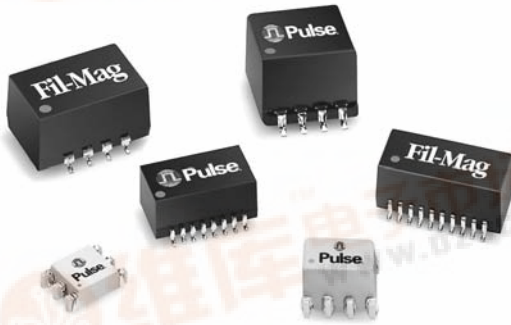


SURFACE MOUNT COMMON MODE CHOKES

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

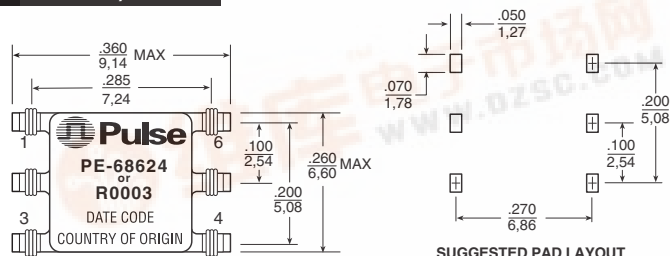
* When ordering Tape & Reel packaging, add a "T" at the end of the part number (i.e. PE-65738T or 23Z106SMT).

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

Mechanicals

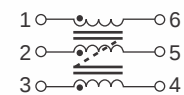
Schematics

PE-68624, R0003



Weight0.17 grams
Tape & Reel1500/reel
Tube60/tube

R0003



Connect unused pin to logic ground for optimum performance.

PE-68624



SURFACE MOUNT COMMON MODE CHOKES

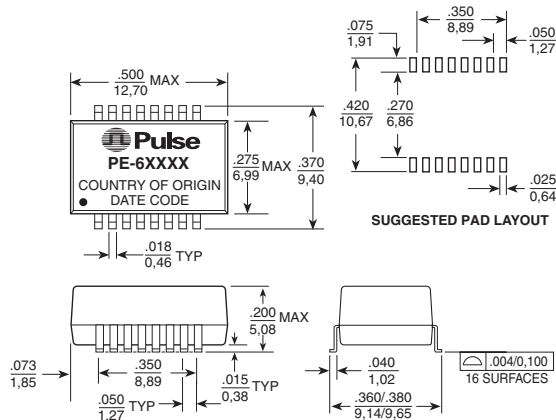
Suited for LAN and Telecom Applications



Mechanicals

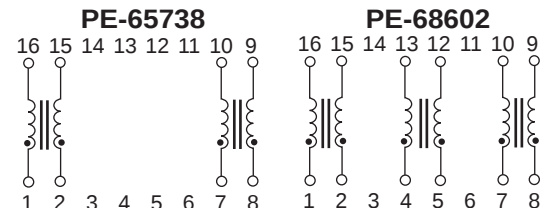
Schematics

PE-65738, PE-68602, PE-69011

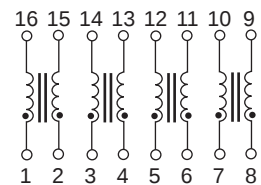


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 0.25

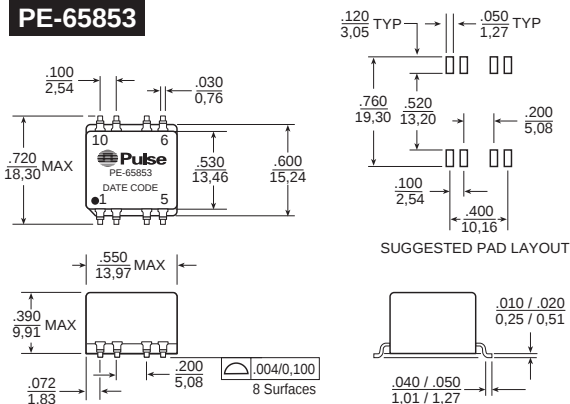
Weight 0.83 grams
Tape & Reel900/reel
Tube40/tube



