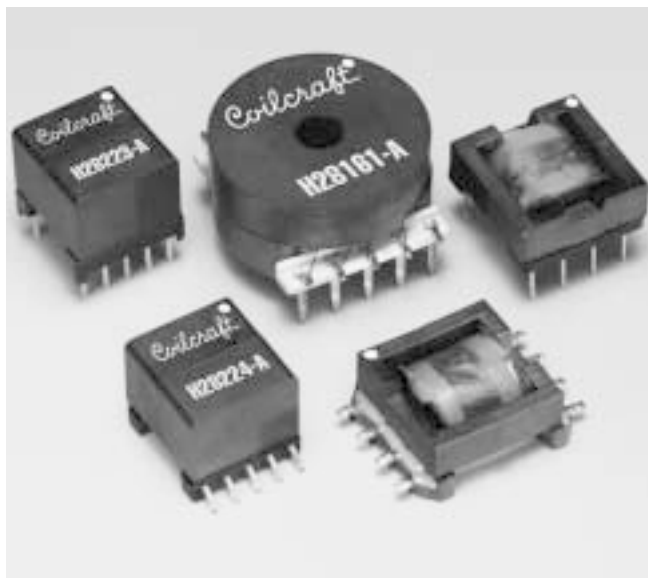


**NEW!**

# HDSL2 Transformers



This family of transformers provides optimum performance with the Level One SK70740/-41/-42 and other HDSL2 transceiver chip sets. The series now includes parts with a 1 CT to 2.3 CTS turns ratio, allowing them to work with line drivers for lower power supply voltages.

They're engineered for minimum DC resistance and very low leakage inductance. Primary inductance with and without DC bias is stable from -40° C to +85° C. The return loss, longitudinal balance and THD are optimized for the best overall performance at the HDSL2 transmission speed.

The H282XX transformers have an exceptionally small footprint while the H276XX and H281XX are among the lowest profile parts available. All three families are designed to meet UL 1459 and UL 1950 requirements.

For free evaluation samples or to discuss custom designs, please contact Coilcraft.

## SPECIFICATIONS

| Part number | Style  | Data rate (kb/s) | Turns ratio chip:line | Primary inductance (mH) ±15% | Leakage inductance (µH) max | Capacitance (pF) max | DCR (Ω) max<br>Chip side      Line side |
|-------------|--------|------------------|-----------------------|------------------------------|-----------------------------|----------------------|-----------------------------------------|
| H28161-A    | Leaded | 1500             | 1 CT:2.3 CTS          | 2.0                          | 25                          | 90                   | 1.5 (9-7)      1.5 (1-4), 1.5 (2-5)     |
| H28159-A    | Leaded | 1500             | 1 CT:2.3 CTS          | 2.0                          | 30                          | 55                   | 2.0 (8-6)      2.0 (1-2), 2.0 (3-4)     |
| H28160-A    | SMT    | 1500             | 1 CT:2.3 CTS          | 2.0                          | 30                          | 55                   | 2.0 (8-6)      2.0 (1-2), 2.0 (3-4)     |
| H27649-B    | Leaded | 1500             | 1 CT:2 CTS            | 2.0                          | 25                          | 90                   | 1.5 (9-7)      1.5 (1-4), 1.5 (2-5)     |
| H27650-A    | Leaded | 1500             | 1 CT:2 CTS            | 2.0                          | 25                          | 55                   | 2.0 (8-6)      2.0 (1-2), 2.0 (3-4)     |
| H27695-A    | SMT    | 1500             | 1 CT:2 CTS            | 2.0                          | 25                          | 55                   | 2.0 (8-6)      2.0 (1-2), 2.0 (3-4)     |
| H28223-B    | Leaded | 1500             | 1 CT:2.3 CTS          | 2.0                          | 30                          | 65                   | 1.85 (10-7)      2.1 (1-4), 2.1 (2-5)   |
| H28224-B    | SMT    | 1500             | 1 CT:2.3 CTS          | 2.0                          | 30                          | 65                   | 1.85 (10-7)      2.1 (1-4), 2.1 (2-5)   |

| Part number | DC bias capacity (mA) | Dielectric strength (V) | Return loss (dB) min | Longitudinal balance (dB) typ | THD (dB) typ |
|-------------|-----------------------|-------------------------|----------------------|-------------------------------|--------------|
| H28161-A    | 100                   | 2300                    | 13 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H28159-A    | 100                   | 3000                    | 13 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H28160-A    | 100                   | 3000                    | 13 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H27649-B    | 100                   | 2300                    | 14 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H27650-A    | 100                   | 3000                    | 14 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H27695-A    | 100                   | 3000                    | 14 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H28223-B    | 100                   | 3000                    | 13 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |
| H28224-B    | 100                   | 2300                    | 13 @ 40 kHz          | 65 @ 40 kHz                   | -85 @ 20 kHz |

1. All electrical specifications referenced to line side.
2. Operating temperature range -40° C to +85° C.
3. Electrical specifications at 25° C.

