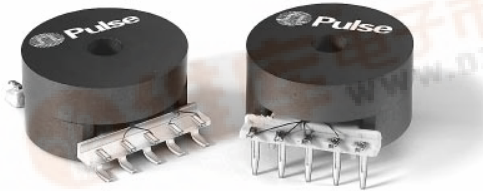


# HDSL TRANSFORMERS

For Brooktree and Level One Chipsets



- Designs exceed standards for ANSI and ETSI
- Excellent THD performance
- Maximum height .500" (12,70 mm)
- Matched to Brooktree's ICs

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

| Part Number | Matched To Brooktree IC No. | Application        | Turns Ratio Chip-Line (±2%) | Inductance Line Side (mH) | DC Current Capability (mA) | Leakage Inductance (µH MAX) | Isolation Voltage (Vrms MIN) | Mounting |
|-------------|-----------------------------|--------------------|-----------------------------|---------------------------|----------------------------|-----------------------------|------------------------------|----------|
| PE-68621    | BT8952                      | 784 Kbps (2 pair)  | 2CT:1:1                     | 3.0 ± 6%                  | 160                        | 16                          | 1500                         | THT      |
| PE-68622    | BT8952                      | 1168 Kbps (2 pair) | 2CT:1:1                     | 2.0 ± 6%                  | 160                        | 16                          | 1500                         | THT      |
| PE-69300    | BT8921/BT8970               | 784 Kbps (2 pair)  | 1CT:1:1                     | 3.0 ± 6%                  | 70                         | 8                           | 1500                         | THT      |
| PE-69301    | BT8921/BT8970               | 1168 Kbps (2 pair) | 1CT:1:1                     | 2.0 ± 6%                  | 70                         | 8                           | 1500                         | THT      |
| B1001       | BT8960                      | 416 Kbps           | 1CT:1:1                     | 3.5 ± 10%                 | 70                         | 12                          | 1500                         | THT      |
| B1002       | BT8960                      | 288 Kbps           | 1CT:1:1                     | 5.0 ± 10%                 | 70                         | 12                          | 1500                         | THT      |
| B1004       | BT8960                      | 160 Kbps           | 1CT:1:1                     | 8.0 ± 10%                 | 70                         | 16                          | 1500                         | THT      |
| B1006       | BT8921/BT8970               | 1168 Kbps (2 pair) | 1CT:1:1                     | 2.0 ± 6%                  | 70                         | 8                           | 1500                         | SMT      |
| B1007       | BT8921/BT8970               | 784 Kbps (2 pair)  | 1CT:1:1                     | 3.0 ± 6%                  | 70                         | 8                           | 1500                         | SMT      |

