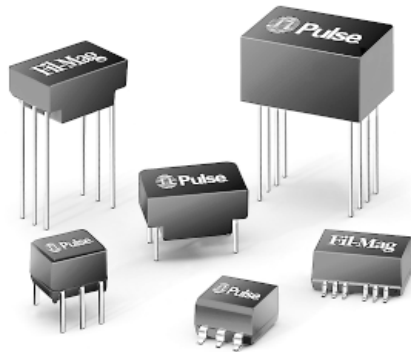


GENERAL PURPOSE TRANSFORMERS

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



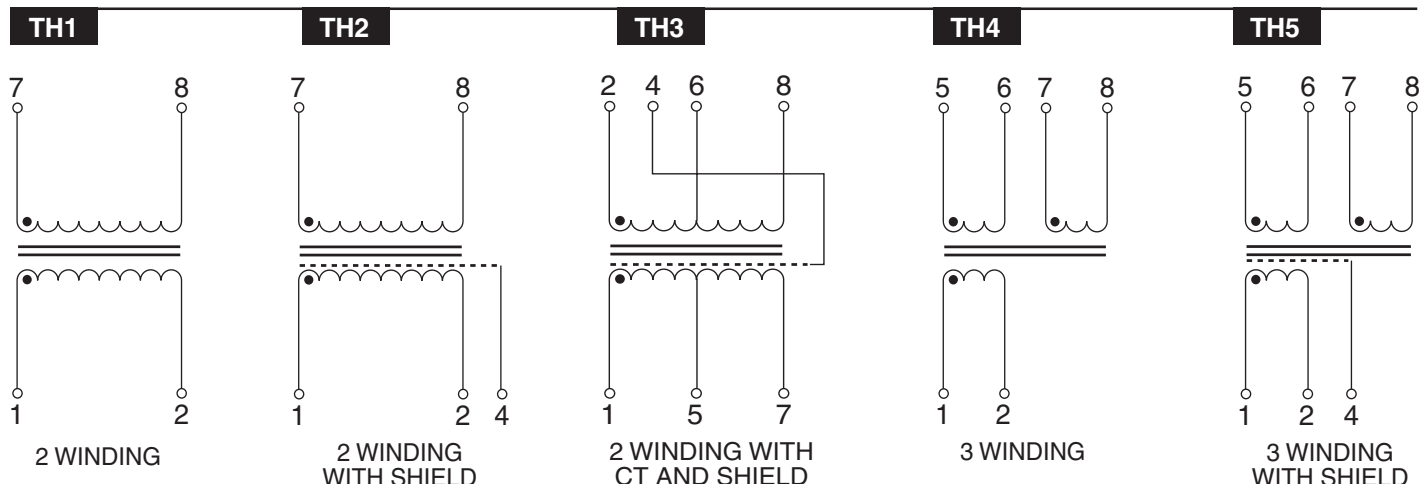
-  Wide range of inductors and turns ratios
-  Suitable for a variety of applications
-  High flux density capability
-  Available in through hole and surface mount packages

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 (Vrms)	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



