 |
| 23Z105SM | 8 | 68 | 8 | 24 | 30 | 29 | 27 | 24 | 16 | 11 | — | 0.20 | 5 |
| 23Z109SM | 10 | 7.5 | 4 | 9 | 20 | 25 | 26 | 24 | 16 | 11 | — | 0.20 | 5 |
| T8008 | 16 | 47 | 7 | 27 | 40 | 44 | 42 | 36 | 26 | — | — | 0.40 | 6 |

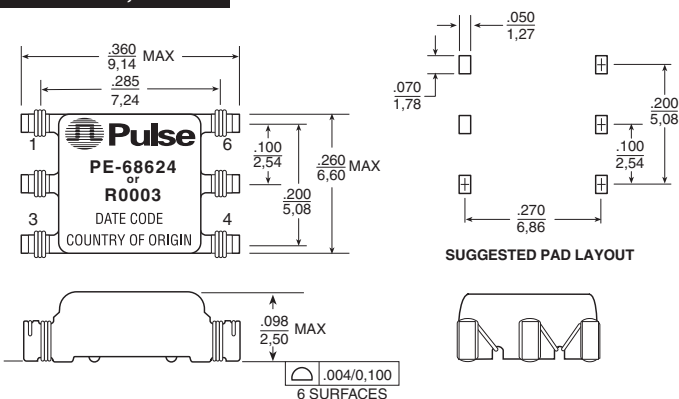
* When ordering Tape & Reel packaging, add a "T" at the end of the part number (i.e. PE-65738T or 23Z106SMT).

NOTE: Additional common mode chokes are available. Please contact Applications Engineering.

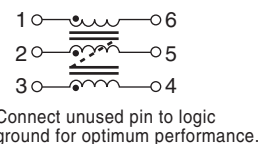
Mechanicals

Schematics

PE-68624, R0003



R0003



PE-68624



SURFACE MOUNT COMMON MODE CHOKES

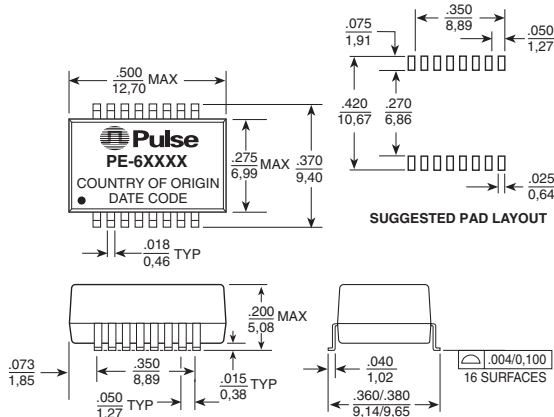
Suited for LAN and Telecom Applications



Mechanicals

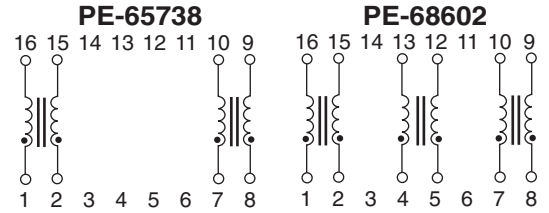
Schematics

PE-65738, PE-68602, PE-69011

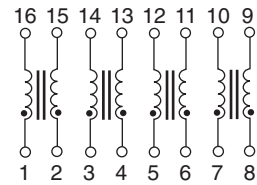


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

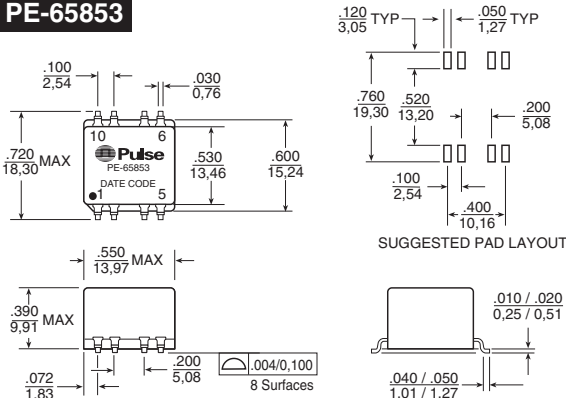
Weight0.83 grams
Tape & Reel900/reel
Tube40/tube



