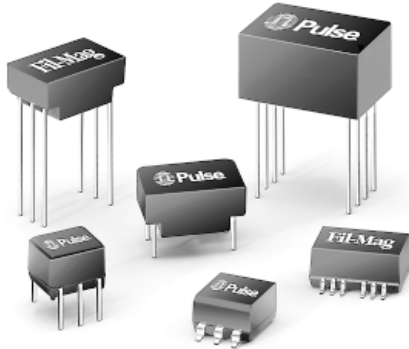






GENERAL PURPOSE TRANSFORMERS



2 Watt Pulse, Electrostatically Shielded,
500 mW Pulse, RF Pulse, and Control Transformers



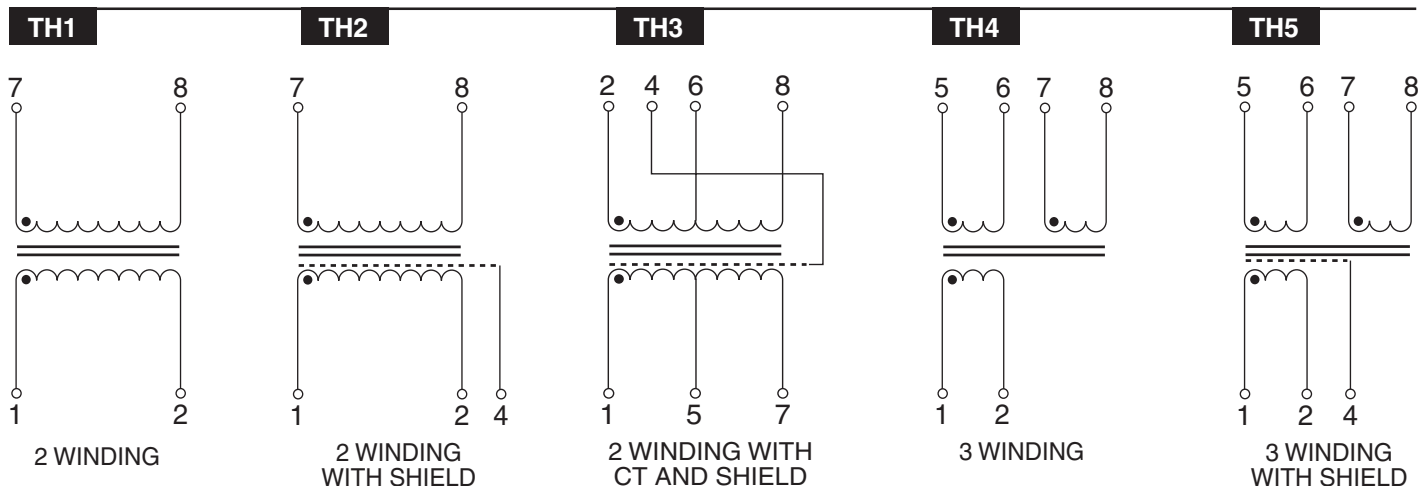
-  Wide range of inductors and turns ratios
-  Suitable for a variety of applications
-  High flux density capability
-  Available in through hole and surface mount packages

Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio (±5%)	Primary Sine Wave OCL (mH MIN)	Primary ET-Constant (V-µs MIN)	Rise Time (ns MAX)	PRI/SEC* C _{WW} (pF MAX)	Leakage Inductance PRI/SEC (µH MAX)	DCR Primary (Ω MAX)	DCR Secondary (Ω MAX)	DCR Tertiary (Ω MAX)	Hi-Pot (V _{rms})	Schematic/Package Style
2 WATT PULSE TRANSFORMERS											
PE-2227X	1:1	0.5	46	8	26	1.7	1.3	1.4	—	700	TH1
PE-2228X	1:1	1.3	84	30	40	3.0	3.6	3.8	—	700	TH1
PE-2243X	1:1	20.0	250	80	87	10.5	27.0	28.0	—	700	TH1
PE-2229X	1:1:1	1.3	91	30	38	3.2	3.6	3.8	3.9	700	TH4
PE-2231X	1:1:1	5.0	196	70	35	13.0	8.8	9.6	11.0	700	TH4
PE-2671X	4:1:4	0.2	53	50	17	5.7	1.2	0.2	1.3	700	TH4
ELECTROSTATICALLY SHIELDED TRANSFORMERS											
PE-5154X	1:1	0.2	91	17	2.7	3.1	1.6	1.6	—	700	TH2
PE-5156X	1:1	1.2	77	19	4.1	2.8	1.1	1.1	—	700	TH2
PE-5160X	1:1	10.0	224	200	4.5	22.0	11.0	11.0	—	700	TH2
PE-5158X	1CT:1CT	1.0	77	21	3.2	2.5	1.8	1.8	—	700	TH3
PE-5163X	1CT:1CT	10.0	252	60	2.5	16.7	14.0	14.0	—	700	TH3