PE-69011



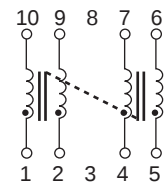
PE-65853



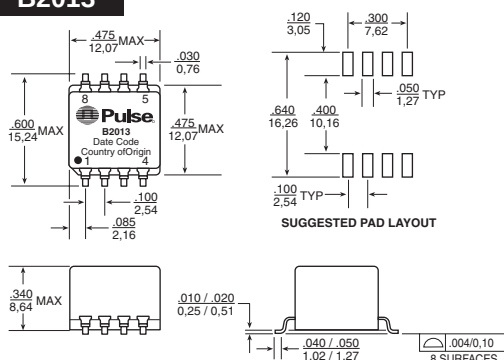
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 0.25

Weight 4.0 grams
Tape & Reel150/reel
Tube35/tube

PE-65853



B2013



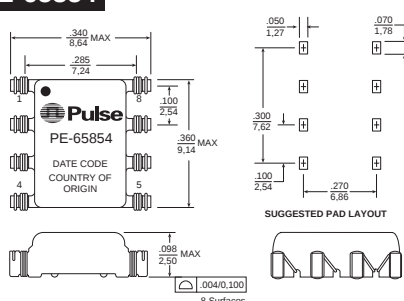
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 0.25

Weight 9.5 grams
Tray30/tray

B2013



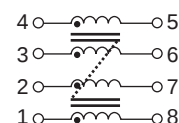
PE-65854



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

Weight 0.3 grams
Tape & Reel1500/reel
Tube60/tube

PE-65854



SURFACE MOUNT COMMON MODE CHOKES

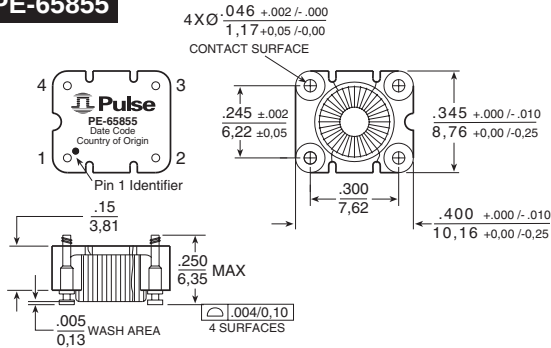
Suited for LAN and Telecom Applications



Mechanicals

Schematics

PE-65855



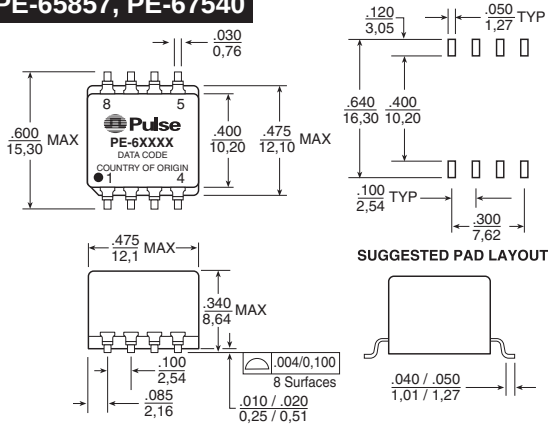
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
0,25

Weight 0.69 grams
Tape & Reel800/reel
Tube40 /tube

PE-65855



PE-65857, PE-67540

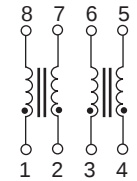
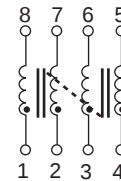


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
0,25

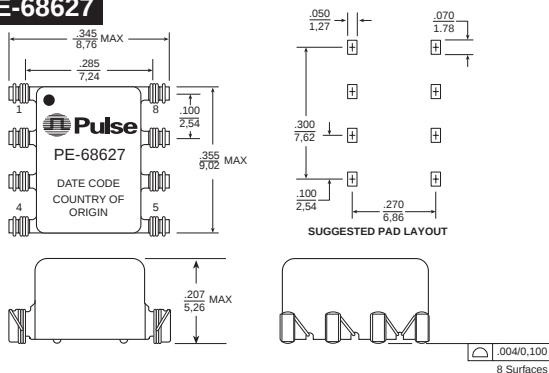
Weight 2.0 grams
Tape & Reel250/reel
Tube40/tube