PE-69011



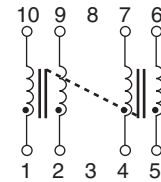
PE-65853



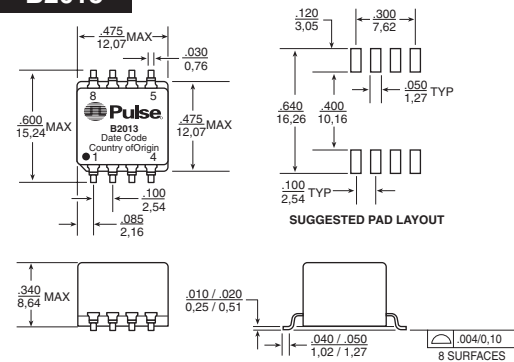
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

Weight4.0 grams
Tape & Reel150/reel
Tube35/tube

PE-65853



B2013



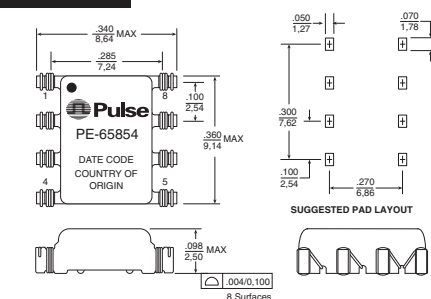
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Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

Weight9.5 grams
Tray30/tray

B2013



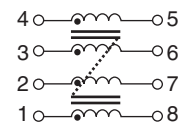
PE-65854



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

Weight0.3 grams
Tape & Reel1500/reel
Tube60/tube

PE-65854



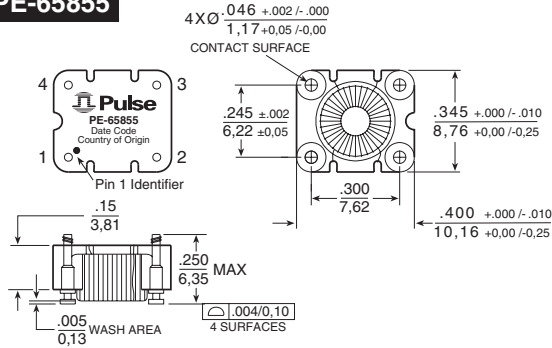
SURFACE MOUNT COMMON MODE CHOKES Suited for LAN and Telecom Applications



Mechanicals

Schematics

PE-65855



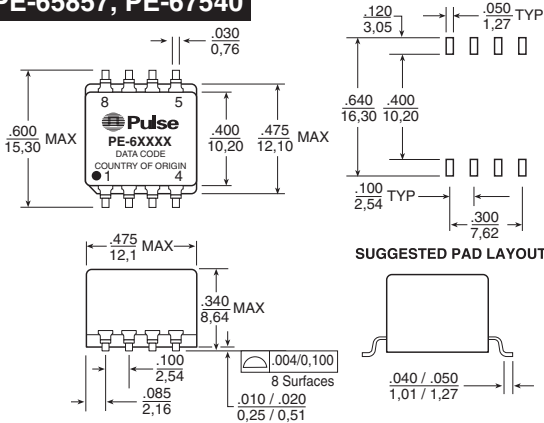
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

Weight0.69 grams
Tape & Reel800/reel
Tube40 /tube

PE-65855



PE-65857, PE-67540

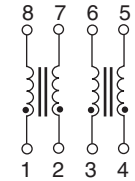
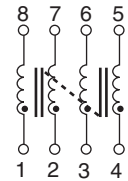


Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

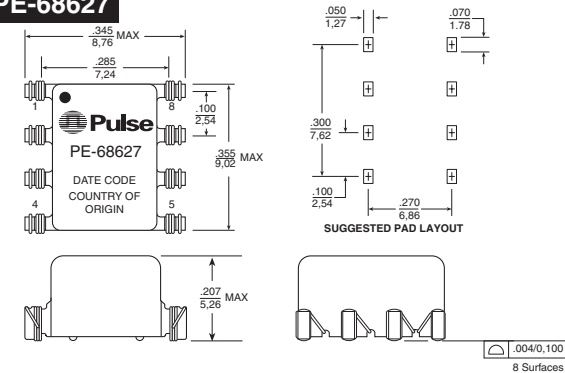
Weight2.0 grams
Tape & Reel250/reel
Tube40 /tube