GENERAL PURPOSE TRANSFORMERS

500 mW Pulse

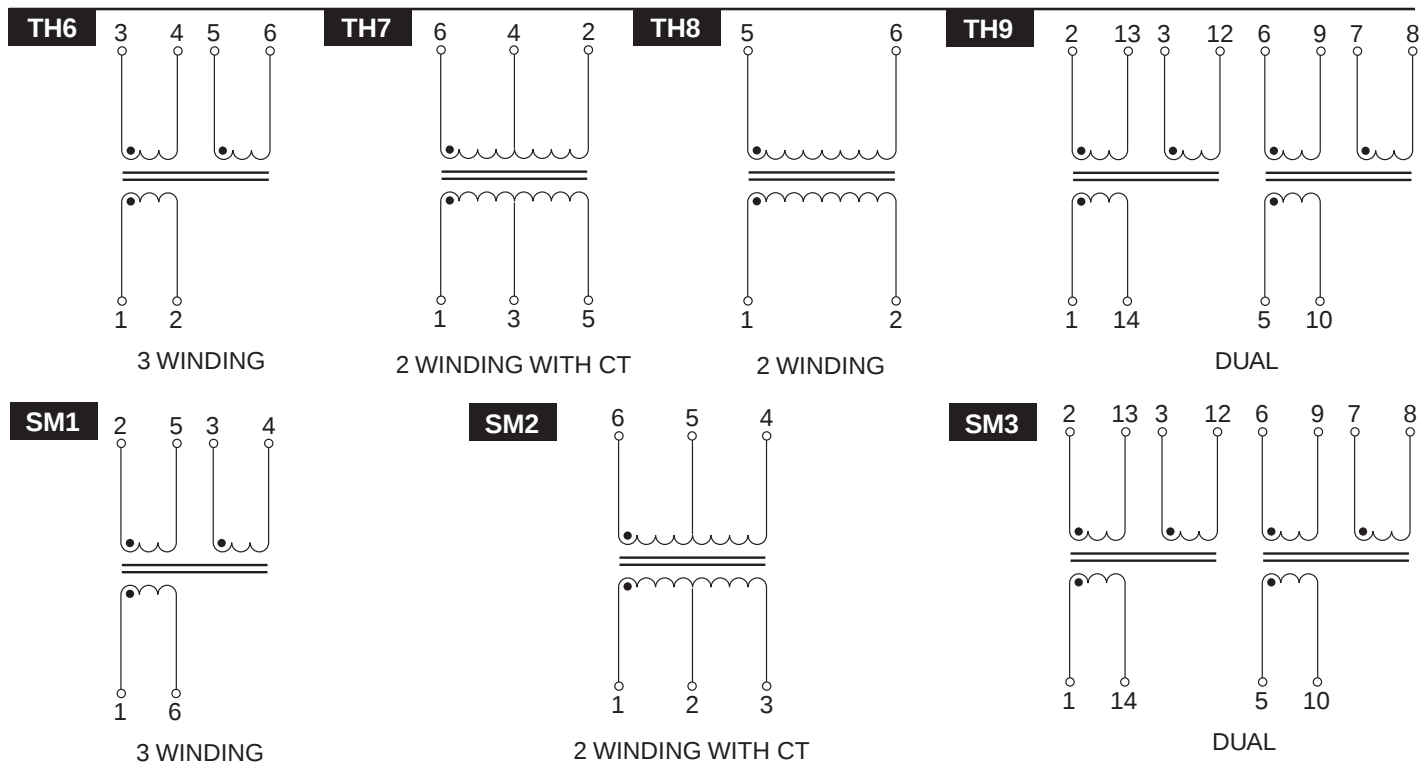


Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

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



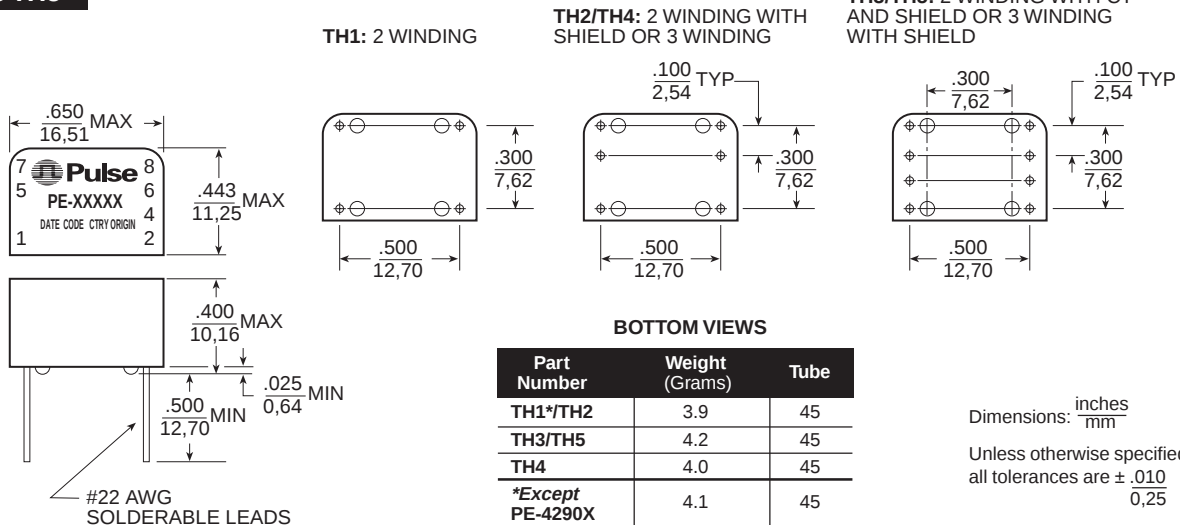
GENERAL PURPOSE TRANSFORMERS

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

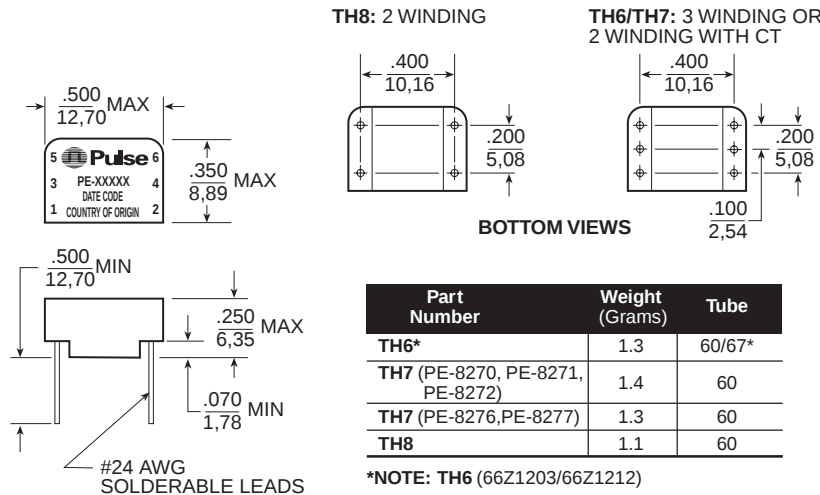


Mechanicals

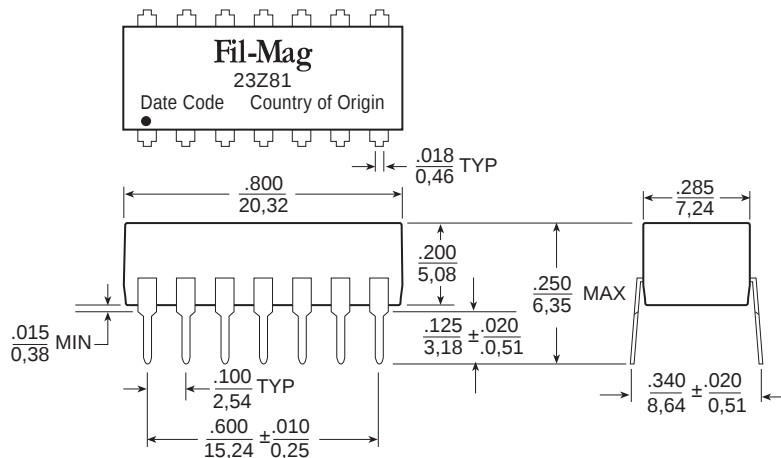
TH1 to TH5



TH6 to TH8



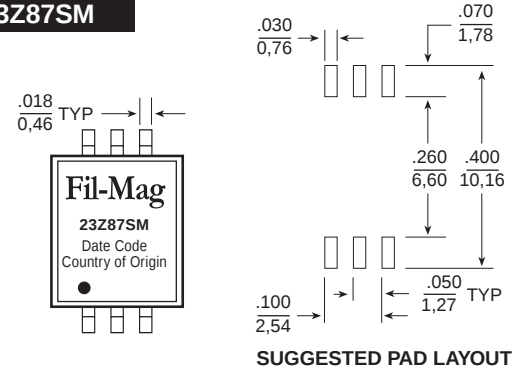
TH9



Pulse
A TECHNITROL COMPANY

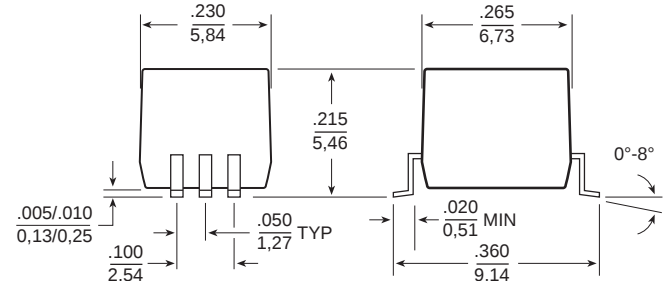
Mechanicals

23Z87SM



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

Unless otherwise specified,
all tolerances are $\pm \frac{.010}{.025}$



