

ISDN U-INTERFACE TRANSFORMERS

For Applications with 2B1Q and 4B3T Coding



-  Matched to leading transceiver ICs
-  Parts meet ANSI T1.601-1992 and ETSI ETR 080
-  Transformer models with 2000 Vrms to 3000 Vrms minimum isolation
-  Recognized to UL1459 and UL1950
-  BABT certified to EN60950

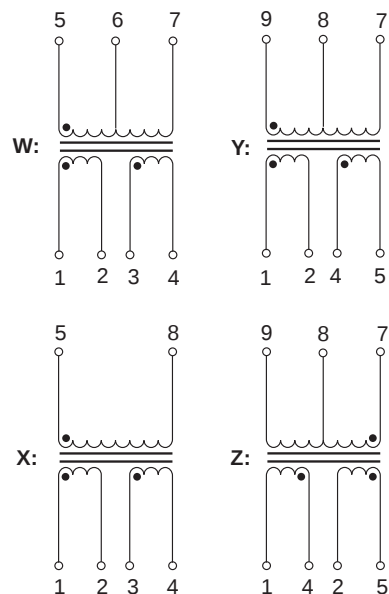
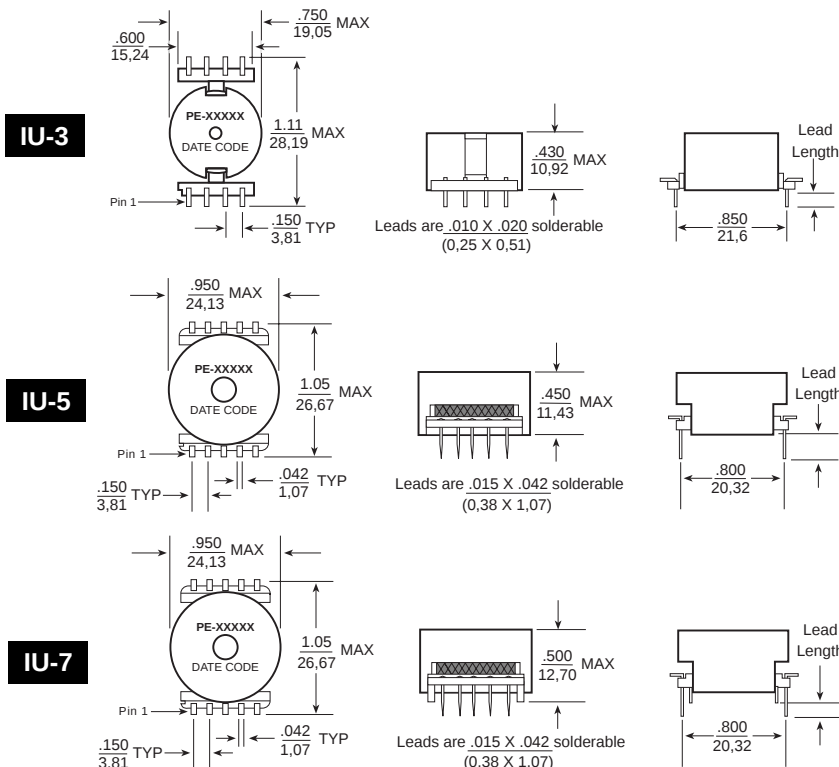
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Isolation Voltage (Vrms MIN)	Part Number	Turns Ratio Line:Chip (±3%)	Line Side Pins	OCL Line side (mH)	DCR Line Side (Ω)	DCR Chip Side (Ω)	IDC (mA)	Lead Length	Package/ Schematic
2000 Vrms	PE-65575*	1.65:1	(1-4)	13.0-18.0	5.2 ±15%	3.0 ±15%	50	0.15 ± 0.03 (3,81 ± 0,76)	IU-3/W ⁴
	PE-65578	1.32:1	(1-4)	7.0-8.3	2.4 MAX	2.7 MAX	55	0.15 ± 0.03 (3,81 ± 0,76)	IU-3/X
	PE-65579	2.00:1	(1-5)	25.5-28.5	11.6 MAX	6.4 MAX	60	0.17 ± 0.04 (4,32 ± 1,02)	IU-5/Y
	PE-65581	1.50:1	(4-2)	14.2-15.8	16.0 MAX	2.5 MAX	60	0.17 ± 0.04 (4,32 ± 1,02)	IU-5/Z
	PE-65583	1.50:1	(4-2)	25.6-29.0	20.0 MAX	3.0 MAX	60	0.16 ± 0.03 (4,06 ± 0,76)	IU-5/Z ²
	PE-65584	1.50:1	(1-5)	25.6-29.0	20.0 MAX	3.0 MAX	60	0.17 ± 0.04 (4,32 ± 1,02)	IU-5/Y ²
2500 Vrms	PE-68628*	1.25:1	(1-5)	26.5-29.5	12.0 MAX	7.0 MAX	80	0.16 ± 0.03 (4,06 ± 0,76)	IU-5/Y ²
	PE-68631	1.50:1	(4-2)	25.6-29.0	20.0 MAX	3.0 MAX	60	0.13 ± 0.03 (3,30 ± 0,76)	IU-7/Z ²
	PE-68681	1.50:1	(1-5)	25.6-28.4	20.0 MAX	3.0 MAX	60	0.13 ± 0.03 (3,30 ± 0,76)	IU-7/Y ²
3000 Vrms	PE-68668*	1.25:1	(1-5)	26.5-29.5	13.0 MAX	7.5 MAX	80	0.13 ± 0.03 (3,30 ± 0,76)	IU-7/Y ²
	PE-68669*	1.65:1	(1-4)	13.0-18.0	5.2 ±15%	3.0 ±15%	50	0.13 ± 0.03 (3,30 ± 0,76)	IU-3/W

