




# ISDN U-INTERFACE SURFACE MOUNT TRANSFORMERS

## For Applications in 2B1Q Coding



-  Characteristics matched to leading transceiver ICs
-  Meets ANSI T1.601-1992 and ETSI ETR 080 standards for longitudinal balance, linearity and return loss
-  Minimum Isolation: 2000 Vrms

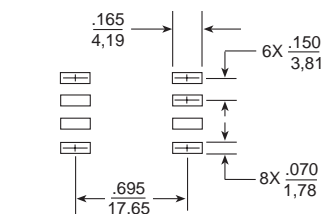
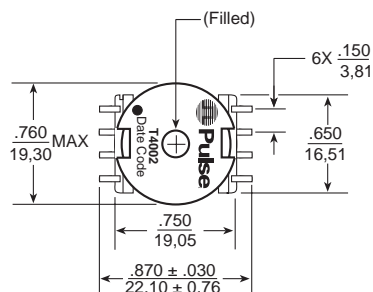
### Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

Part Number	Turns Ratio Line:Chip (±3%)	Line Side Pins	ACL Line side (mH)	DCR Line Side (Ω)	DCR Chip Side (Ω)	IDC (mA)	Isolation Voltage (Vrms MIN)	Package/Schematic
T4001	1.25:1	(1-5)	26.5-30.0	12.4 MAX	7.0 MAX	80	2000	BT-2/Y
T4002	1.65:1	(1-4)	15.0-18.0	5.2 ± 15%	3.0 ± 15%	50	2000	BT-1/W
T4004	1.50:1	(1-5)	25.6-28.4	20.0 MAX	3.0 MAX	60	2000	BT-2/Z
T4006	1.50:1	(1-5)	14.2-15.8	16.0 MAX	2.5 MAX	60	2000	BT-2/Z

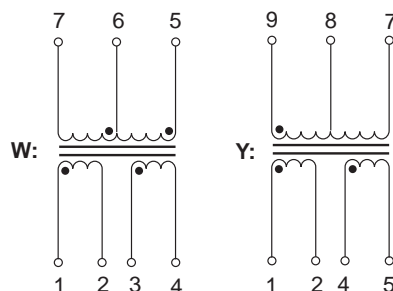
### Mechanicals

### Schematics

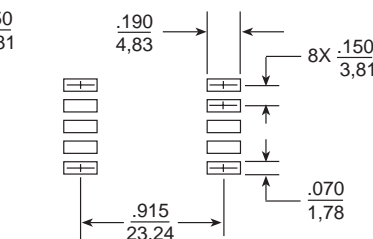
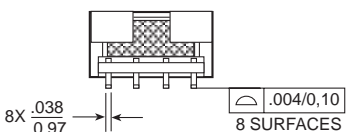
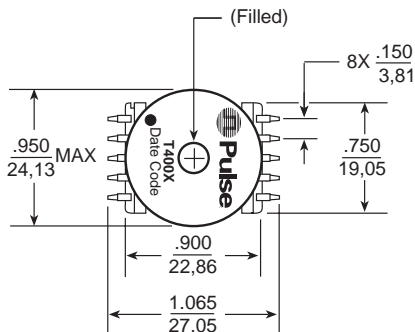
**BT-1**



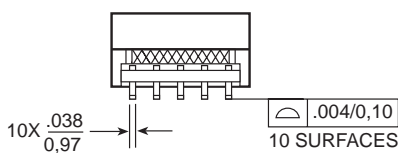
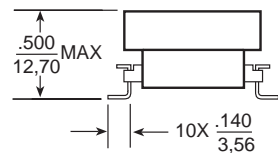
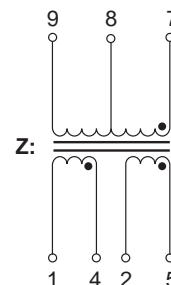
SUGGESTED PAD LAYOUT



**BT-2**



SUGGESTED PAD LAYOUT



**BT-1**      **BT-2**  
 Weight ..... 9.5 grams ..... 15.0 grams  
 Pan Size ..... 30/tray ..... 24/tray

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

Unless otherwise specified all tolerances are  $\pm \frac{.010}{0.25}$

Fuji IP III Machine:  
 Nozzle: AQNA-3230  
 Rubber pad: UP5X20EN

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## For Applications in 2B1Q Coding



### Additional Specifications

Return Loss (10 and 25 KHz)	Longitudinal Balance		Surge Voltage Capability	
20 dB MIN	281 Hz to 40 KHz	55 dB MIN	Metallic @ 800 V Peak	10/700 usec
—	Above 40 KHz	-20 dB/decade	Long. @ 2400 V Peak	10/560 usec

### Transformer Selection

Company	Chip	Transformer 2000 Vrms Isolation	Echo Cancellation Hybrid
Motorola	MC145572	T4001	—
Siemens	PEB 2091	T4002	PE-36005 or PE-36005W
National	TP 3410	T4004	—
Thomson	SD5411	T4006	—

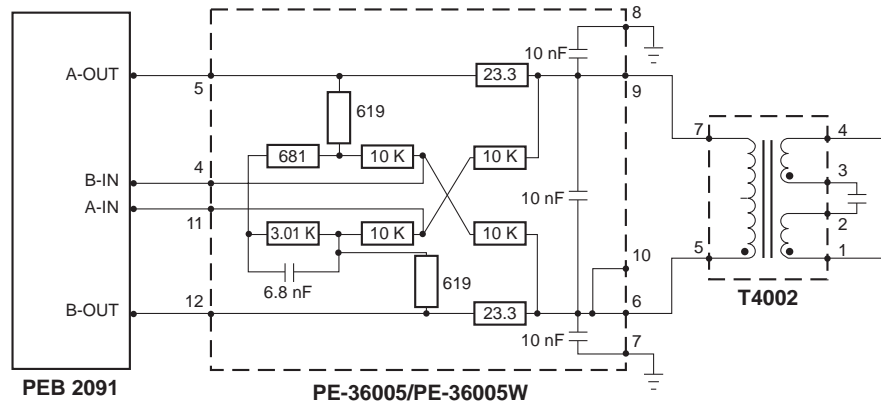
### Echo Cancellation Hybrids

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

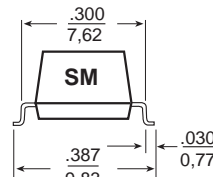
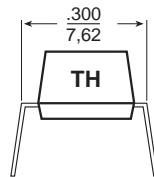
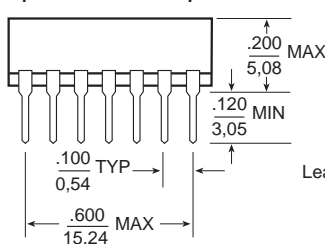
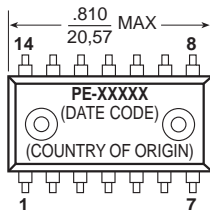
#### Notes:

1. Safety Standards Recognition – All transformers listed in this data sheet are designed to meet UL 1459 and UL 1950 as a basic insulation barrier (All pending).
2. 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.

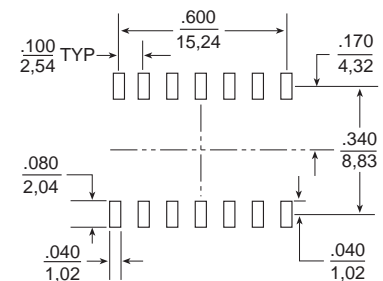
### Echo Cancellation Hybrid:



### DP-14



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



### SUGGESTED PAD LAYOUT

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

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

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

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