*NOTE: for Electrostatically Shielded Transformers, C_{WW} is measured with shield corrected to guard voltage.

Schematics



U.S: 858 674 8100 • U.K: 44 1483 401 700 • France: 33 3 84 35 04 04 • Singapore: 65 287 8998 • Taiwan: 886 2 2698 0228 • <http://www.pulseeng.com>

GENERAL PURPOSE TRANSFORMERS

500 mW Pulse

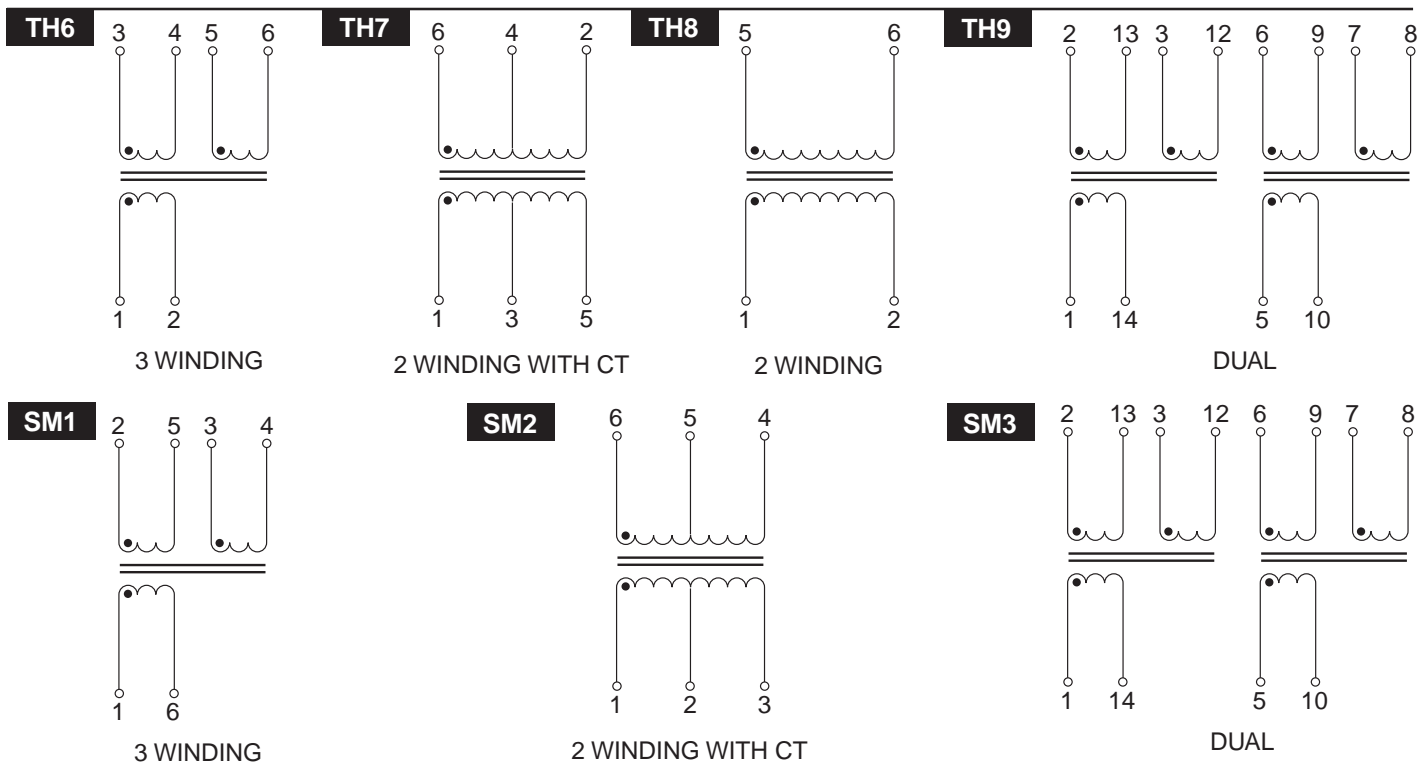


Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio (±5%)	Primary Sine Wave OCL (mH MIN)	Primary ET-Constant (V-μs MIN)	Rise Time (ns MAX)	PRI/SEC C _{ww} (pF MAX)	Leakage Inductance PRI/SEC (μH MAX)	DCR Primary (Ω MAX)	DCR Secondary (Ω MAX)	DCR Tertiary (Ω MAX)	Hi Pot V _{rms}	Schematic Package Style
500 mW PULSE TRANSFORMERS											
PE-5760	1:1:1	5.0	25.0	10.5	70	1.3	3.9	3.9	3.9	500	TH6
PE-5761	1:1:1	2.0	16.0	8.2	37	0.8	2.5	2.5	2.5	500	TH6
PE-5762	1:1:1	0.5	8.5	5.3	32	0.4	1.3	1.3	1.3	500	TH6
PE-5763	1:1:1	0.2	5.0	4.2	18	0.3	0.9	0.9	0.9	500	TH6
PE-5764	1:1:1	0.05	5.2	5.6	18	0.5	1.3	1.3	1.3	500	TH6
PE-5769	2:1:1	0.5	8.5	5.6	11	1.1	1.3	0.7	0.7	500	TH6
PE-8270	1CT:1CT	2.0	16.0	—	37	0.8	2.5	2.5	—	700	TH7
