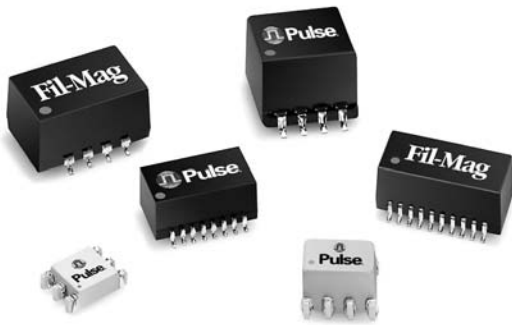






SURFACE MOUNT COMMON MODE CHOKES

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

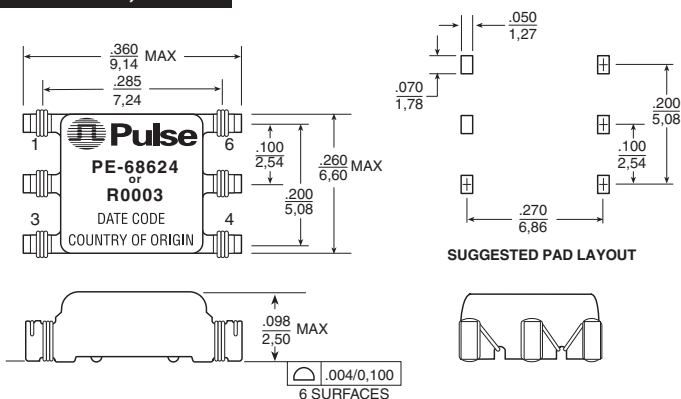
* When ordering Tape & Reel packaging, add a "T" at the end of the part number (i.e. PE-65738T or 23Z106SMT).

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

Mechanicals

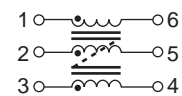
Schematics

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

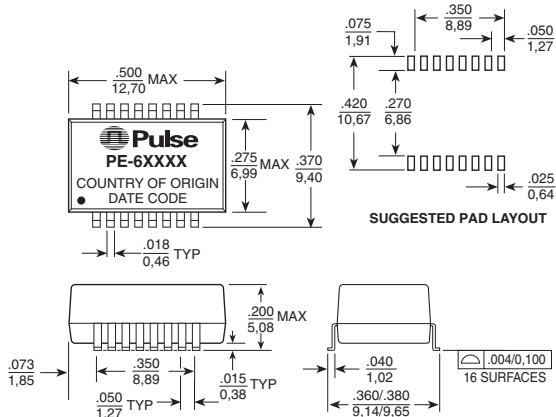
Suited for LAN and Telecom Applications



Mechanicals

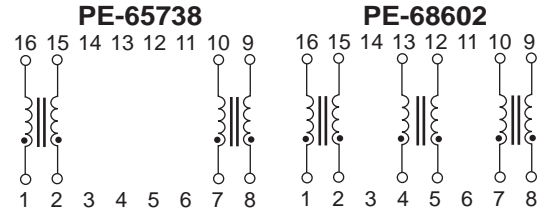
Schematics

PE-65738, PE-68602, PE-69011

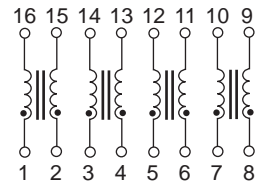


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

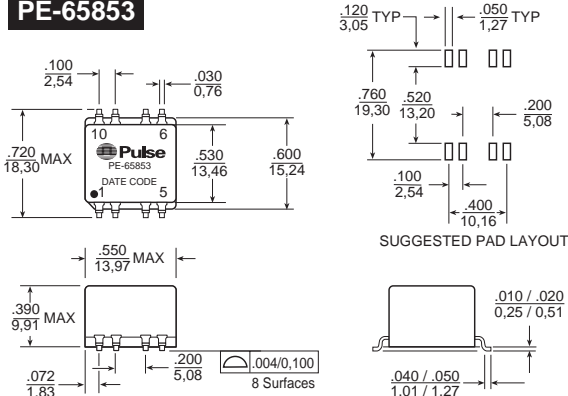
Weight0.83 grams
Tape & Reel900/reel
Tube40/tube



