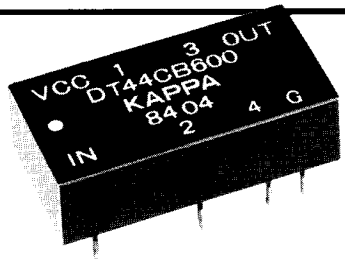
SERIES DL44/DT44 TTL SCHOTTKY (14-PIN) • 4 INDEPENDENT DELAYS

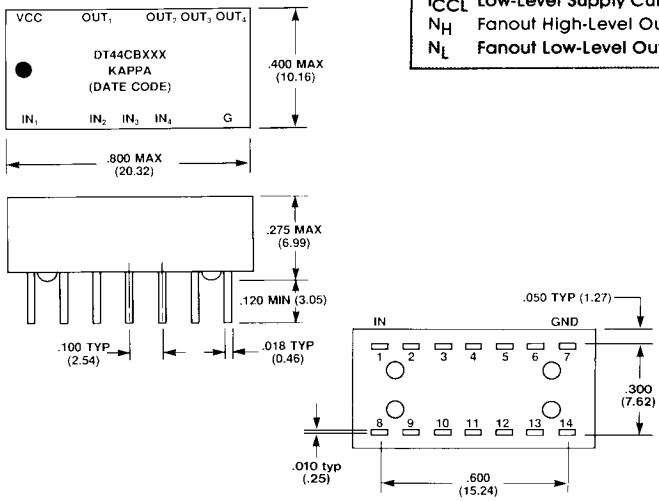
# QUADRUPLE DIGITAL DELAY LINE

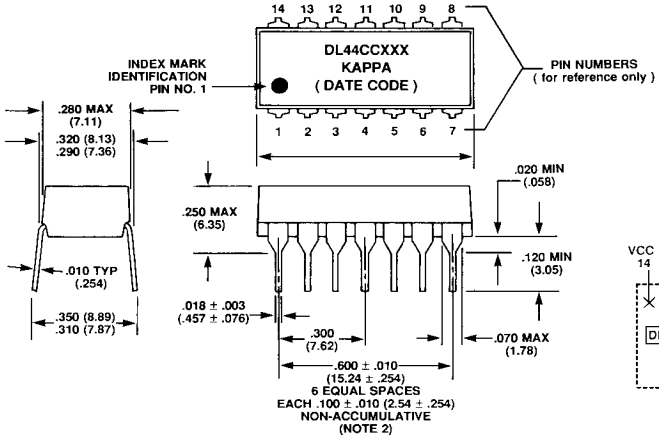


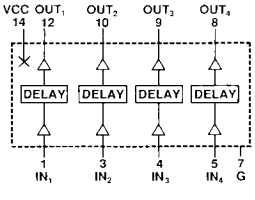

## FEATURES

- TTL Schottky interfaced
- 14-Pin DIL Package
- 4 independent equal delays
- Rise Time 4 ns max
- Delays from 5-50 ns

## MARKINGS AND DIMENSIONS, in (mm)




| RECOMMENDED OPERATING CONDITIONS | | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|
| $V_{CC}$ | Supply Voltage | 4.75 | 5.00 | 5.25 | V |
| $V_{IH}$ | High-Level Input Voltage | 2.0 | | | V |
| $V_{IL}$ | Low-Level Input Voltage | | | 0.8 | V |
| $I_{IK}$ | Input Clamp Current | | | −18 | mA |
| $I_{OH}$ | High-Level Output Current | | | −1.0 | mA |
| $I_{OL}$ | Low-Level Output Current | | | 20 | mA |
| $T_A$ | Operating Free-Air Temperature | 0 | +25 | +70 | °C |

| DC ELECTRICAL CHARACTERISTICS | | TEST CONDITIONS | | | | |
|---|---|---|---|---|---|---|
| $V_{OH}$ | High-Level Output Voltage | $V_{CC}$ = min, $V_{IL}$ = max, $I_{OH}$ = max | 2.7 | 3.4 | | V |
| $V_{OL}$ | Low-Level Output Voltage | $V_{CC}$ = min, $V_{IH}$ = min, $I_{OL}$ = max | | | 0.5 | V |
| $V_{IK}$ | Input Clamp Voltage | $V_{CC}$ = min, $I_I$ = $I_{IK}$ | | | −1.2 | V |
| $I_{IH}$ | High-Level Input Current | $V_{CC}$ = max, $V_{IN}$ = 2.7V | | | 50 | μA |
| | | $V_{CC}$ = max, $V_{IN}$ = 5.25V | | | 1.0 | mA |
| $I_{IL}$ | Low-Level Input Current | $V_{CC}$ = max, $V_{IN}$ = 0.5V | | | −2 | mA |
| $I_{OS}$ | Short Circuit Output Current | $V_{CC}$ = max, $V_{OUT}$ = 0, one output at a time | −40 | | −100 | mA |
| $I_{CCH}$ | High-Level Supply Current | $V_{CC}$ = max, $V_{IN}$ = OPEN | | 60 | 75 | mA |
| $I_{CCL}$ | Low-Level Supply Current | $V_{CC}$ = max, $V_{IN}$ = 0 | | 120 | 150 | mA |
| $N_H$ | Fanout High-Level Output | $V_{CC}$ = max, $V_{OH}$ = 2.7V | | | 20 | TTL load |
| $N_L$ | Fanout Low-Level Output | $V_{CC}$ = max, $V_{OL}$ = 0.5V | | | 10 | TTL load |

| INPUT PULSE TEST CONDITIONS | | | | | |
|---|---|---|---|---|---|
| $E_{IN}$ | Pulse Voltage | 3.1 | 3.2 | 3.3 | V |
| $T_{RI}$ | Pulse Rise Time | | | 2.0 | ns |
| $T_W$ | Pulse Width of Total Delay | 100 | | | % |
| d | Duty Cycle | | 33.3 | 50 | % |

| PART NUMBER | Delay Time (ns) |
|---|---|
| **DT44CB050** | **5** |
| DT44CB100 | 10 |
| **DT44CB150** | **15** |
| DT44CB200 | 20 |
| **DT44CB250** | **25** |
| DT44CB300 | 30 |
| **DT44CB350** | **35** |
| DT44CB400 | 40 |
| **DT44CB450** | **45** |
| DT44CB500 | 50 |

| PART NUMBER | Delay Time (ns) |
|---|---|
| **DL44CB050** | **5** |
| DL44CB100 | 10 |
| **DL44CB150** | **15** |
| DL44CB200 | 20 |
| **DL44CB250** | **25** |
| DL44CB300 | 30 |
| **DL44CB350** | **35** |
| DL44CB400 | 40 |
| **DL44CB450** | **45** |
| DL44CB500 | 50 |

**Notes:**

1. Delay measured at 1.5V level on leading edge only.
2. Delay tolerances: ±5% or ±2 ns, whichever is greater.
3. Rise Time measured from 0.75V to 2.4V level.
4. Measured with no loads on output.
5. **Other delays also available upon request.**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