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

Unless otherwise specified, all tolerances are $\pm \frac{.005}{0.13}$

Fil-Mag
23Z81SM

● Date Code Country of Origin

SUGGESTED PAD LAYOUT

Dimensions are given in inches (top) and millimeters (bottom). TYP indicates typical dimensions.

Top View Dimensions:

- Overall width: .100 / 2,54
- Overall height: .070 / 1,78
- Pin pitch (center-to-center): .030 / 0,76
- Pin width: .260 / 6,60
- Pin spacing (between groups): .400 / 10,16
- Pin width (bottom): .050 / 1,27
- Pin pitch (bottom): .300 / 7,62

Side View Dimensions:

- Overall height: .450 / 11,43
- Pin height: .215 / 5,46
- Pin pitch (bottom): .050 / 1,27
- Pin width (bottom): .300 / 7,62

Suggested Pad Layout Dimensions:

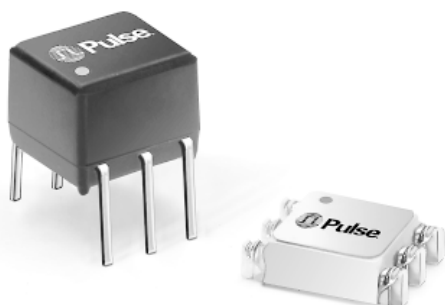
- Pad width: .265 / 6,73
- Pad height: .020 / 0,51 (MIN)
- Pad spacing (between groups): .360 / 9,14
- Pad angle: 0°-8°

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

Unless otherwise specified, all tolerances are $\pm \frac{.005}{0.13}$

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

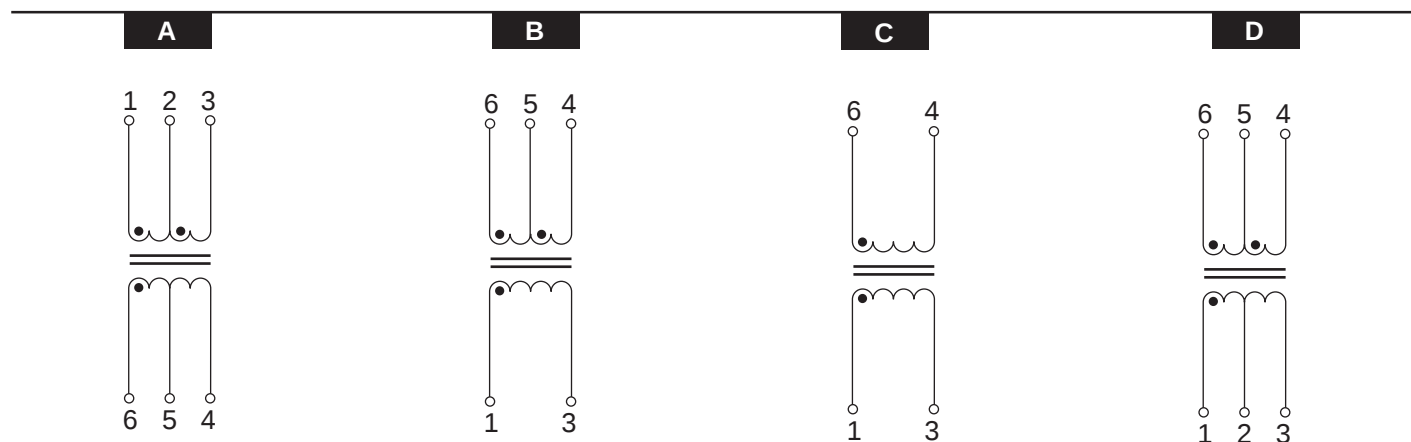
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio (±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 Low Freq High Freq (MHz) (MHz)		Schematic/Package Style
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:√2CT	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