PE-8271	1CT:1CT	0.5	8.5	—	32	0.4	1.3	1.3	—	500	TH7
PE-8272	1CT:1CT	0.2	5.0	4.2	18	0.3	0.9	0.9	—	700	TH7
PE-8276	2CT:1CT	2.0	16.0	—	19	1.8	2.5	1.4	—	500	TH7
PE-8277	2CT:1CT	0.5	8.5	—	12	1.2	1.4	0.8	—	700	TH7
PE-65502	1.25:1	1.2	10.0	10.0	35	0.8	0.8	0.7	—	1500	TH8
23Z81	1:1:1 dual	.085	2.5	3.0	9.5	0.2	0.20	—	—	500	TH9
66Z1203	1:1:1	—	25.0	10.5	60	1.3	3.9	3.9	3.9	500	TH6
66Z1212	1:1:1	—	16.0	11.0	19	1.8	2.5	1.4	1.4	500	TH6
PE-5762M	1:1:1	0.5	5.0	4.2	25	0.3	0.9	0.9	0.9	1500	SM1
PE-5763M	1:1:1	0.2	4.0	3.5	18	0.2	0.7	0.7	0.7	1500	SM1
PE-5769M	2:1:1	0.5	5.0	4.2	18	0.3	0.9	0.45	0.45	1500	SM1
PE-8271M	1CT:1CT	0.5	5.0	4.2	18	0.3	0.9	0.9	—	1500	SM2
PE-8272M	1CT:1CT	0.2	4.0	3.5	14	0.2	0.7	0.7	—	1500	SM2
PE-8277M	2CT:1CT	0.5	5.0	6.0	18	0.7	0.9	0.45	—	1500	SM2
23Z81SM	1:1:1 dual	.085	2.5	3.0	9.5	0.2	0.20	—	—	500	SM3
23Z87SM	1:1:1	.085	2.5	3.0	9.5	0.2	0.20	—	—	500	SM2

NOTE: To order Tape & Reel packaging for surface mount parts, add the suffix "T" to the part number. (Example: PE-5769MT). The "T" will appear on all paper work, but will not be marked on parts.