PE-65857

PE-67540



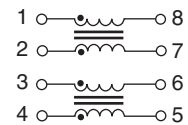
PE-68627



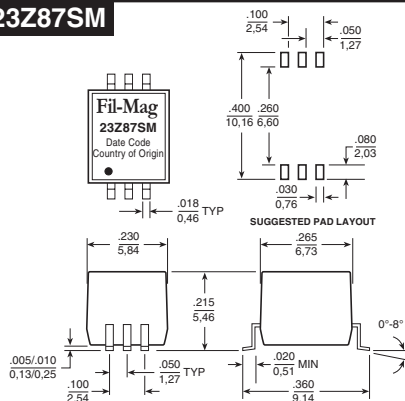
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

Weight0.3 grams
Tape & Reel1500/reel
Tube55 /tube

PE-68627



23Z87SM



Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .005$
 $0,13$

Weight0.5 grams
Tape & Reel750/reel
Tube100 /tube

23Z87SM



SURFACE MOUNT COMMON MODE CHOKES

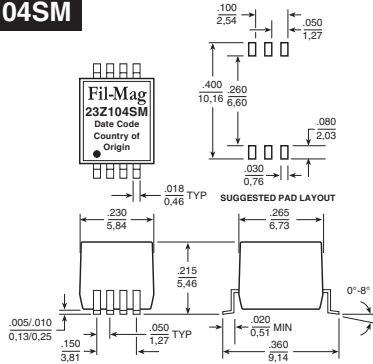
Suited for LAN and Telecom Applications



Mechanicals

Schematics

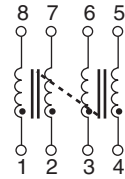
23Z104SM



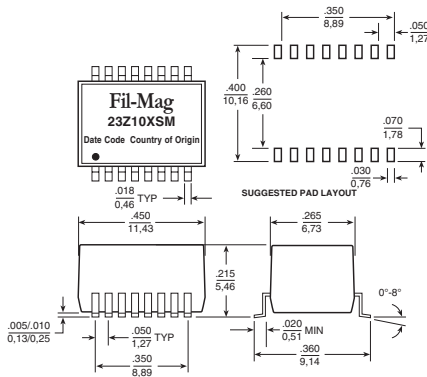
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .005$
0,13

Weight 0.5 grams
Tape & Reel750/reel
Tube 100/tube

23Z104SM



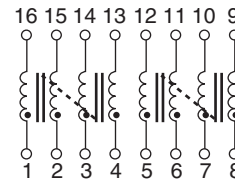
23Z105SM, 23Z106SM



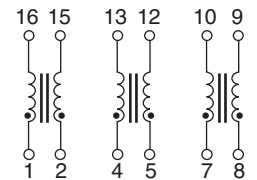
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .005$
0,13

23Z105SM 23Z106SM
Weight 0.8 grams 1.0 grams
Tape & Reel750/reel750/reel
Tube50/tube50/tube

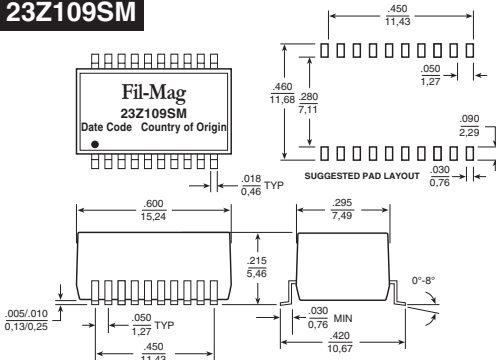
23Z105SM



23Z106SM



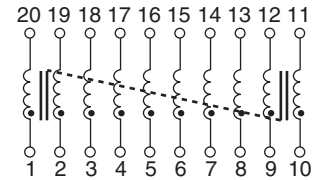
23Z109SM



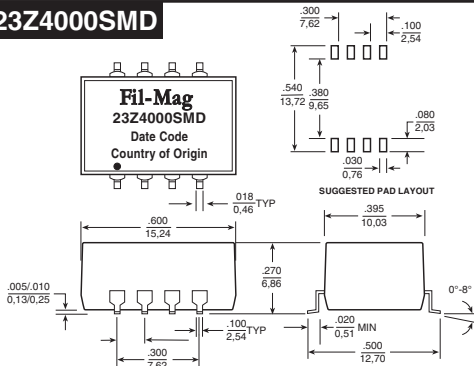
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .005$
0,13