PE-65857

PE-67540



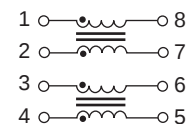
PE-68627



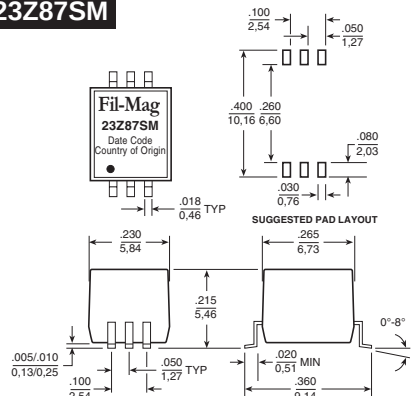
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
0,25

Weight 0.3 grams
Tape & Reel1500/reel
Tube55/tube

PE-68627



23Z87SM



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

Weight 0.5 grams
Tape & Reel750/reel
Tube100/tube

23Z87SM



SURFACE MOUNT COMMON MODE CHOKES

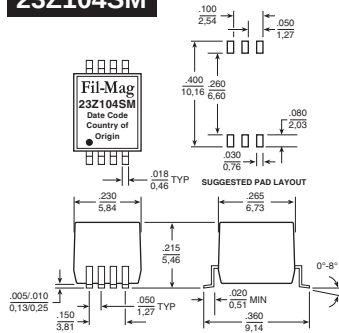
Suited for LAN and Telecom Applications



Mechanicals

Schematics

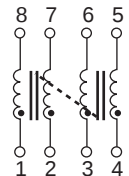
23Z104SM



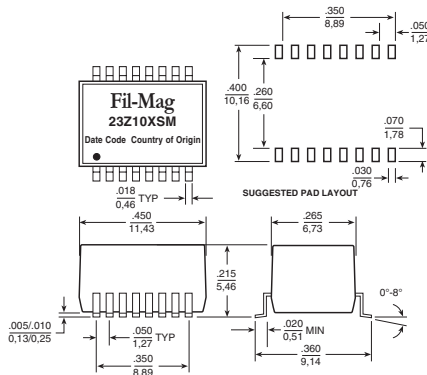
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0.13}$

Weight 0.5 grams
Tape & Reel750/reel
Tube100/tube

23Z104SM



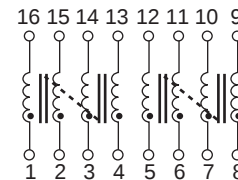
23Z105SM, 23Z106SM



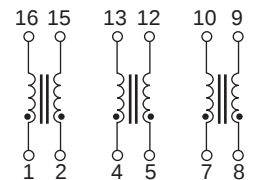
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0.13}$

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

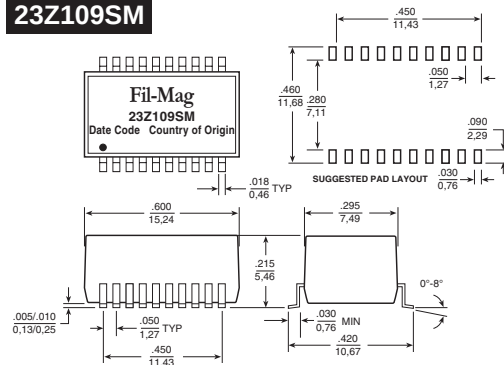
23Z105SM



23Z106SM



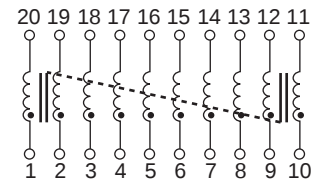
23Z109SM



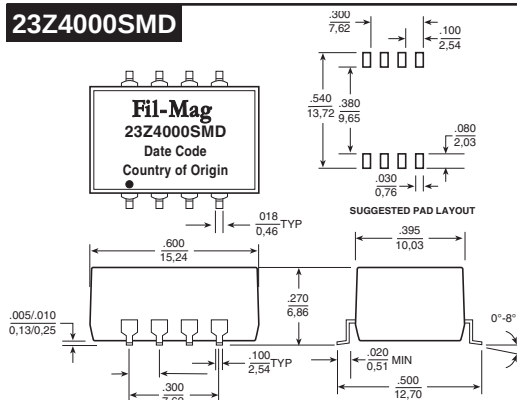
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0.13}$