Schematics



U.S: 858 674 8100 • U.K: 44 1483 401 700 • France: 33 3 84 35 04 04 • Singapore: 65 287 8998 • Taiwan: 886 2 2698 0228 • <http://www.pulseeng.com>

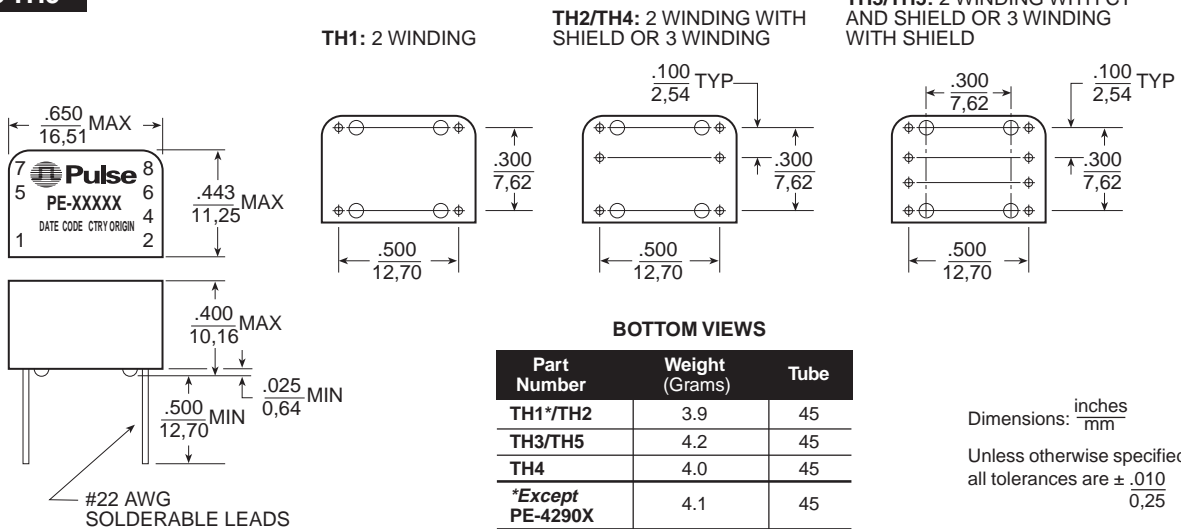
GENERAL PURPOSE TRANSFORMERS

2 Watt Pulse, Electrostatically Shielded, and 500 mW Pulse Transformers

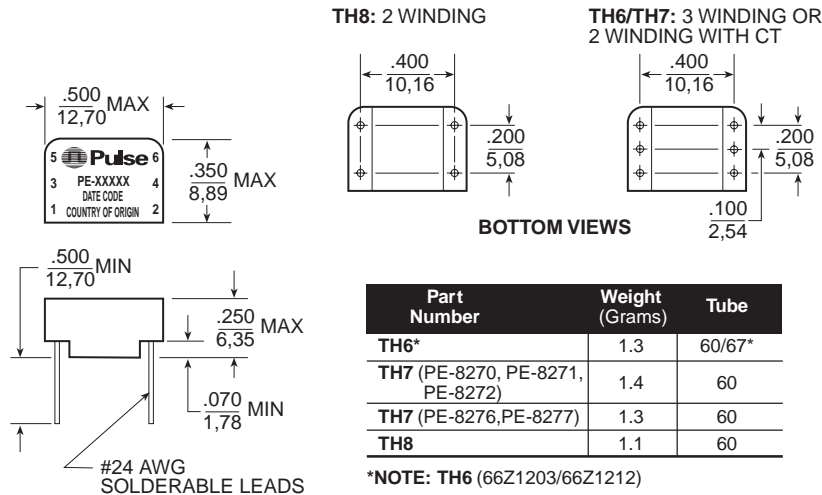


Mechanicals

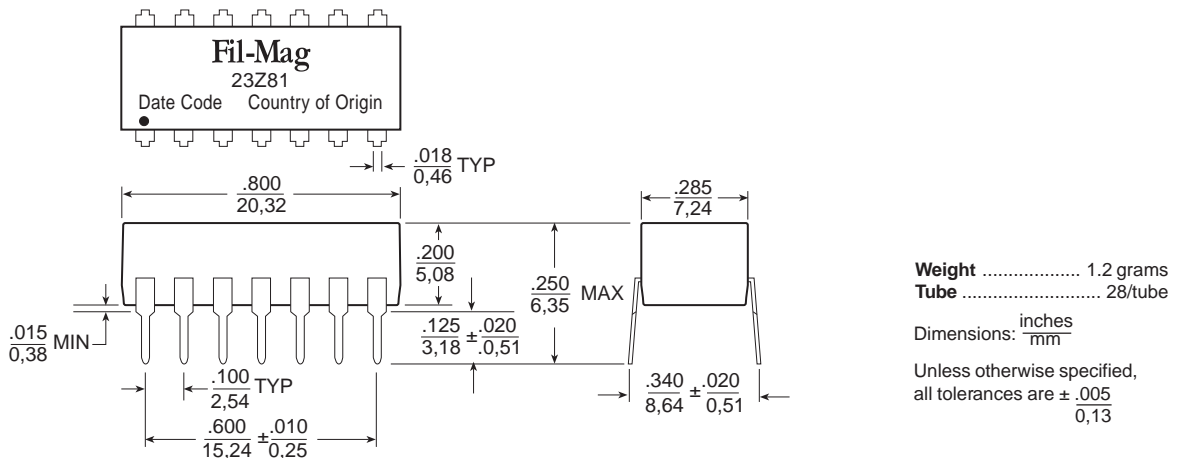
TH1 to TH5



TH6 to TH8



TH9



GENERAL PURPOSE TRANSFORMERS



2 Watt Pulse, Electrostatically Shielded, and 500 mW Pulse Transformers

Mechanicals

SM1 & SM2 (except 23Z87SM)

SUGGESTED PAD LAYOUT

23Z87SM

SUGGESTED PAD LAYOUT

Part	Weight (Grams)	Tape & Reel	Tube
SM1	0.6	500	65
SM2:			
PE-8271M	0.7	500	60
PE-8272M	0.7	500	65
PE-8277M	0.6	500	65
Except 23Z87SM	0.5	750	100

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

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

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

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

SM3

SUGGESTED PAD LAYOUT

Weight 0.9 grams

Tube 50/tube

Tape & Reel 750/reel

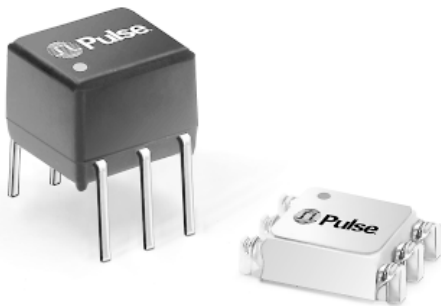
Dimensions: $\frac{\text{inches}}{\text{mm}}$

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

U.S: 858 674 8100 • U.K: 44 1483 401 700 • France: 33 3 84 35 04 04 • Singapore: 65 287 8998 • Taiwan: 886 2 2698 0228 • <http://www.pulseeng.com>

GENERAL PURPOSE TRANSFORMERS

RF Pulse



- Designed for use in 50 Ω Wideband IC applications
- Characterized for Pulse and wide band use at 50 Ω impedance
- Standard 6-pin DIP package or *ThinSet* surface mount package