Weight 1.3 grams
Tape & Reel500/reel
Tube38/tube

23Z109SM



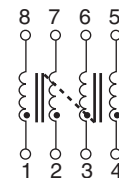
23Z4000SMD



Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm .005$
0,13

Weight 2.1 grams
Tape & Reel350/reel
Tube38/tube

23Z4000SMD



SURFACE MOUNT COMMON MODE CHOKES

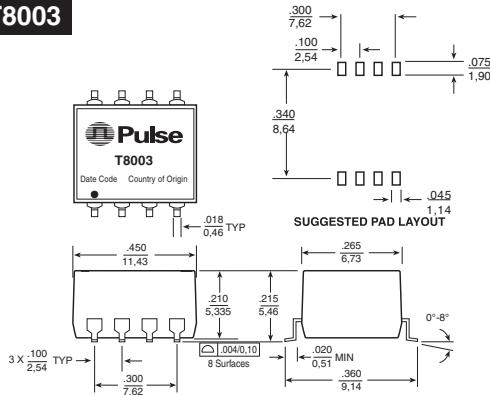
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Mechanicals

Schematics

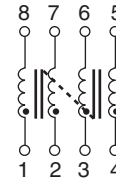
T8003



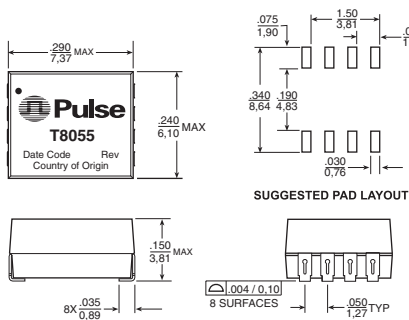
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight 0.84 grams
Tape & Reel750/reel
Tube 100/tube

T8003



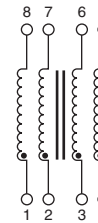
T8055



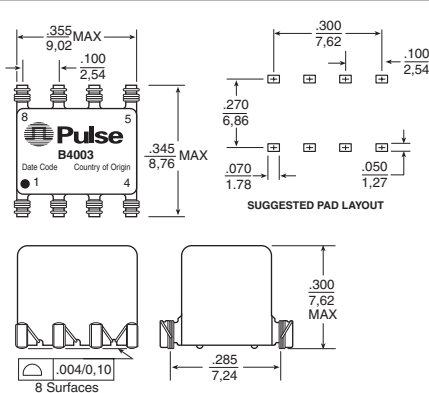
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 0.2 grams
Tape & Reel1750/reel
Tube80/tube

T8055



B4003



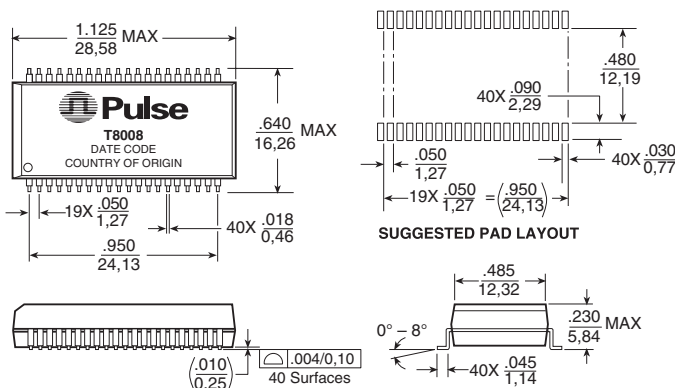
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 1.0 grams
Tape & Reel425/reel
Tube50/tube

B4003



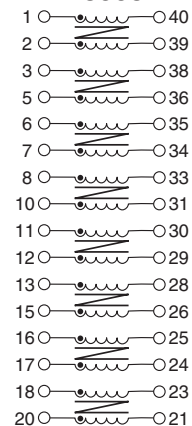
T8008



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 4.0 grams
Tape & Reel250/reel
Tube15/tube

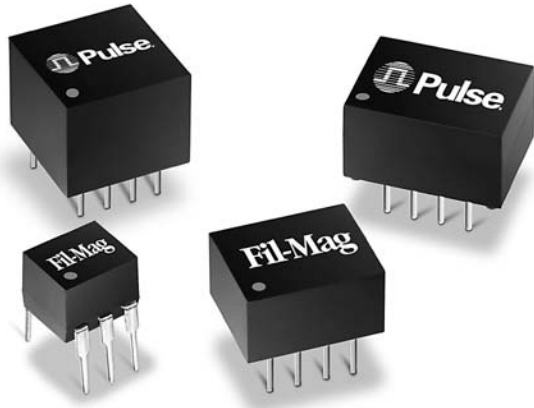
T8008







NOTE: The common mode test circuit for surface mount is the same as for through hole and is on the back page.