Weight 1.3 grams
Tape & Reel500/reel
Tube38/tube

23Z109SM



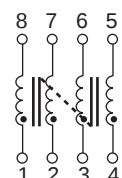
23Z4000SMD



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0.13}$

Weight 2.1 grams
Tape & Reel350/reel
Tube38/tube

23Z4000SMD



SURFACE MOUNT COMMON MODE CHOKES

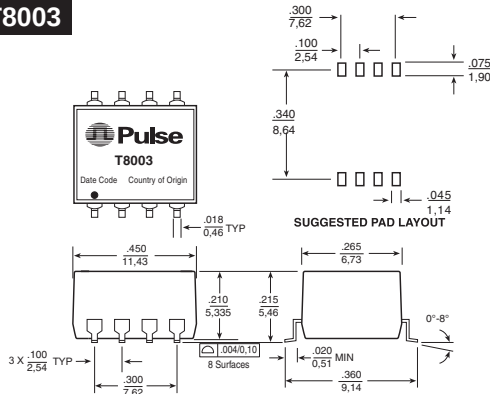
Suited for LAN and Telecom Applications



Mechanicals

Schematics

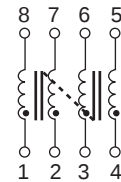
T8003



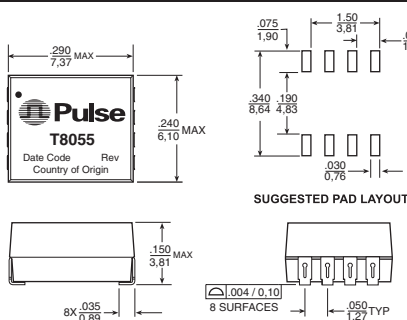
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .005$
0,13

Weight0.84 grams
Tape & Reel750/reel
Tube100/tube

T8003



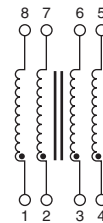
T8055



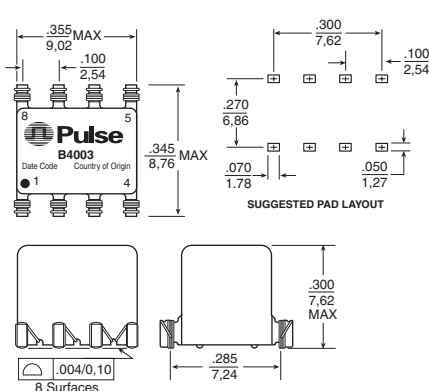
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
0,25

Weight0.2 grams
Tape & Reel1750/reel
Tube80/tube

T8055



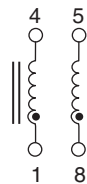
B4003



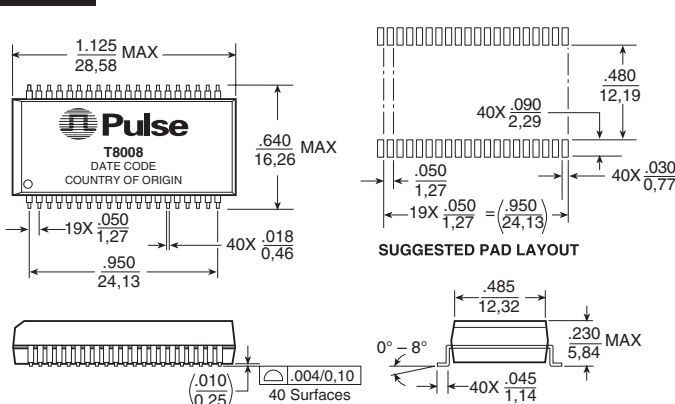
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
0,25