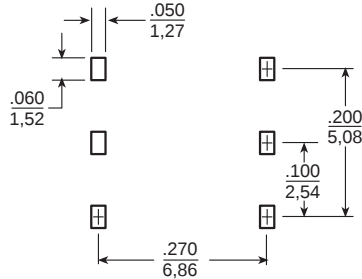
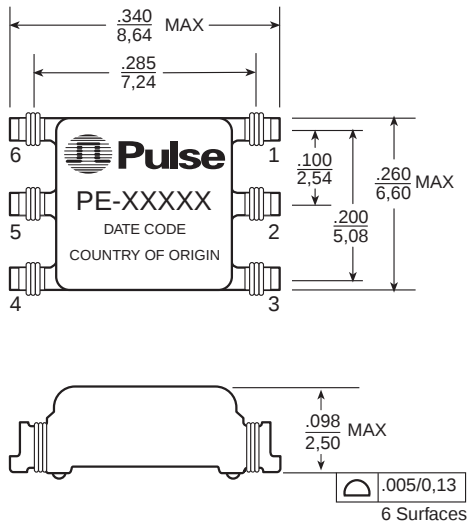
GENERAL PURPOSE TRANSFORMERS

RF Pulse



Mechanicals

SMT 1



SUGGESTED PAD LAYOUT

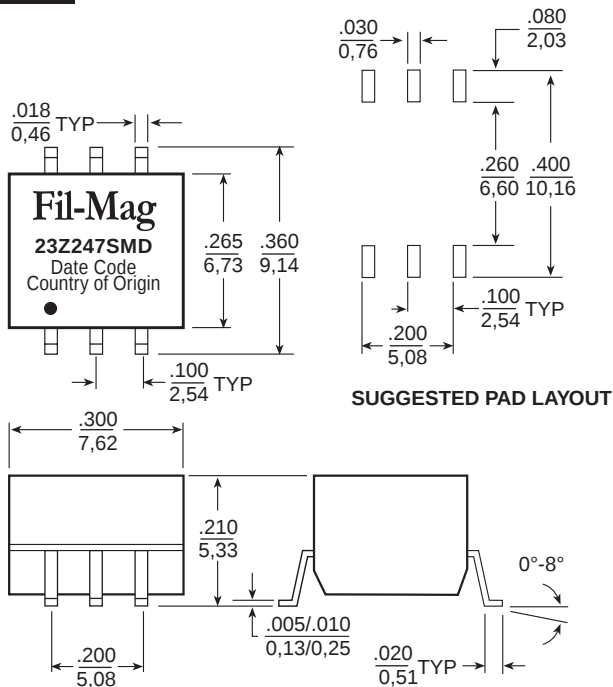
PE-65457 PE-65459

Weight 0.2 grams 0.1 grams
Tube 60/tube 60/tube
Tape & Reel 1500/reel 1500/reel

Dimensions: inches
mm

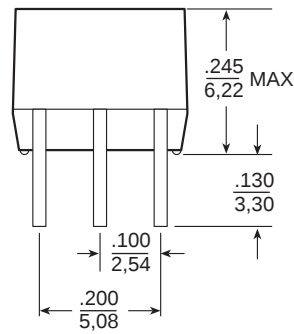
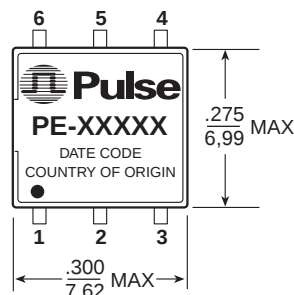
Unless otherwise specified, all tolerances are $\pm .010$
0,25

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

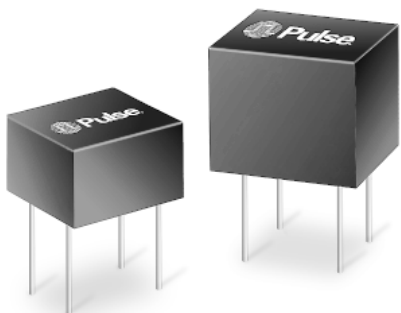
Weight 0.6 grams
Tube 65/tube

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

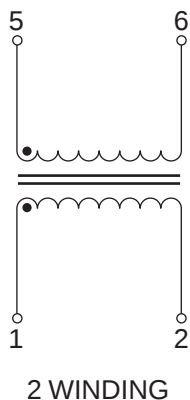
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio (±10%)	Primary Sine Wave OCL (mH MIN)	Primary ET-Constant (V-μs MIN)	PRI/SEC Cww (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