THROUGH HOLE COMMON MODE CHOKES

Suited for LAN and Telecom Applications



-  Reduces radiated EMI emissions
-  Filters common mode noise for EMI reduction
-  Common mode attenuation from 100 KHz to 1 GHz
-  Tube packaging available for through hole parts

Electrical Specifications @ 25°C

| Part Number | No. of Lines | Primary Inductance OCL (μH MIN) | Common Mode Attenuation (dB TYP) | | | | | | | | | DCR (Ω MAX) | Page Number of Mech. & Schem. |
|-------------|--------------|---------------------------------|----------------------------------|-------|--------|--------|--------|---------|---------|---------|-------|-------------|-------------------------------|
| | | | 100 KHz | 1 MHz | 10 MHz | 30 MHz | 50 MHz | 100 MHz | 300 MHz | 500 MHz | 1 GHz | | |
| PE-65944 | 2 | 24 | 1 | 14 | 28 | 32 | 33 | 28 | 13 | 5 | — | 0.30 | 9 |
| 23Z107 | 2 | 68 | 8 | 25 | 33 | 32 | 30 | 27 | 18 | 12 | — | 0.20 | 10 |
| PE-67531 | 2 | 140 | 14 | 34 | 45 | 49 | 50 | 47 | 38 | 32 | 25 | 0.60 | 9 |
| B2005 | 2 | 9000 | 47 | 47 | 41 | 30 | 22 | 33 | 21 | 15 | 15 | 1.0 | 10 |
| PE-65554 | 4 | 24 | — | 21 | 32 | 38 | 39 | 34 | 24 | 13 | — | 0.30 | 8 |
| 42Z4000 | 4 | 36 | 8 | 24 | 37 | 40 | 40 | 38 | 30 | 24 | — | 0.20 | 10 |
| PE-67501 | 4 | 50 | 14 | 34 | 45 | 49 | 50 | 47 | 20 | 15 | 10 | 0.30 | 9 |
| PE-68002 | 4 | 68 | 7 | 24 | 37 | 41 | 42 | 40 | 31 | 27 | — | 0.35 | 9 |
| 23Z104 | 4 | 85 | 8 | 23 | 29 | 29 | 28 | 25 | 17 | 11 | — | 0.20 | 10 |
| PE-67539 | 4 | 140 | 14 | 33 | 44 | 48 | 48 | 43 | 33 | 28 | 19 | 0.60 | 9 |
| PE-65542 | 4 | 1000 | 28 | 41 | 42 | 32 | 22 | — | — | — | — | 0.70 | 8 |
| PT5039 | 4 | 3600 | 42 | 43 | 42 | 32 | 27 | 17 | 15 | 9 | 13 | 0.50 | 8 |
| J0010D11 | 4 | — | 9 | 13 | 32 | 35 | 35 | 29 | 13 | 24 | 19 | 0.50 | 11 |
| PE-65950 | 4 | 4700±30% | 40 | 51 | 37 | 28 | 23 | 20 | — | — | — | 1.00 | 8 |
| PE-65541 | 4 | 6000 | 44 | 54 | 33 | 32 | 29 | — | — | — | — | 1.40 | 8 |
| PE-68613 | 4 | 3290 | 40 | 51 | 37 | 28 | 23 | 20 | — | — | — | 1.00 | 11 |
| PE-64683 | 6 | 25 | 6 | 18 | 32 | 38 | 37 | 32 | 21 | 17 | — | 0.35 | 8 |

THROUGH HOLE COMMON MODE CHOKES

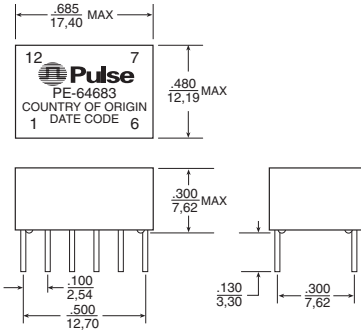
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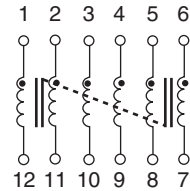
Mechanicals