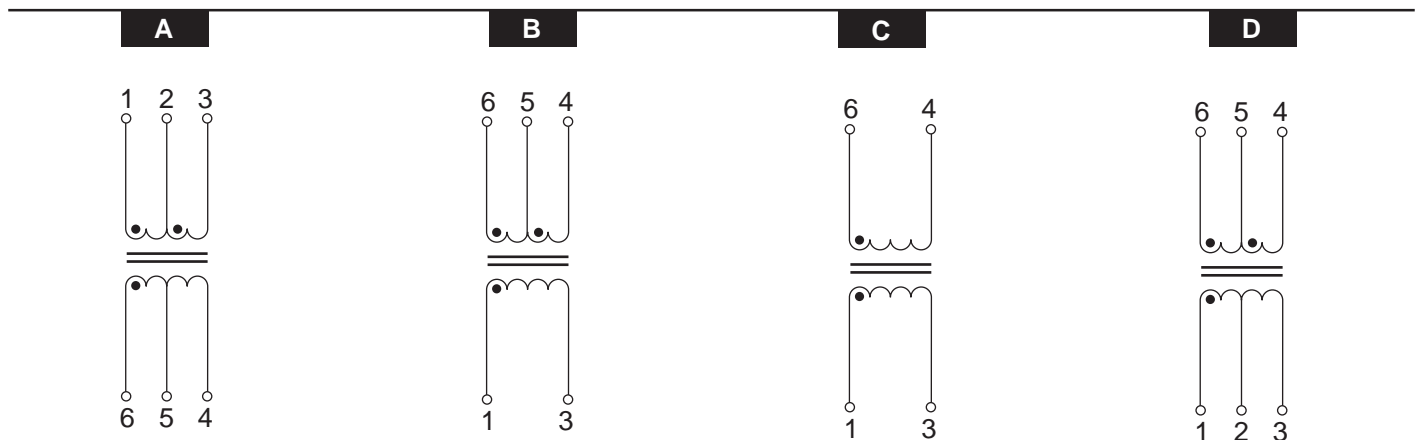
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio ($\pm 5\%$)	Primary Pulse Inductance (μH MIN)	Primary ET-Constant (v- μS MIN)	PRI/SEC C _{ww} (pF MAX)	PRI/SEC Leakage Inductance (μH MAX)	Primary DCR (Ω MAX)	Secondary DCR (Ω MAX)	Bandwidth for -3 dB Loss		Schematic/Package Style
								Low Freq (MHz)	High Freq (MHz)	
SURFACE MOUNT*										
PE-65457	1CT:1CT	80	2.5	15	0.18	0.20	0.20	0.05	90	A / SMT1
PE-65459	1CT:2CT	40	2.0	15	0.14	0.20	0.30	0.05	110	A / SMT1
23Z247SMD	1:1CT	80	2.5	15	0.18	0.20	0.20	0.05	90	B / SMT2
THROUGH HOLE										
PE-62245A	1:1	40	2.5	12	0.15	0.20	0.20	0.05	110	C / TH10
PE-62246A	1CT:1CT	40	2.5	15	0.18	0.20	0.20	0.05	90	D / TH10
PE-62250A	1:2CT	25	2.0	15	0.14	0.20	0.30	0.10	110	B / TH10
PE-62252A	1: $\sqrt{2}$ CT	40	2.5	18	0.20	0.20	0.30	0.05	80	B / TH10
PE-62254A	1:4CT	10	1.25	10	0.10	0.20	0.60	0.20	60	B / TH10

***NOTE:**

To order Tape & Reel packaging for surface mount parts, add the suffix "T" to the part number. (Example: PE-65457T). The "T" will appear on all paper work, but will not be marked on parts.

Schematics



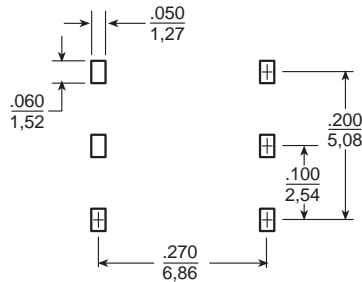
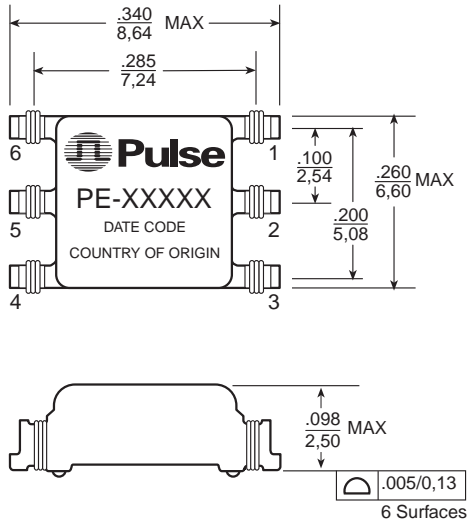
GENERAL PURPOSE TRANSFORMERS

RF Pulse



Mechanicals

SMT 1



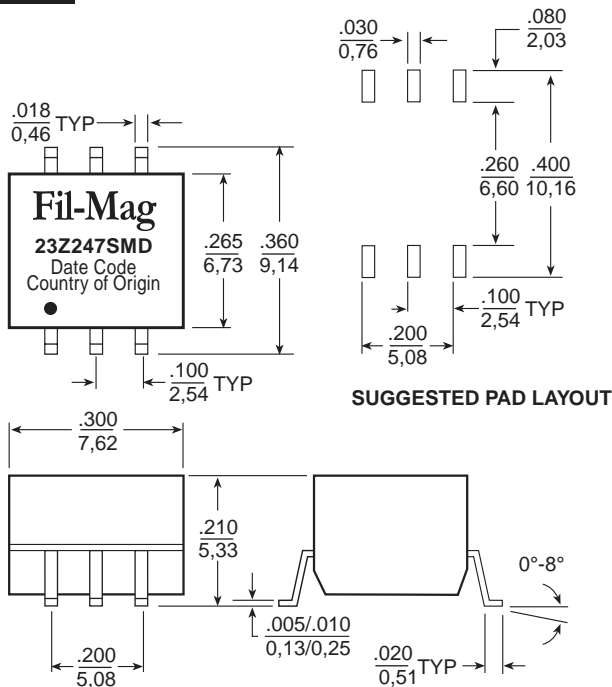
SUGGESTED PAD LAYOUT

	PE-65457	PE-65459
Weight	0.2 grams	0.1 grams
Tube	60/tube	60/tube
Tape & Reel	1500/reel	1500/reel