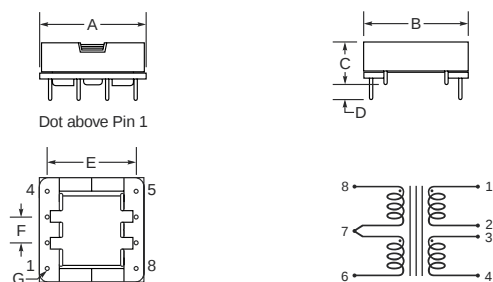
Specifications subject to change without notice. Document 202-1 Revised 1/21/00

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**NEW!**

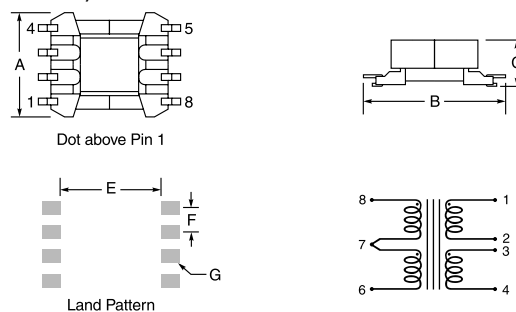
# HDSL2 Transformers

## H27650-A, H28159-A



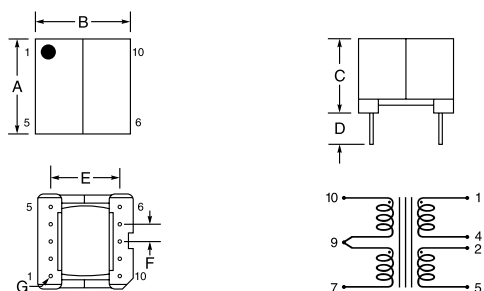
| A max | B max | C max | D min | E     | F typ | G typ |
|-------|-------|-------|-------|-------|-------|-------|
| .650  | .675  | .35   | .125  | .541  | .148  | .030  |
| 16,51 | 17,15 | 8,9   | 3,19  | 13,74 | 3,76  | 0,76  |

## H27695-A, H28160-A



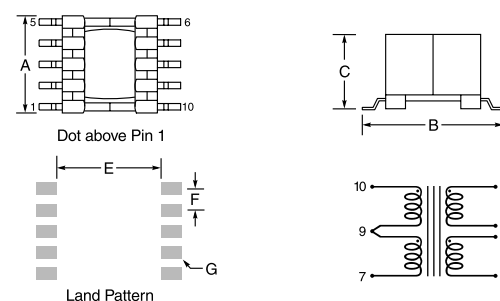
| A max | B max | C max | E     | F typ | G typ       |
|-------|-------|-------|-------|-------|-------------|
| .650  | .675  | .35   | .591  | .148  | .079 x .110 |
| 16,51 | 17,15 | 8,9   | 15,01 | 3,76  | 2,01 x 2,79 |

## H28223-B



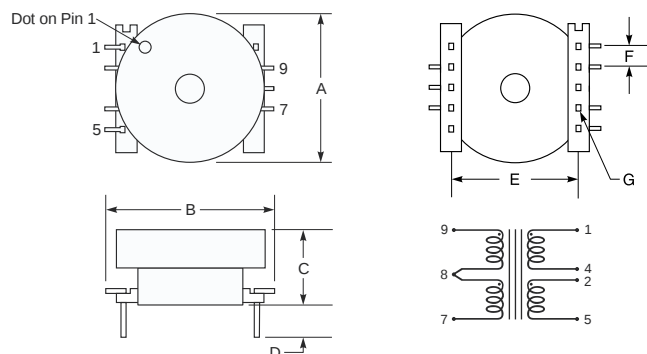
| A max | B max | C max | D min | E     | F typ | G max |
|-------|-------|-------|-------|-------|-------|-------|
| .550  | .550  | .500  | .100  | .400  | .100  | .032  |
| 13,97 | 13,97 | 12,70 | 3,0   | 10,16 | 2,54  | 0,82  |

## H28224-B



| A max | B max | C max | E     | F typ | G typ       |
|-------|-------|-------|-------|-------|-------------|
| .530  | .705  | .500  | .629  | .098  | .053 x .034 |
| 13,46 | 17,91 | 12,70 | 15,98 | 2,49  | 1,35 x 0,86 |

## H27649-B, H28161-A



| A max | B max | C max | D min | E     | F typ | G typ       |
|-------|-------|-------|-------|-------|-------|-------------|
| .950  | 1.05  | .46   | .12   | .800  | .150  | .045 x .025 |
| 24,13 | 26,7  | 11,7  | 3,0   | 20,32 | 3,81  | 1,14 x 0,64 |

# Coilcraft

Specifications subject to change without notice. Document 202-2 Revised 9/11/01

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