Schematics

PE-64683



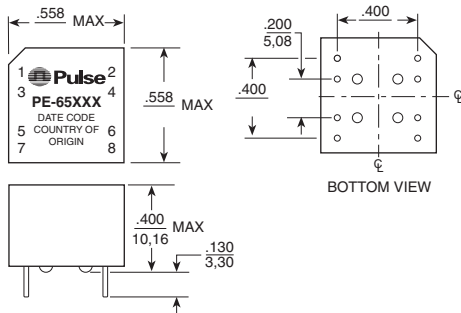
PE-64683



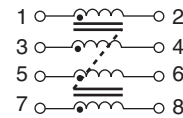
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.27 grams
Tube30/tube

PE-65541, PE-65542, PE-65950



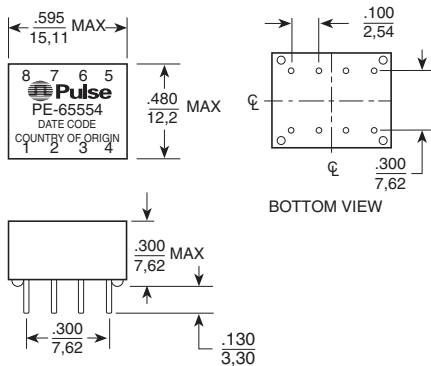
PE-65541 PE-65542 PE-65950



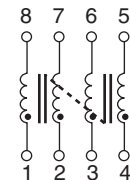
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.38 grams
Tube35/tube

PE-65554



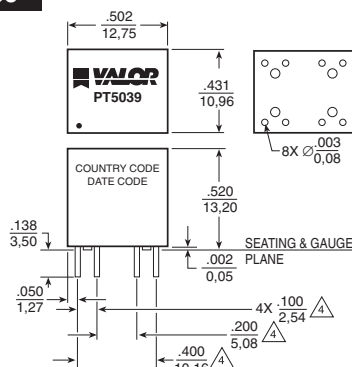
PE-65554



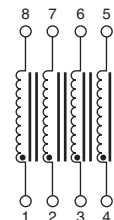
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight2.5 grams
Tube35/tube

PT5039



PT5039



Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight2.5 grams
Tube35/tube

THROUGH HOLE COMMON MODE CHOKES

Suited for LAN and Telecom Applications

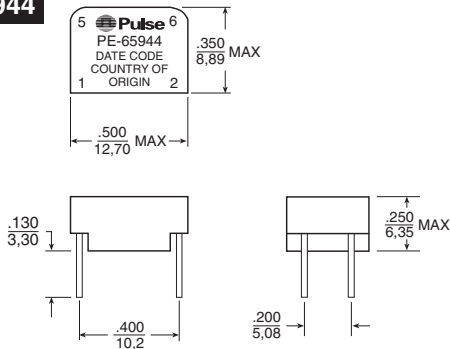


Pulse
A TECHNITROL COMPANY

Mechanicals

Schematics

PE-65944



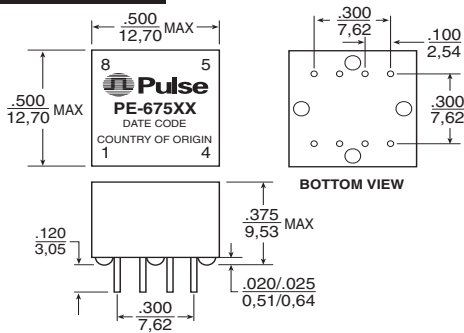
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-65944



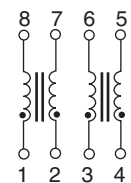
Weight1.07 grams
Tube30/tube

PE-67501, PE-67539



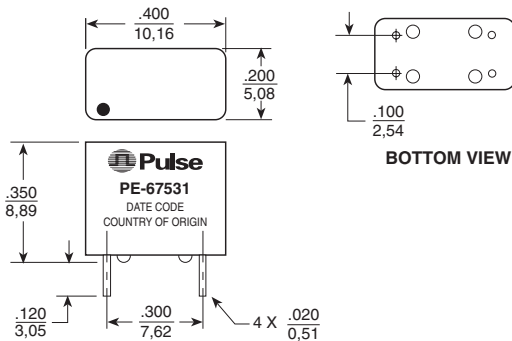
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-67501 PE-67539