Weight1.0 grams
Tape & Reel425/reel
Tube50/tube

B4003



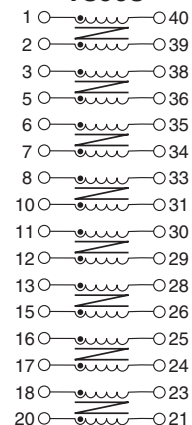
T8008



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

Weight4.0 grams
Tape & Reel250/reel
Tube15/tube

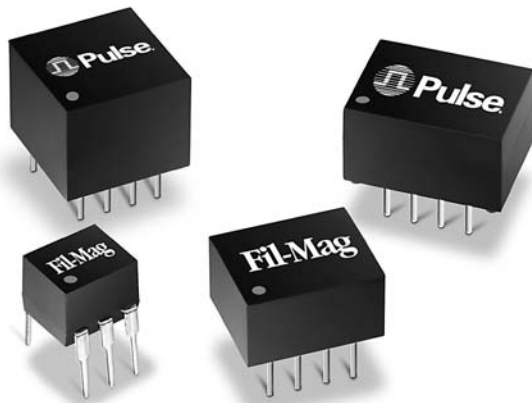
T8008



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	11
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
23Z87	3	69	8	22	29	29	28	26	20	15	—	0.20	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	11
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	12
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
23Z106	6	85	8	23	30	29	28	27	21	15	—	0.20	10

THROUGH HOLE COMMON MODE CHOKES

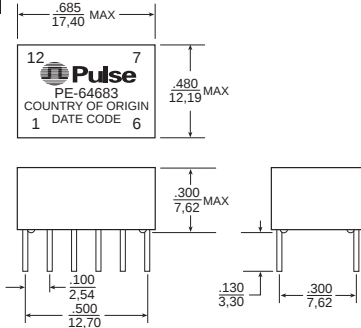
Suited for LAN and Telecom Applications



Mechanicals

Schematics

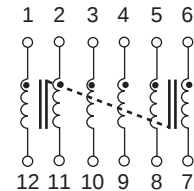
PE-64683



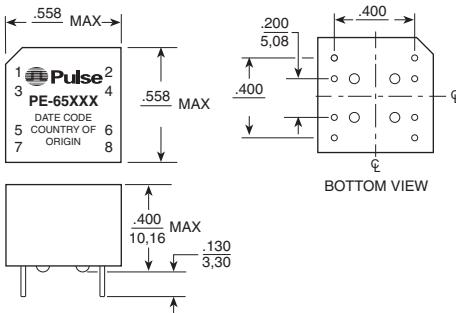
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.27 grams
Tube30/tube

PE-64683



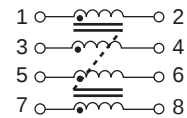
PE-65541, PE-65542, PE-65950



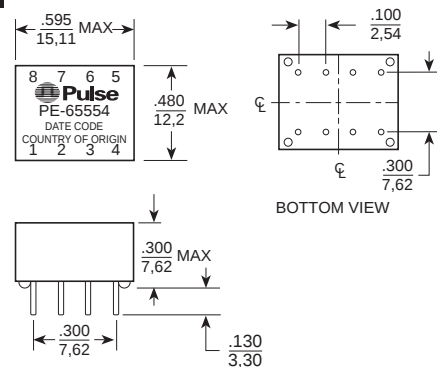
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.38 grams
Tube35/tube

PE-65541 PE-65542 PE-65950



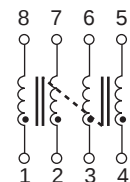
PE-65554



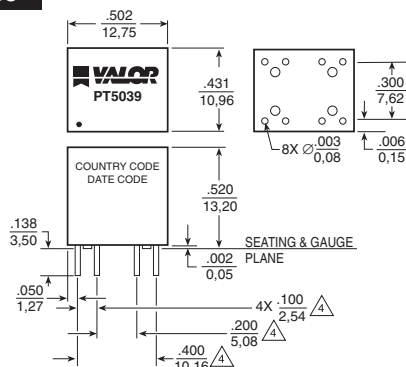
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight2.5 grams
Tube35/tube