NOTE: For surface mount versions of these parts, please see data sheet T614. New small surface mount package available. Contact Pulse Application Engineering at (619) 674-8100 for more information. *Operating temperature range: -40°C to 85°C.

Mechanicals

Schematics



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

U.S.A: TEL 619 674 8100 • EUROPE: TEL 44 1483 401700 • ASIA: TEL 65 287 8998 • WEB: <http://www.pulseeng.com>

T603.D (12/98)

Return Loss (2B1Q) (10 and 25 KHz)	Longitudinal Balance (2B1Q)		Longitudinal Balance (4B3T)		Surge Voltage Resistability (ALL)	
20 dB MIN	281 Hz to 40 KHz	55 dB MIN	5 KHz	20 dB MIN	Metallic @ 800 V Peak	10/700 μsec
—	Above 40 KHz	-20 dB/decade	20 KHz-150 KHz	40 dB MIN	Long. @ 2400 V Peak	10/560 μsec
—	—	—	1 MHz	36 dB MIN	—	—

Company	Chip	Coding	Transformer 2000 Vrms Isolation	Transformer High Isolation Models	Echo Cancellation Hybrid
Motorola	MC145472	2B1Q	PE-65579	—	—
Motorola	MC145572	2B1Q	PE-68628	PE-68668	—
National	TP 3410	2B1Q	PE-65583 ⁽¹⁾	PE-68631	—
			PE-65584 ⁽¹⁾	PE-68681	—
Siemens	PEB 2091	2B1Q	PE-65575 ⁽⁴⁾	PE-68669	PE-36005 or PE-36005W
Siemens	PEB 2090 PEB 20901	4B3T	PE-65578	—	—
Thomson	SD 5411	2B1Q	PE-65581	—	—

PE-36005	Through Hole	THT	DP-14/TH
PE-36005W	Surface Mount	SMT	DP-14/SM

1. PE-65583 and PE-65584 are electrically identical, but have different schematics.
2. Pin 6 removed for keying to printed circuit board.
3. Common Mode Chokes for EMI reduction are also available. Recommended part numbers are either PE-68624 (surface mount) or PE-65944 (through hole) – see data sheet **G002**.
4. Additional model PE-65585, equivalent to PE-65575, has standoffs. Maximum height is .475 (12.07).

DP-14

Pin Configuration: The package is a 14-pin DIP. Pins 1-7 are on the left, and pins 8-14 are on the right. The package is labeled with "PE-XXXXX (DATE CODE)" and "(COUNTRY OF ORIGIN)".

Dimensions: The package height is .200 MAX (5,08). The lead length is .120 MIN (3,05). The lead width is .100 TYP (0,54). The package width is .600 MAX (15,24). The lead thickness is .030 (0,77).

Suggested SM Layout: The package is shown in a surface mount footprint. The footprint dimensions are: .100 TYP (2,54) for the lead width, .080 (2,03) for the lead spacing, .040 (1,02) for the lead thickness, .600 (15,24) for the package width, .170 (4,32) for the lead length, and .340 (8,64) for the lead spacing.

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

	DP-14TH	DP-14SM
Weight	1.5 grams	1.5 grams
Tube	25/tube	25/tube

Distributor

T603.D (12/98)