PE-69011



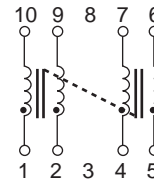
PE-65853



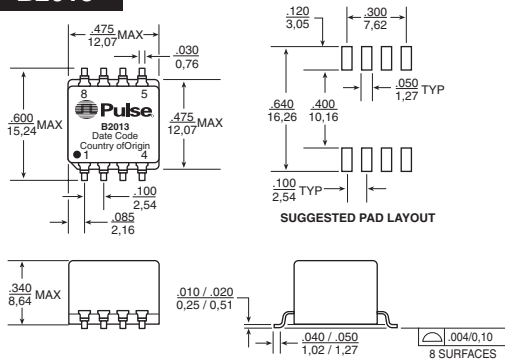
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

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

PE-65853



B2013



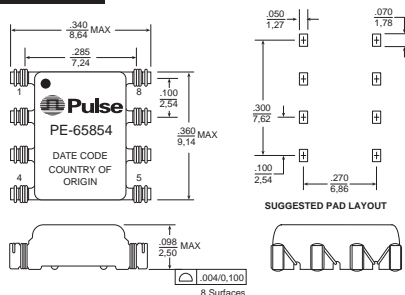
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

Weight9.5 grams
Tray30/tray

B2013



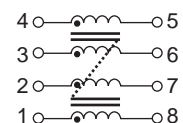
PE-65854



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

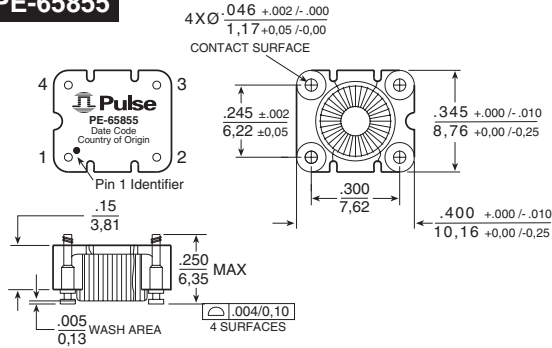
Suited for LAN and Telecom Applications



Mechanicals

Schematics

PE-65855



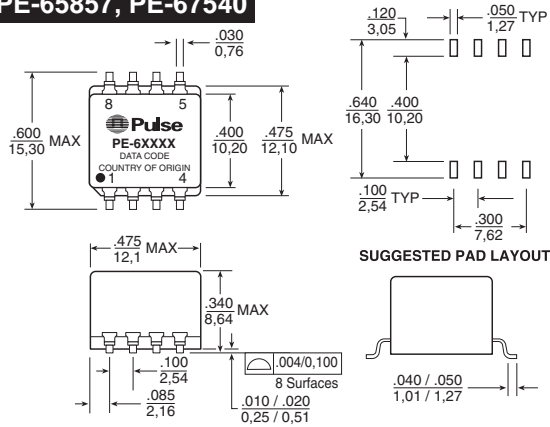
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

Weight069 grams
Tape & Reel800/reel
Tube40 /tube

PE-65855



PE-65857, PE-67540

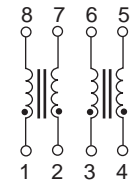
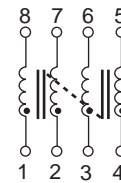


