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

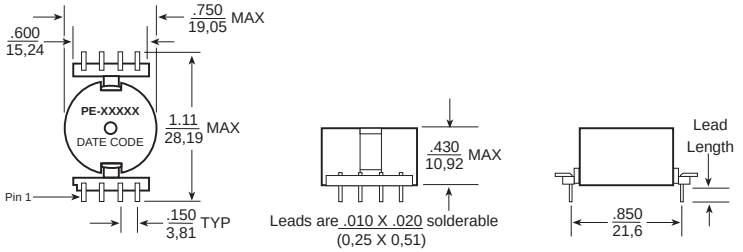
Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

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]
	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]
2500 Vrms	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]
	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]
3000 Vrms	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

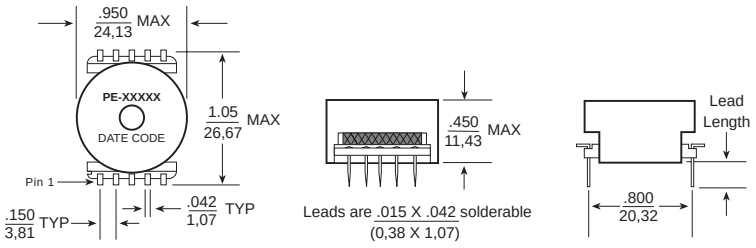
NOTE: For surface mount versions of these parts, please see data sheet **T614.** New small surface mount package available. Contact Pulse Application Engineering at (619) 674-8100 for more information. ***Operating temperature range: -40°C to 85°C.**

Mechanicals

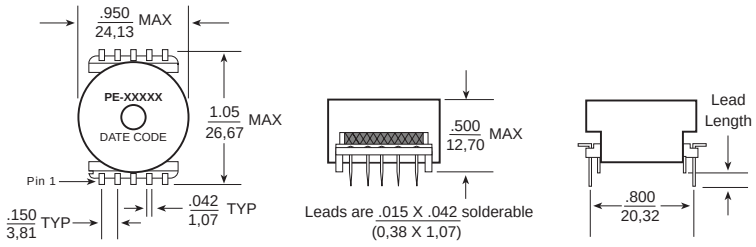
IU-3



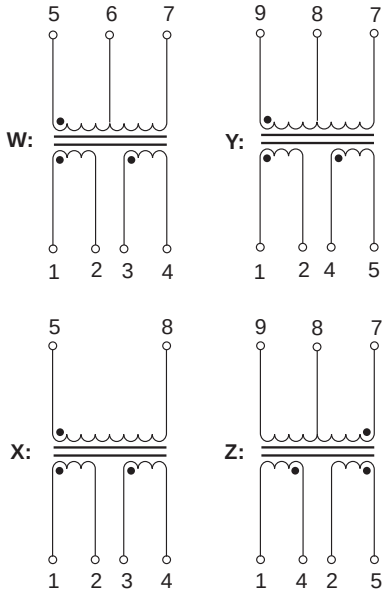
IU-5



IU-7



Schematics



Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

ISDN U-INTERFACE TRANSFORMERS

For Applications with 2B1Q and 4B3T Coding

Pulse
A TECHNITROL COMPANY

Additional Specifications

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	—	—

Transformer Selection

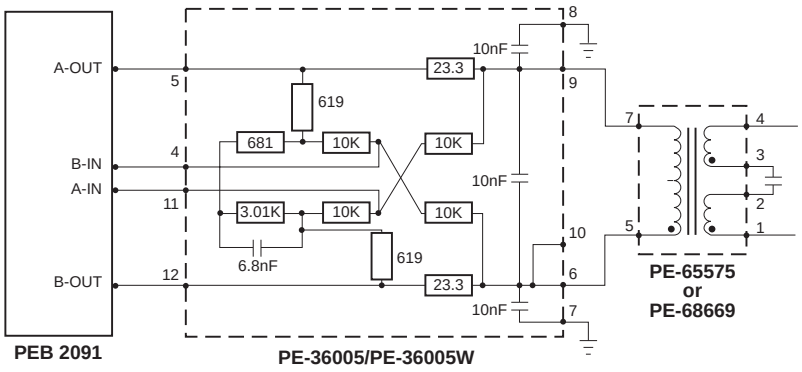
Company	Chip	Coding	Transformer 2000 Vrms Isolation	Transformer High Isolation Models	Echo Cancellation Hybrid
Motorola	MC145472	2B1Q	PE-65579	—	—
Motorola	MC145572	2B1Q	PE-68628	PE-68668	—
National	TP 3410	2B1Q	PE-65583(1)	PE-68631	—
			PE-65584(1)	PE-68681	—
Siemens	PEB 2091	2B1Q	PE-65575(4)	PE-68669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

Echo Cancellation Hybrids

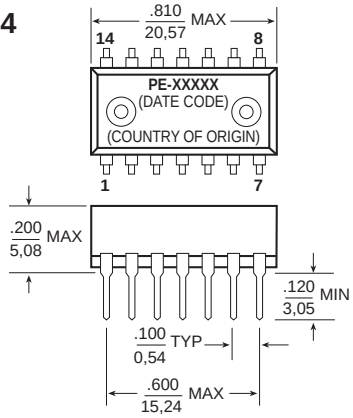
PE-36005	Through Hole	THT	DP-14/TH
PE-36005W	Surface Mount	SMT	DP-14/SM

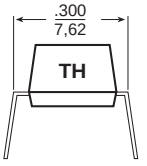
Notes:
1. PE-65583 and PE-65584 are electrically identical, but have different schematics.
2. Pin 6 removed for keying to printed circuit board.
3. Common Mode Chokes for EMI reduction are also available. Recommended part numbers are either PE-68624 (surface mount) or PE-65944 (through hole) – see data sheet **G002.**
4. Additional model PE-65585, equivalent to PE-65575, has standoffs. Maximum height is .475 (12,07).

Typical Application Circuit for Transformer and Echo Cancellation Hybrid

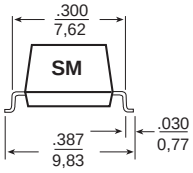


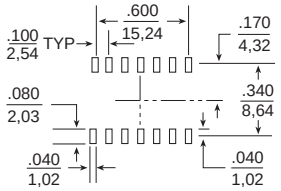
DP-14





Leads are .010 X .020 solderable (0,25 X 0,51)





SUGGESTED SM LAYOUT

Dimensions: Inches / mm

Unless otherwise specified all tolerances are ± .010 / 0,25

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

For More Information :

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