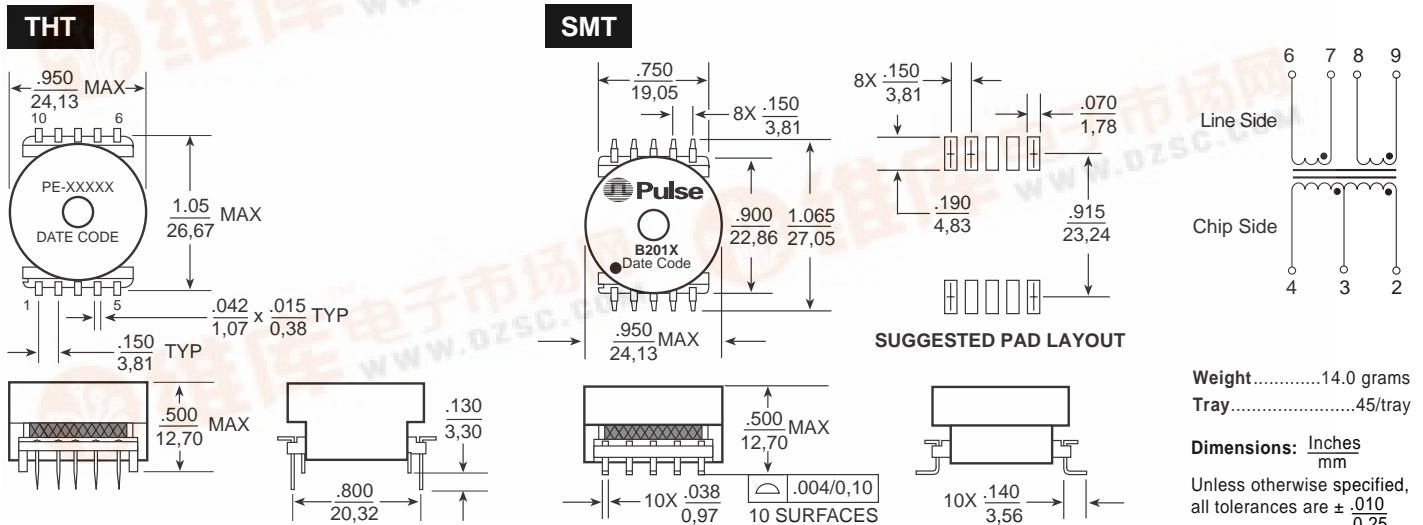
## Additional Information

| Part Number | DCR Line Side (MAX) | DCR Chip Side (MAX) | Return Loss   |              |              | Longitudinal Balance (dB TYP @ 135 Ω) | THD (dB TYP @ 135 Ω)  | Mounting |
|-------------|---------------------|---------------------|---------------|--------------|--------------|---------------------------------------|-----------------------|----------|
|             |                     |                     | 4 KHz - 2 MHz | 40 - 200 KHz | 40 - 320 KHz |                                       |                       |          |
| PE-68621    | 2.2 Ω (6-7),(8-9)   | 4.4 Ω (2-4)         | 4 dB MIN      | 20 dB MIN    | —            | 55 @ 196 KHz                          | -75 @ 200 KHz, 6V p-p | THT      |
| PE-68622    | 2.2 Ω (6-7),(8-9)   | 4.4 Ω (2-4)         | 4 dB MIN      | —            | 16.5 dB MIN  | 55 @ 292 KHz                          | -75 @ 200 KHz, 6V p-p | THT      |
| PE-69300    | 2.2 Ω (6-7),(8-9)   | 2.2 Ω (2-4)         | 4 dB MIN      | 20 dB MIN    | —            | 55 @ 196 KHz                          | -75 @ 200 KHz, 6V p-p | THT      |
| PE-69301    | 2.2 Ω (6-7),(8-9)   | 2.2 Ω (2-4)         | 4 dB MIN      | —            | 16.5 dB MIN  | 55 @ 292 KHz                          | -75 @ 200 KHz, 6V p-p | THT      |
| B1006       | 2.2 Ω (6-7),(8-9)   | 2.2 Ω (2-4)         | 4 dB MIN      | —            | 16.5 dB MIN  | 55 @ 292 KHz                          | -75 @ 200 KHz, 6V p-p | SMT      |
| B1007       | 2.2 Ω (6-7),(8-9)   | 2.2 Ω (2-4)         | 4 dB MIN      | 20 dB MIN    | —            | 55 @ 196 KHz                          | -75 @ 200 KHz, 6V p-p | SMT      |
|             |                     |                     | 9 - 40 KHz    | 20 - 80 KHz  | 33 - 110 KHz |                                       |                       |          |
| B1001       | 2.2 Ω (6-7),(8-9)   | 2.2 Ω (2-4)         | —             | —            | 16.5 dB MIN  | 55 @ 104 KHz                          | -70 @ 104 KHz, 6V p-p | THT      |
| B1002       | 2.5 Ω (6-7),(8-9)   | 2.5 Ω (2-4)         | —             | 16.5 dB MIN  | —            | 55 @ 72 KHz                           | -70 @ 80 KHz, 6V p-p  | THT      |
| B1004       | 3.0 Ω (6-7),(8-9)   | 3.0 Ω (2-4)         | 16.5 dB MIN   | —            | —            | 55 @ 40 KHz                           | -70 @ 40 KHz, 6V p-p  | THT      |

Surge Voltage Capability: Metallic: 800 Vpeak 10/560 µsec. Long.: 2400 Vpeak 10/700 µsec. UL approval for basic insulation has been received (File: E133523).