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

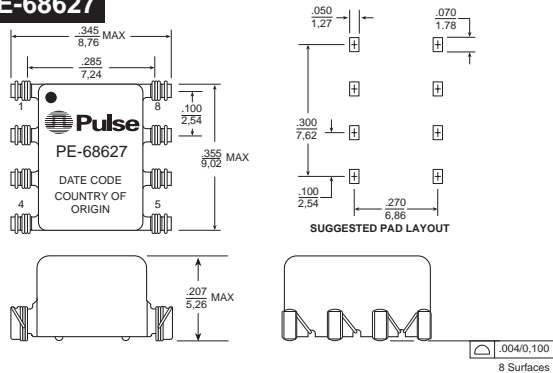
Weight2.0 grams
Tape & Reel250/reel
Tube40/tube

PE-65857

PE-67540



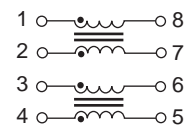
PE-68627



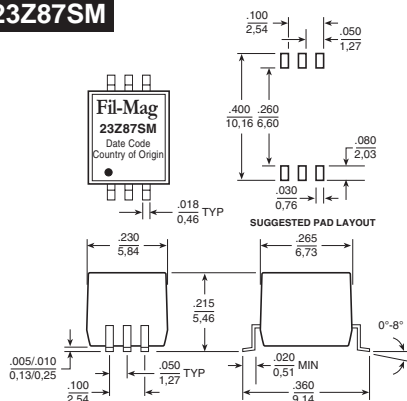
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .010$
 $0,25$

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

PE-68627



23Z87SM



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

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

23Z87SM



SURFACE MOUNT COMMON MODE CHOKES

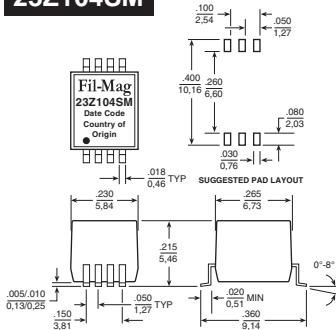
Suited for LAN and Telecom Applications



Mechanicals

Schematics

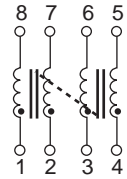
23Z104SM



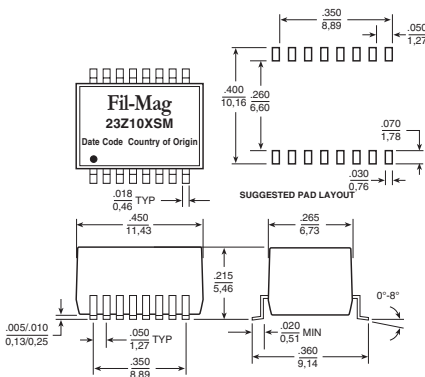
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .005$
 $0,13$

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

23Z104SM



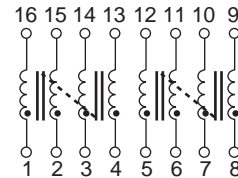
23Z105SM, 23Z106SM



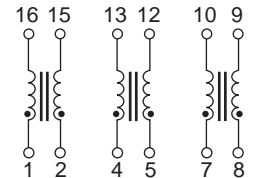
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .005$
 $0,13$

23Z105SM **23Z106SM**
Weight0.8 grams .1.0 grams
Tape & Reel750/reel .750/reel
Tube50/tube .50/tube