Dimensions: inches
mm

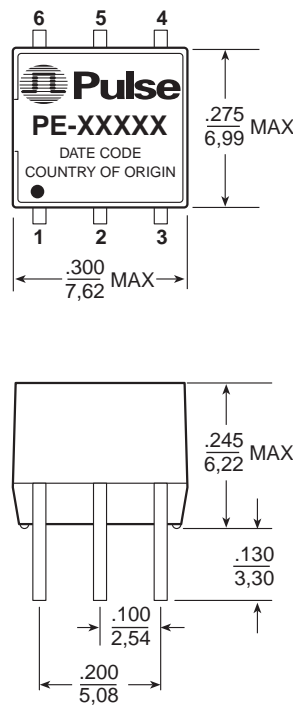
Unless otherwise specified, all tolerances are $\pm .010$
 $0,25$

SMT 2



SUGGESTED PAD LAYOUT

TH10



Weight	0.5 grams
Tube	76/tube
Tape & Reel	750/reel

Dimensions: inches
mm

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

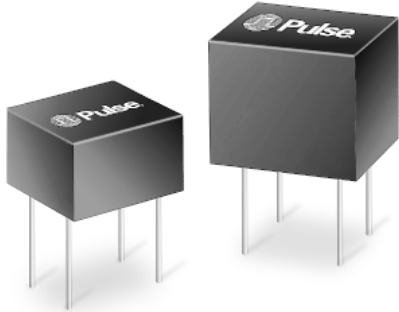
Weight	0.6 grams
Tube	65/tube




Dimensions: inches
mm

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

GENERAL PURPOSE TRANSFORMERS

Control Transformers



-  Recognized component – Underwriter's Laboratories, Inc.
-  High dielectric strength capability for industrial applications
-  High ET – product allows long pulse width

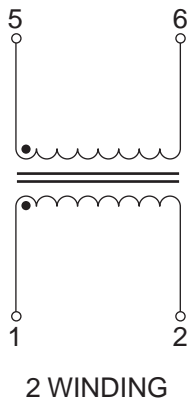
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio (±10%)	Primary Sine Wave OCL (mH MIN)	Primary ET-Constant (V-μs MIN)	PRI/SEC C _{ww} (pF MAX)	PRI/SEC Leakage Inductance	Primary DCR (Ω MAX)	Secondary DCR (Ω MAX)	Hi Pot* PRI/SEC (Vrms)	Schematic/Package Style
PE-61001	1:1	1.0	360	30	15.0	2.8	3.1	1600	A/TH11
PE-61003	2:1	0.2	180	24	5.0	1.4	0.9	1600	A/TH11
PE-61006	1:1:1	0.2	180	30	5.0	—	1.5	1600	B/TH11
PE-61007	1:1:1	1.0	360	36	12.0	2.8	3.6	1600	B/TH11
PE-61008	1:1:1	5.0	866	42	80.0	6.0	7.2	1600	B/TH11
PE-61014	1:1	1.0	700	36	26.0	3.0	3.2	2400	A/TH12
PE-61015	1:1	5.0	1500	42	130.0	6.3	7.0	2400	A/TH12
PE-61017	2:1	1.0	700	36	24.0	3.0	2.0	2400	A/TH12
PE-61018	2:1	5.0	1500	42	125.0	6.3	4.0	2400	A/TH12
PE-61019	1:1:1	0.2	290	34	4.7	1.4	1.5	2400	B/TH12
PE-61023	2:1:1	1.0	700	40	27.0	3.0	2.0	2400	B/TH12

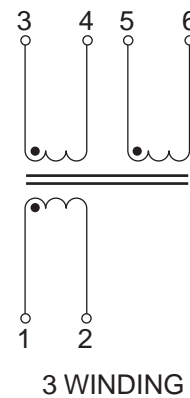
*NOTE: PE-61001–PE-61023 Hi Pot SEC/SEC 300 Vrms. Average Power Rating: 2 Watts. UL-478 Recognized, File Number E52661.