## Mechanicals





## Schematic



# HDSL TRANSFORMERS

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-  Excellent THD performance
-  Maximum height .500" (12,7 mm)
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## Electrical Specifications @ 25°C — Operating Temperature -40°C to 85°C

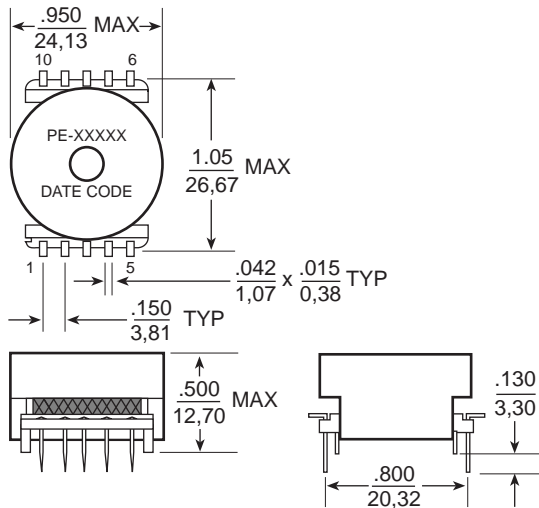
| Part Number | Matched To Level One IC No. | Application (Kbps) | Turns Ratio Chip-Line ( $\pm 3\%$ ) | Inductance Line Side (mH) | DC Current Capability (mA) | Leakage Inductance (MAX) | Isolation Voltage (Vrms MIN) |
|-------------|-----------------------------|--------------------|-------------------------------------|---------------------------|----------------------------|--------------------------|------------------------------|
| PE-68614*   | SK70704                     | 784 (2 pair)       | 1CT:1.8CT                           | 2.75 $\pm$ 6%             | 75                         | —                        | 2000                         |
| PE-68650    | SK70704                     | 1168 (2 pair)      | 1CT:1.8CTS                          | 2.06 $\pm$ 6%             | 75                         | —                        | 2500                         |

## Additional Information

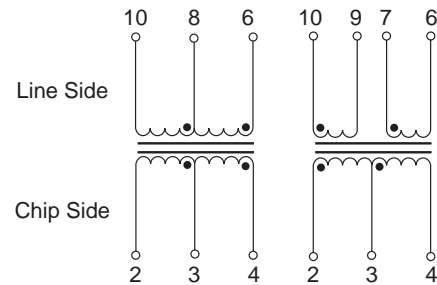
| Part Number | DCR Line Side ( $\Omega$ MAX) | DCR Chip Side ( $\Omega$ MAX) | Return Loss   |              |              | Longitudinal Balance (dB MIN @ 135 $\Omega$ ) | THD (dB TYP @ 135 $\Omega$ ) |
|-------------|-------------------------------|-------------------------------|---------------|--------------|--------------|---|------------------------------|
|             |                               |                               | 4 KHz - 2 MHz | 40 - 200 KHz | 40 - 320 KHz |   |                              |
| PE-68614    | 3.0 (6-8),(8-10)              | 3.2 (2-4)                     | —             | 20 dB MIN    | —            | 50 @ 5-196 KHz                                | -75 (5 KHz, 6 V p-p)         |
| PE-68650    | 2.0 (6-7),(9-10)              | 2.0 (2-4)                     | —             | —            | 16.5 dB MIN  | 50 @ 5-292 KHz                                | -75 (5 KHz, 6 V p-p)         |

Surge Voltage Capability: Metallic: 800 Vpeak 10/560  $\mu$ sec. Long.: 2400 Vpeak 10/700  $\mu$ sec. UL approval for basic insulation has been received (File: E133523).

## Mechanical



## Schematic



PE-68614 PE-68650

Weight .....14.0 grams  
Tray ..... .45/tray

Dimensions: Inches  
mm

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

\*The PE-68614 does not have standoffs and has a height of .450" (11,43 mm) MAX, and a leadlength of 0.125"  $\pm$ 0.030".

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