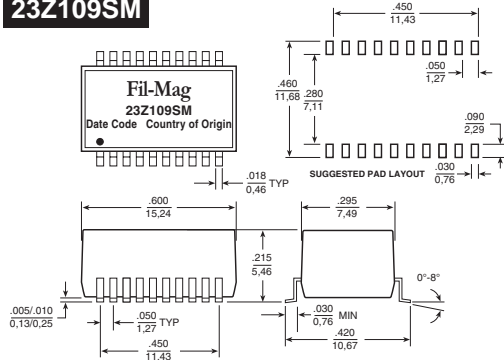
23Z105SM



23Z106SM



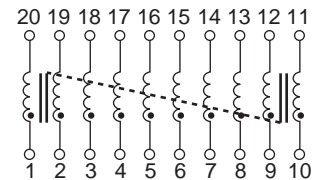
23Z109SM



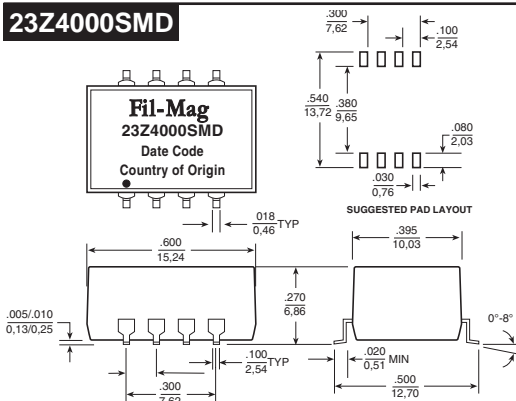
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm .005$
 $0,13$

Weight1.3 grams
Tape & Reel500/reel
Tube38/tube

23Z109SM



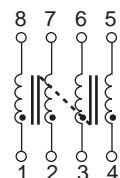
23Z4000SMD



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

Weight2.1 grams
Tape & Reel350/reel
Tube38/tube

23Z4000SMD



SURFACE MOUNT COMMON MODE CHOKES

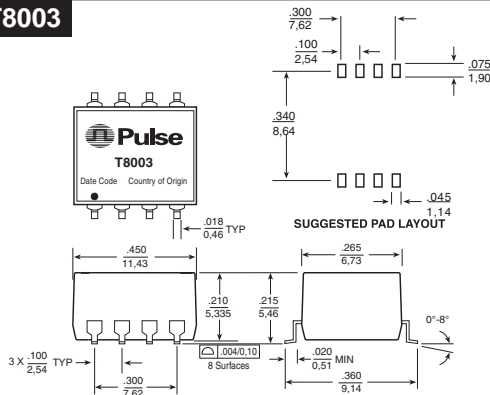
Suited for LAN and Telecom Applications



Mechanicals

Schematics

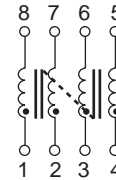
T8003



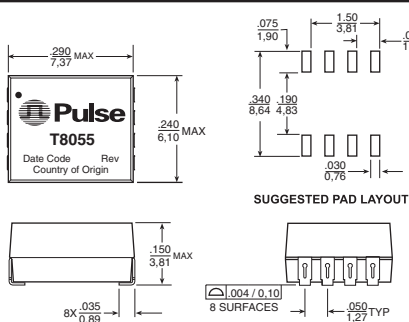
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight 0.84 grams
Tape & Reel750/reel
Tube100/tube

T8003



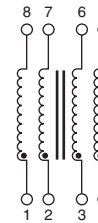
T8055



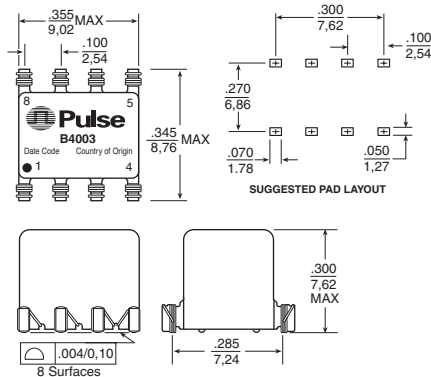
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 0.2 grams
Tape & Reel1750/reel
Tube80/tube