Schematics

A



B



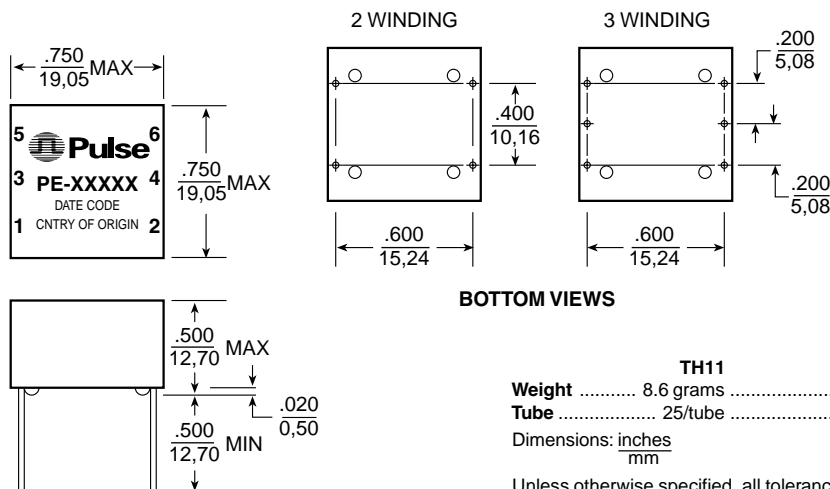
GENERAL PURPOSE TRANSFORMERS

Control Transformers



Mechanicals

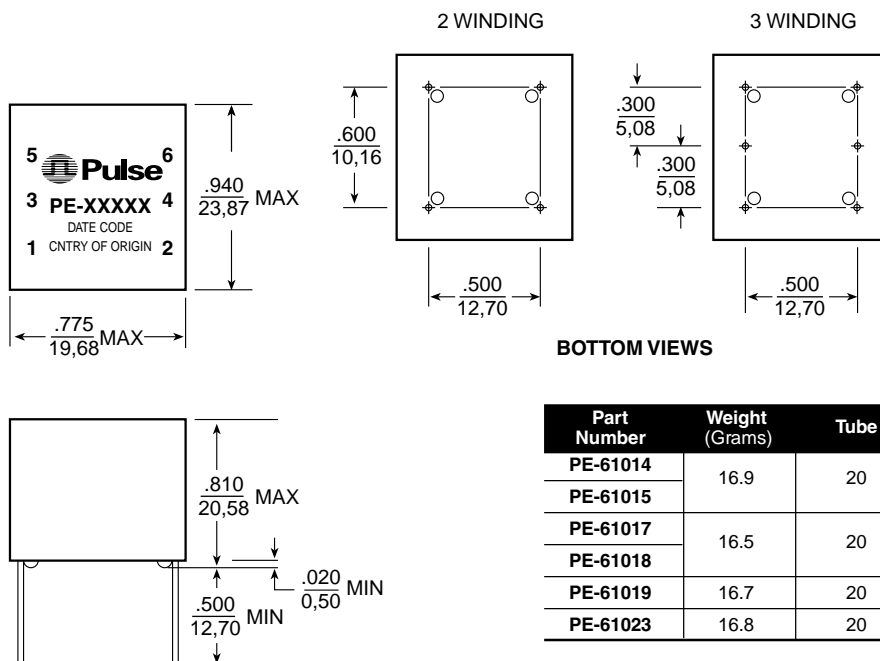
TH11



BOTTOM VIEWS

TH11 **Except PE-61003**
Weight 8.6 grams 8.2 grams
Tube 25/tube 25/tube
Dimensions: inches
 mm
Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

TH12



BOTTOM VIEWS

Part Number	Weight (Grams)	Tube
PE-61014	16.9	20
PE-61015		
PE-61017	16.5	20
PE-61018		
PE-61019	16.7	20
PE-61023	16.8	20

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

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)

1 & 2 Huxley Road
The 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: 65 287 8998
FAX: 65 280 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

DISTRIBUTOR

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.

Printed on recycled paper. ©2001, Pulse Engineering, Inc.