

# Special-Package High-Performance Surface-Mount TTL Delay Lines

## GCTTLDL, GTTLDL

- Five equal taps in 20% increments of total delay.
- Lumped constant, active series.
- Transfer-molded packaging for highest reliability.
- Designed for leading edge timing. Trailing edge timing available.
- Supports Schottky TTL, FAST, and FACT logics.
- Fanout 1 -- 20 loads; logic 0 -- 10 loads.
- Temperature coefficient ±2 ns or ±4% (whichever is greater) at maximum delay, 0 to 70<sup>o</sup>C.
- Military models with temperature range -55 to +125°C and ceramic package IC to meet MIL-STD-883C, but not screened to that specification, add suffix "M" to part number.
- Military models as above, but with ceramic package IC screened to MIL-STD 883C and 38510, add suffix "MX" to part number.
- Military models as "MX" above, but with in-house burn-in and thermal shock, add suffix "MY".

*IEIGH* 

| TECHNITROL<br>PART NO. | TAP DELAYS (ns)  |                  |                  |                  |                  |                 | ALL TAPS        |  |  |  |  |
|------------------------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|--|--|--|--|
|                        | T <sub>D</sub> 1 | T <sub>D</sub> 2 | T <sub>D</sub> 3 | T <sub>D</sub> 4 | T <sub>D</sub> 5 | T <sub>RO</sub> | T <sub>FO</sub> |  |  |  |  |
| GCTTLDL025AMX          | 5.0              | 10.0             | 15.0             | 20.0             | 25.0             | 2.0             | 2.0             |  |  |  |  |
| GCTTLDL050AMX          | 10.0             | 20.0             | 30.0             | 40.0             | 50.0             | 2.0             | 2.0             |  |  |  |  |
| GCTTLDL075AMX          | 15.0             | 30.0             | 45.0             | 60.0             | 75.0             | 2.0             | 2.0             |  |  |  |  |
| GCTTLDL100AMX          | 20.0             | 40.0             | 60.0             | 80.0             | 100.0            | 2.0             | 5.0             |  |  |  |  |
| GCTTLDL125AMX          | 25.0             | 50.0             | 75.0             | 100.0            | 125.0            | 2.0             | 6.0             |  |  |  |  |
| GCTTLDL150AMX          | 30.00            | 60.0             | 90.0             | 120.0            | 150.0            | 2.0             | 7.0             |  |  |  |  |
| GCTTLDL200AMX          | 40.00            | 80.0             | 120.0            | 160.0            | 200.0            | 2.0             | 8.0             |  |  |  |  |

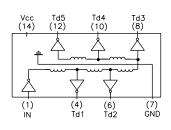
#### GCTTLL SURFACE-MOUNT 5-TAP DELAY LINES

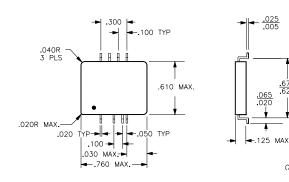
For TTL delay lines qualified to MIL-D-83532, refer to PSC information sheet entitled "QPL Active Delay Lines."

Delay Characteristics measured at  $V_{CC} = 5.0V$ , 25°C, no load. Delay Tolerance  $\pm 2$  ns or 5%, whichever is greater. Rise time measured @ 0.8V to 2.0V levels. For minimum input pulse width -- contact factory.

Notes

### SCHEMATIC





MECHANICAL OUTLINE

- Pin numbers shown are for reference only and are not necessarily marked on unit.
  - Only the pins specified in the schematics are provided with each package.
- Lead material is electro tin plated (alloy 42) or solder dipped.
- All specifications are subject to change without notice.

GCTTLDL-18

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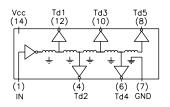
| TECHNITROL<br>PART NO. | TAP DELAYS (ns)  |                  |                  |        |                  |                 | ALL TAPS        |  |
|------------------------|------------------|------------------|------------------|--------|------------------|-----------------|-----------------|--|
|                        | T <sub>D</sub> 1 | T <sub>D</sub> 2 | T <sub>D</sub> 3 | $T_D4$ | T <sub>D</sub> 5 | T <sub>RO</sub> | T <sub>FO</sub> |  |
| GTTLDL025MX            | 5.0              | 10.0             | 15.0             | 20.0   | 25.0             | 2.0             | 2.0             |  |
| GTTLDL050MX            | 10.0             | 20.0             | 30.0             | 40.0   | 50.0             | 2.0             | 2.0             |  |
| GTTLDL075MX            | 15.0             | 30.0             | 45.0             | 60.0   | 75.0             | 2.0             | 2.0             |  |
| GTTLDL100MX            | 20.0             | 40.0             | 60.0             | 80.0   | 100.0            | 2.0             | 2.0             |  |
| GTTLDL125MX            | 25.0             | 50.0             | 75.0             | 100.0  | 125.0            | 2.0             | 2.0             |  |
| GTTLDL150MX            | 30.00            | 60.0             | 90.0             | 120.0  | 150.0            | 2.0             | 5.0             |  |
| GTTLDL200MX            | 40.00            | 80.0             | 120.0            | 160.0  | 200.0            | 2.0             | 5.0             |  |
| GTTLDL250MX            | 50.00            | 100.0            | 150.0            | 200.0  | 250.0            | 2.0             | 9.0             |  |
| GTTLDL500MX            | 100.00           | 200.0            | 300.0            | 400.0  | 500.0            | 2.0             | 9.0             |  |

### **GTTL SURFACE-MOUNT 5-TAP DELAY LINES**

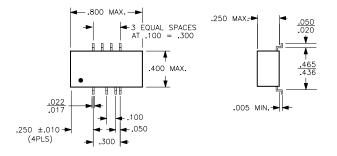
Delay Characteristics measured at  $V_{CC} = 5.0V$ , 25°C, no load. Delay Tolerance  $\pm 2$  ns or 5%, whichever is greater. Rise time measured @ 0.8V to 2.0V levels.

For minimum input pulse width -- contact factory.

#### **SCHEMATIC**



## **MECHANICAL OUTLINE**



#### Notes

- Only the pins specified in the schematics are provided with each package.
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