Weight2.4 grams
Tube40/tube

PE-67531



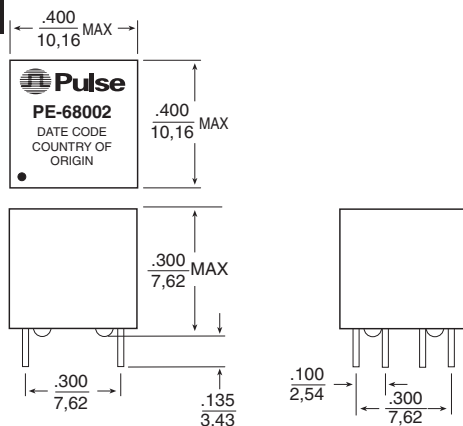
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-67531



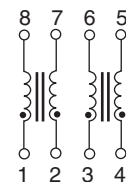
Weight0.76 grams
Tube40/tube

PE-68002



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-68002



Weight1.4 grams
Tube50/tube

THROUGH HOLE COMMON MODE CHOKES

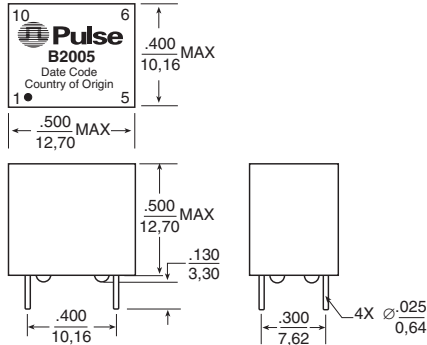
Suited for LAN and Telecom Applications



Mechanicals

Schematics

B2005

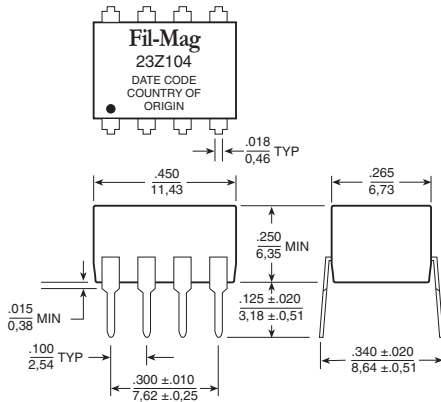


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.005}{0,13}$

Weight 3.7 grams
 Tube40/tube

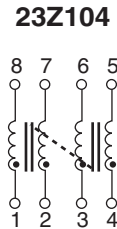


23Z104

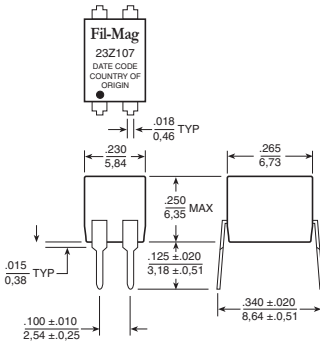


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.005}{0,13}$

Weight 1.0 grams
 Tube50/tube

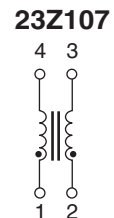


23Z107

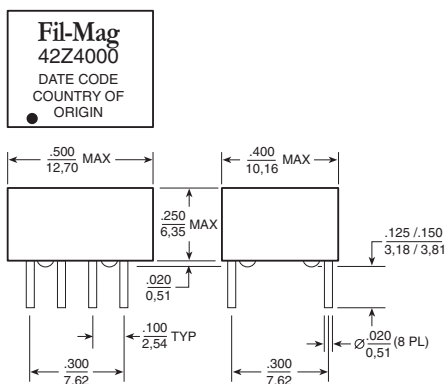


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.005}{0,13}$

Weight0.45 grams
 Tube100/tube