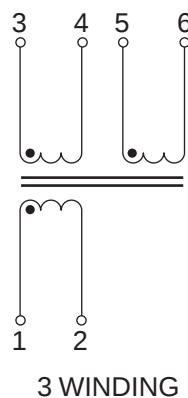
*NOTE: PE-61001–PE-61023 Hi Pot SEC/SEC 300 Vrms. Average Power Rating: 2 Watts. UL-478 Recognized, File Number E52661.

Schematics

A



B



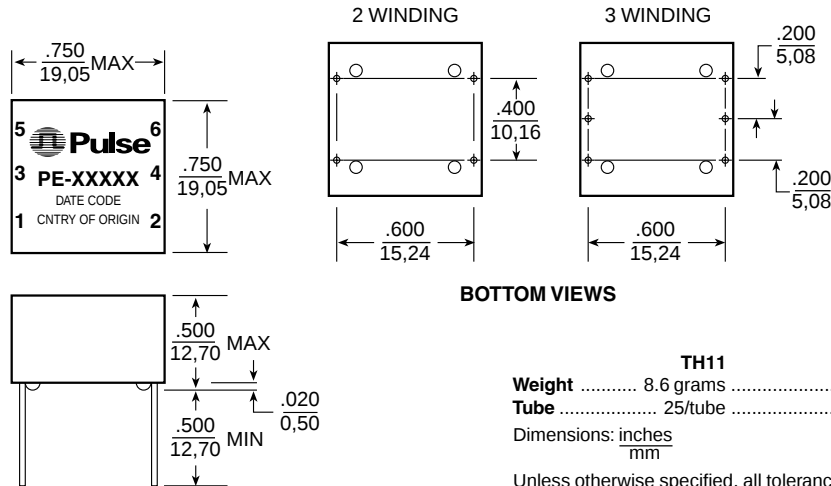
GENERAL PURPOSE TRANSFORMERS

Control Transformers



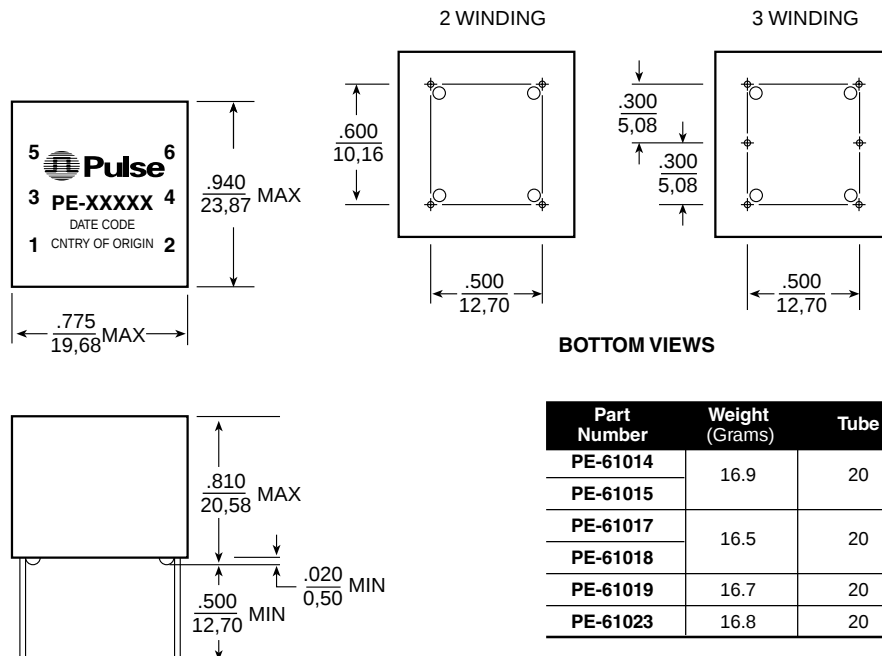
Mechanicals

TH11



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



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 $\pm \frac{.010}{0,25}$

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