T8055



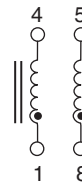
B4003



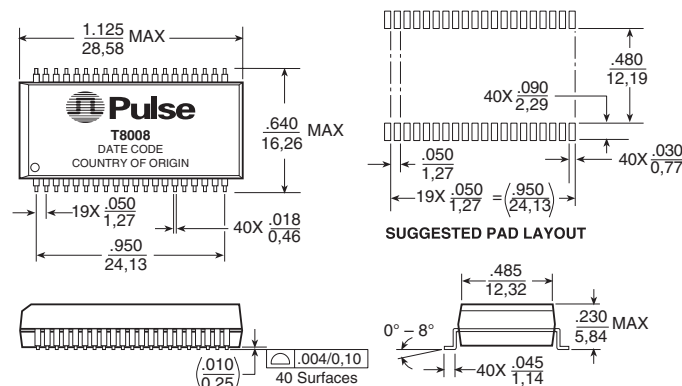
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 1.0 grams
Tape & Reel425/reel
Tube50/tube

B4003



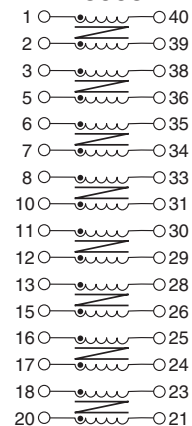
T8008



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



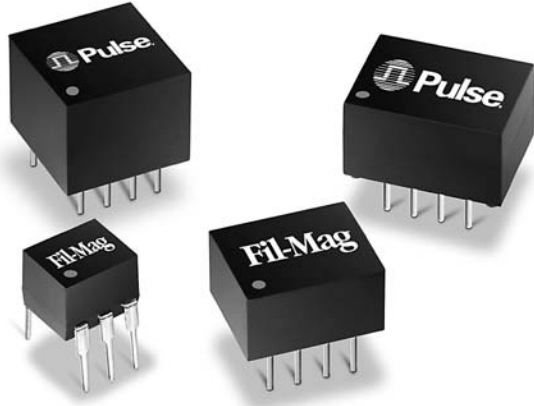
NOTE: The common mode test circuit for surface mount is the same as for through hole and is on the back page.





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G002.G (9/04)

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 \pm 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

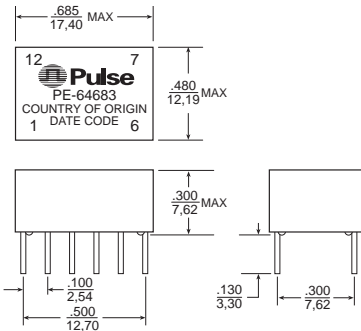
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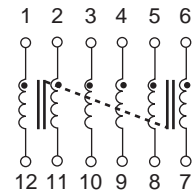
Mechanicals

Schematics

PE-64683



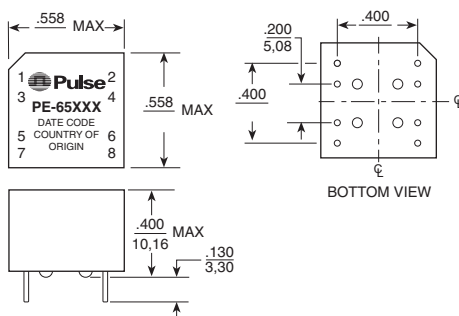
PE-64683



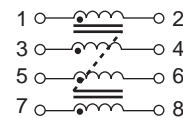
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.27 grams
Tube30/tube

PE-65541, PE-65542, PE-65950



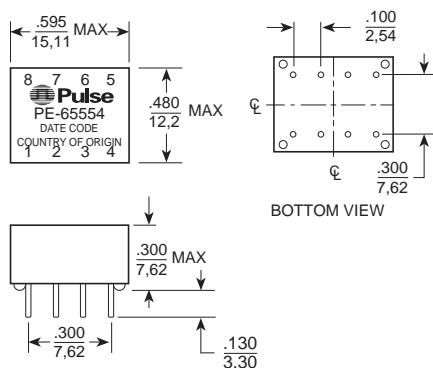
PE-65541 PE-65542 PE-65950



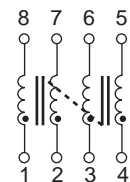
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight0.38 grams
Tube35/tube