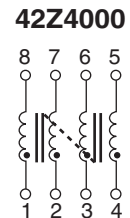


42Z4000



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0,25}$

Weight 1.5 grams
 Tube47/tube



THROUGH HOLE COMMON MODE CHOKES

Suited for LAN and Telecom Applications

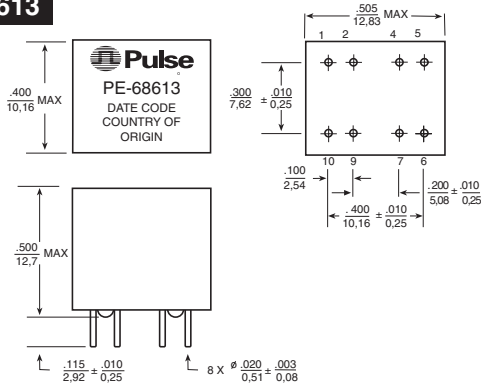


Pulse
A TECHNITROL COMPANY

Mechanicals

Schematics

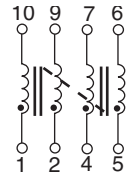
PE-68613



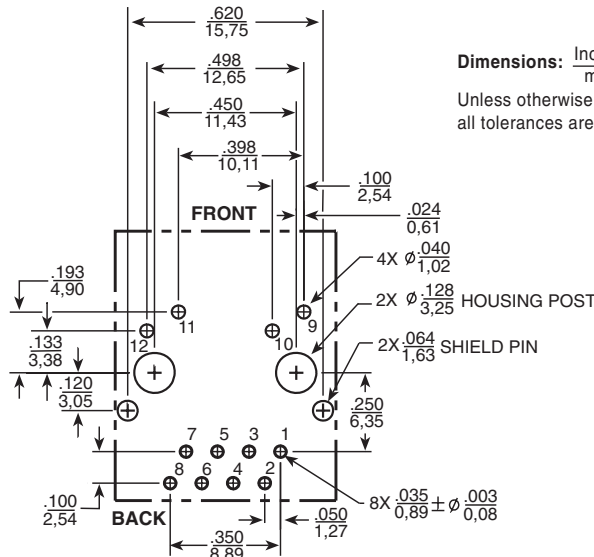
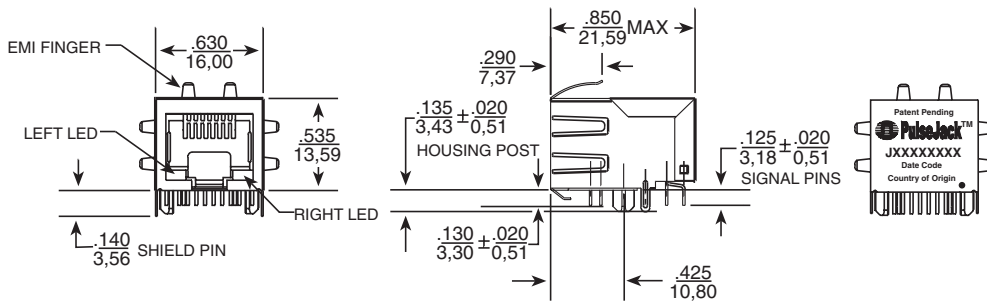
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .005
0,127

Weight3.5 grams
Tube40/tube

PE-68613



J0010D11 - Filtered Connector



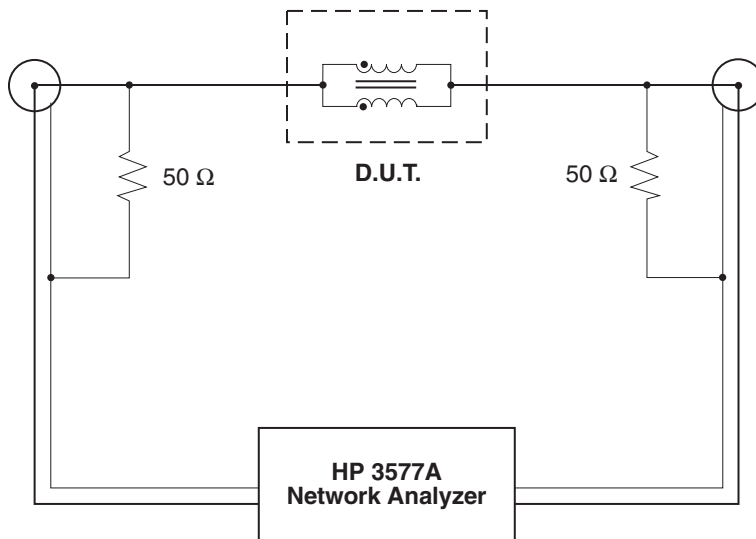
Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0,25

THROUGH HOLE COMMON MODE CHOKES

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Common Mode Test Circuit for Surface Mount and Through Hole



Test Notes:

1. Network analyzer calibrated to compensate for 50 Ω 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).

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