PE-65554



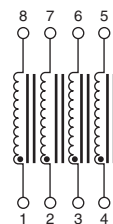
PT5039



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

Weight2.5 grams
Tube35/tube

PT5039



THROUGH HOLE COMMON MODE CHOKES

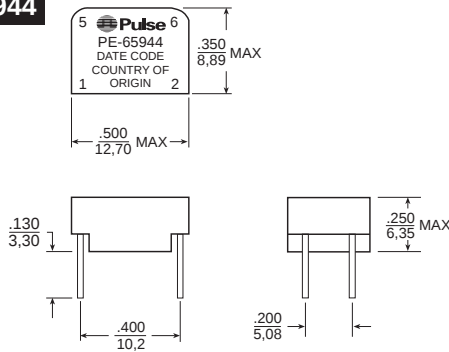
Suited for LAN and Telecom Applications



Mechanicals

Schematics

PE-65944



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

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

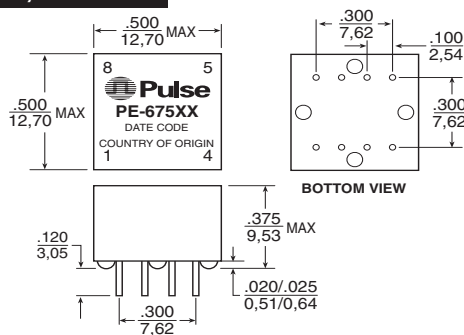
Weight 1.07 grams

Tube30/tube

PE-65944



PE-67501, PE-67539



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

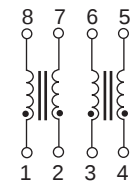
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 2.4 grams

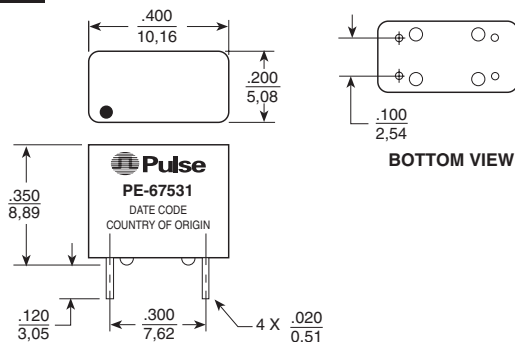
Tube40/tube

PE-67501

PE-67539



PE-67531



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

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

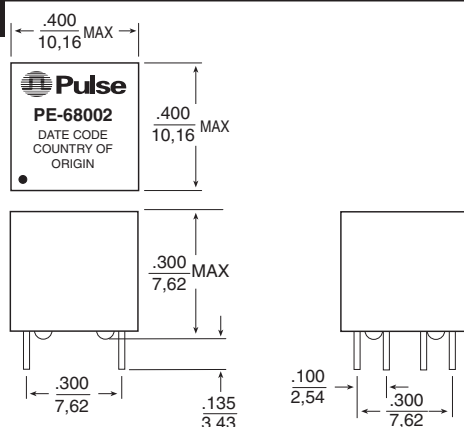
Weight 0.76 grams

Tube40/tube

PE-67531



PE-68002



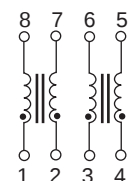
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