PE-65554



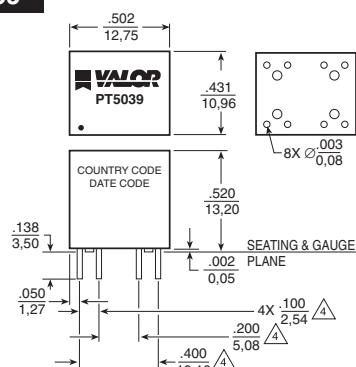
PE-65554



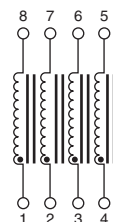
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight2.5 grams
Tube35/tube

PT5039



PT5039



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

Weight2.5 grams
Tube35/tube

THROUGH HOLE COMMON MODE CHOKES

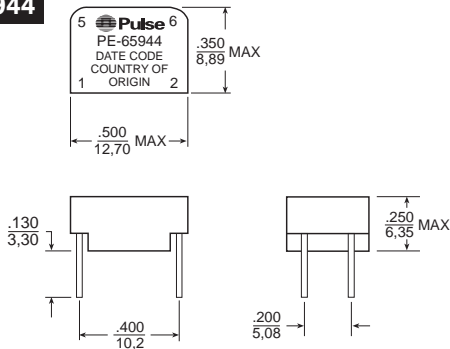
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Mechanicals

Schematics

PE-65944



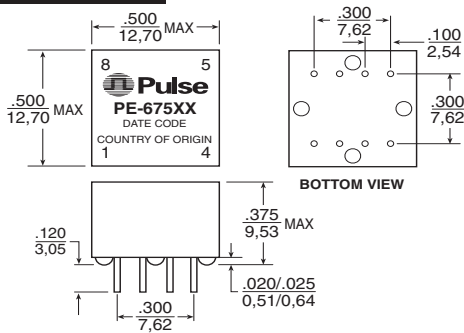
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-65944



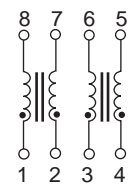
Weight 1.07 grams
Tube30/tube

PE-67501, PE-67539



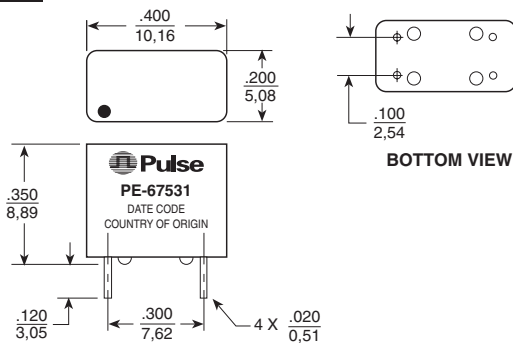
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-67501 PE-67539



Weight 2.4 grams
Tube40/tube

PE-67531



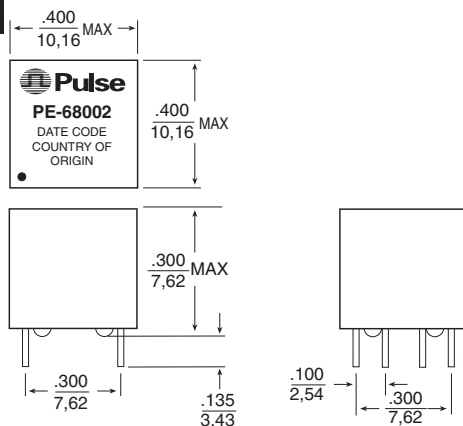
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