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

Weight 1.4 grams

Tube50/tube

PE-68002



THROUGH HOLE COMMON MODE CHOKES

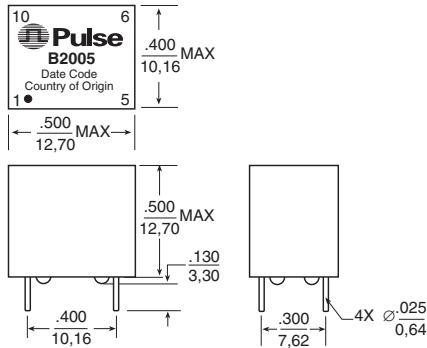
Suited for LAN and Telecom Applications



Mechanicals

Schematics

B2005

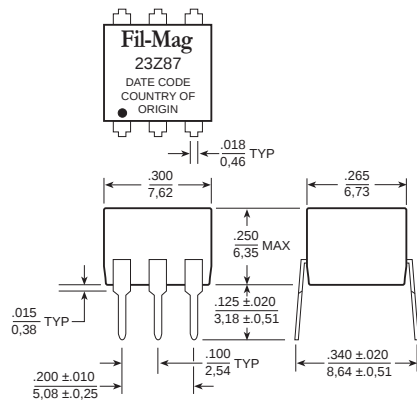


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight 3.7 grams
Tube 40/tube



23Z87



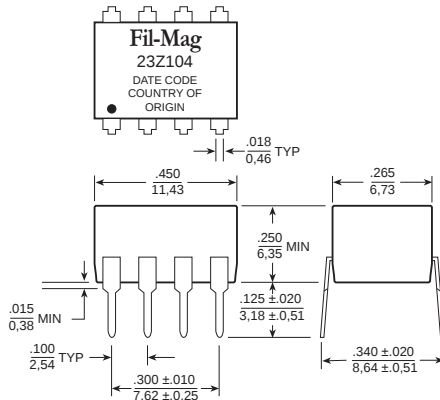
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight 0.7 grams
Tube 76/tube

23Z87



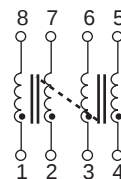
23Z104



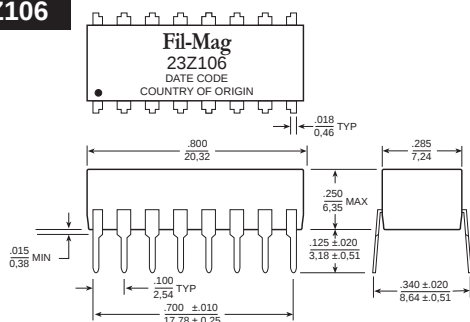
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight 1.0 grams
Tube 50/tube

23Z104



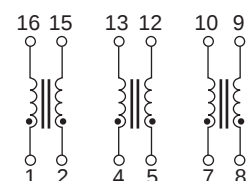
23Z106



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

Weight 1.9 grams
Tube 28/tube

23Z106



THROUGH HOLE COMMON MODE CHOKES

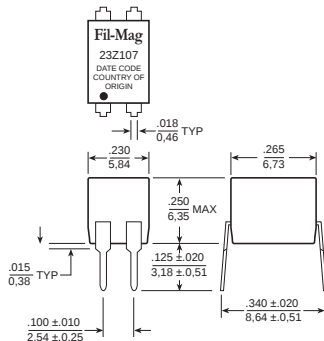
Suited for LAN and Telecom Applications



Mechanicals

Schematics

23Z107



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

Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

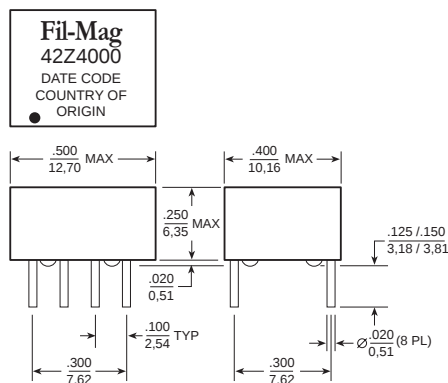
Weight0.45 grams

Tube 100/tube

23Z107



42Z4000



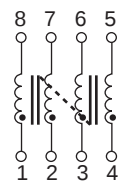
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

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

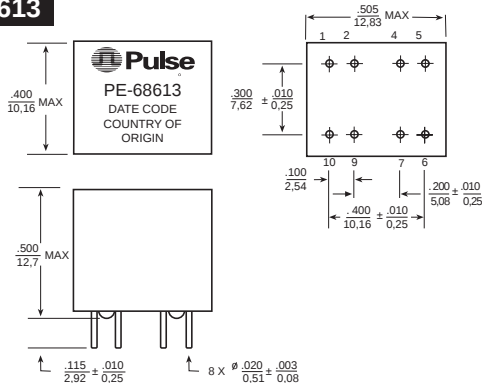
Weight 1.5 grams

Tube47/tube

42Z4000



PE-68613



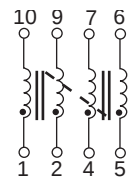
Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,127}$