PE-67531



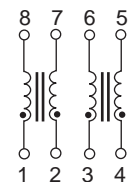
Weight 0.76 grams
Tube40/tube

PE-68002



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

PE-68002



Weight 1.4 grams
Tube50/tube

THROUGH HOLE COMMON MODE CHOKES

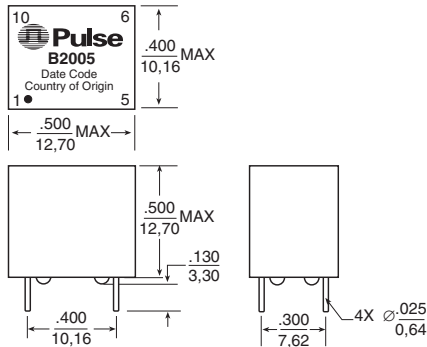
Suited for LAN and Telecom Applications



Mechanicals

Schematics

B2005

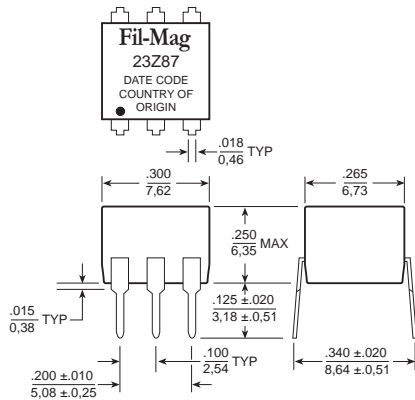


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight3.7 grams
Tube40/tube

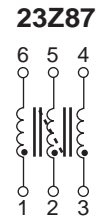


23Z87

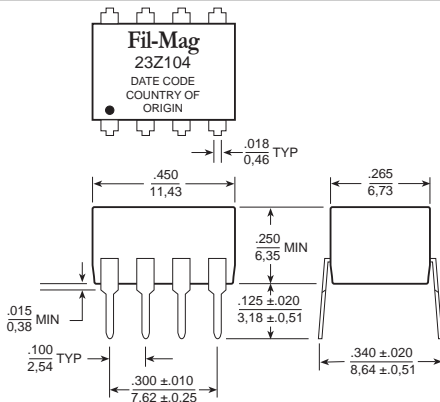


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight0.7 grams
Tube76/tube

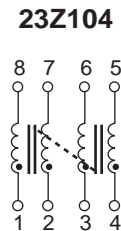


23Z104

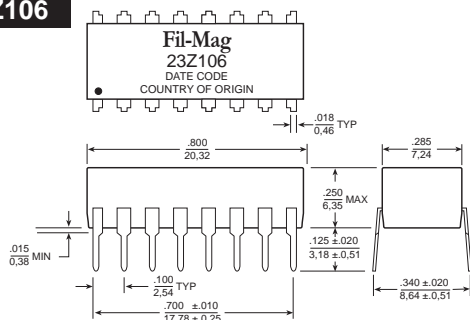


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight1.0 grams
Tube50/tube

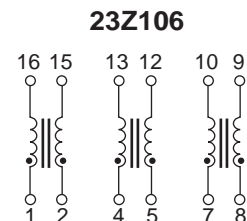


23Z106



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

Weight1.9 grams
Tube28/tube



THROUGH HOLE COMMON MODE CHOKES

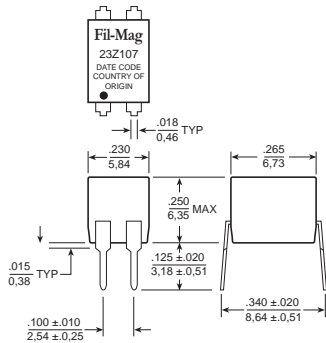
Suited for LAN and Telecom Applications



Mechanicals

Schematics

23Z107



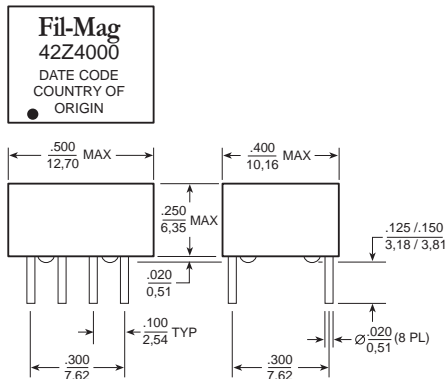
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,13}$

Weight045 grams
Tube100/tube

23Z107



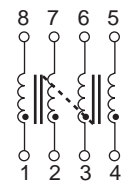
42Z4000



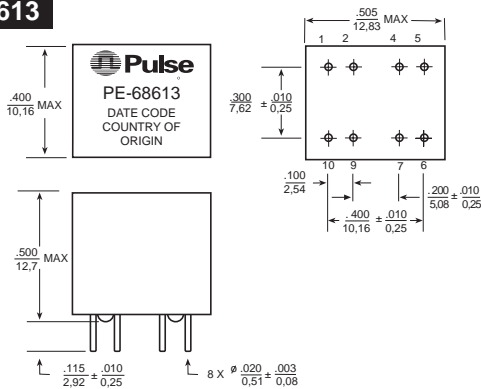
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Weight 1.5 grams
Tube47/tube

42Z4000



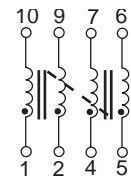
PE-68613



Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified,
all tolerances are $\pm \frac{.005}{0,127}$

Weight 3.5 grams
Tube40/tube

PE-68613



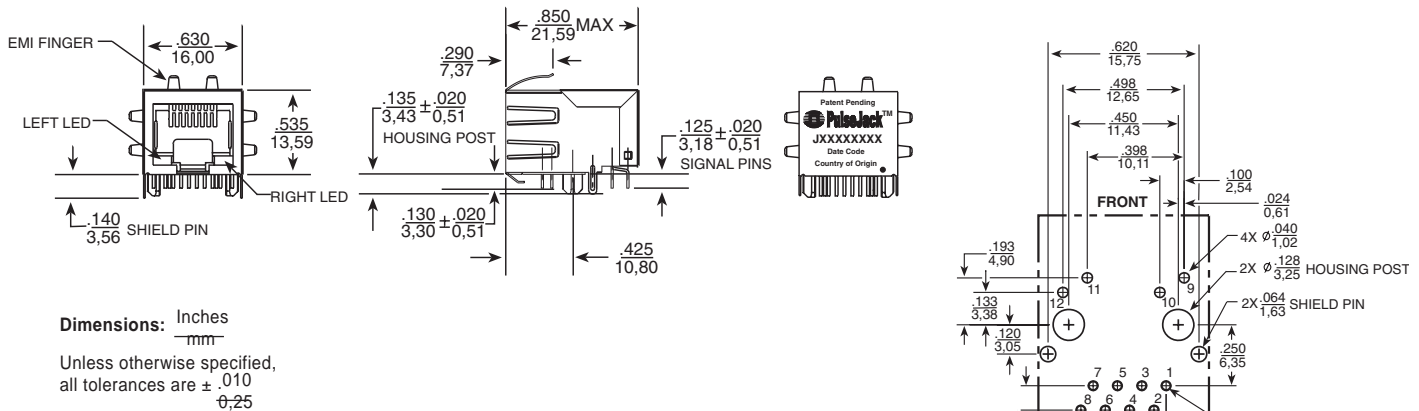
THROUGH HOLE COMMON MODE CHOKES

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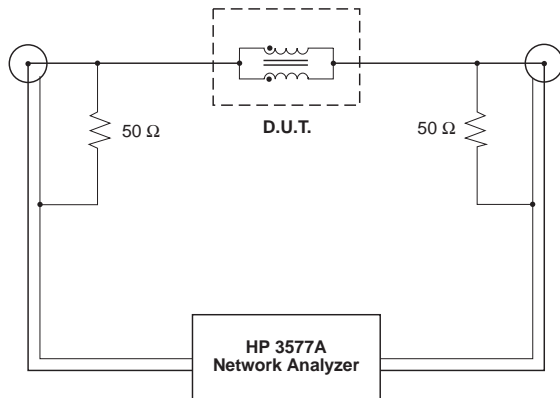


Mechanical

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 :

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