Weight3.5 grams

Tube40/tube

PE-68613



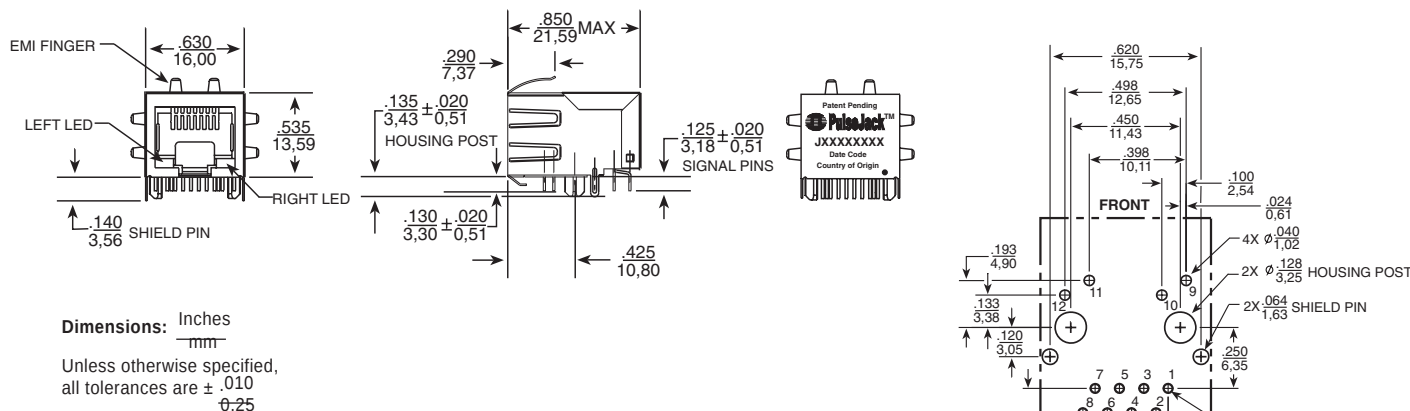
THROUGH HOLE COMMON MODE CHOKES

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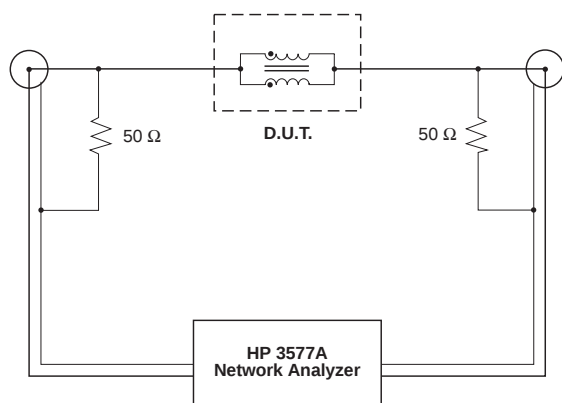


Mechanical

J0010D11 - Filtered Connector



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).

For More Information :

UNITED STATES (Worldwide)

12220 World Trade Drive
San Diego, CA 92128
U.S.A.
<http://www.pulseeng.com>
TEL: 858 674 8100
FAX: 858 674 8262

UNITED KINGDOM (Northern Europe)

3 Huxley Road
Surrey Research Park
Guildford, Surrey GU2 5RE
United Kingdom
TEL: 44 1483 401700
FAX: 44 1483 401701

FRANCE (Southern Europe)

Zone Industrielle
F-39270
Orgelet
France
TEL: 33 3 84 35 04 04
FAX: 33 3 84 25 46 41

SINGAPORE (Southern Asia)

150 Kampong Ampat
#07-01/02
KA Centre
Singapore 368324
TEL: 65 6287 8998
FAX: 65 6280 0080

TAIWAN, R.O.C. (Northern Asia)

3F-4, No. 81, Sec. 1
HsinTai Wu Road
Hsi-Chih, Taipei Hsien
Taiwan, R.O.C.
Tel: 886 2 2698 0228
FAX: 886 2 2698 0948

HONG KONG (China/Hong Kong)

9/F, Phase 2, Tai Sang
Shatin Warehouse Centre
6 Wong Chuk Yeung Street
Fotan Shatin, Hong Kong
TEL: 852 2788 6588
FAX: 852 2776 1055

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