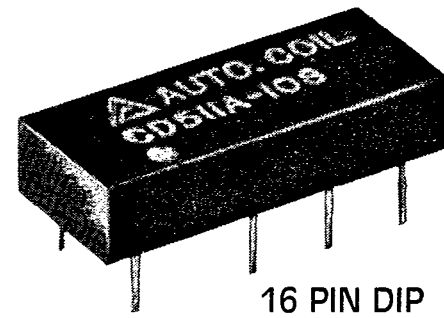


T-47-13

# CD511-Series TTL Digital Delay Module, 16 PIN, 5 TAP

- TTL input and outputs
- Precise and stable delays
- Reliable hybrid construction
- No external components required
- Fan out 10TTL loads/tap, 20TTL loads/package
- Operating temperature 0° to 70°C
- Storage temperature -55° to +125°C



16 PIN DIP

### Electrical Characteristics:

V <sub>IH</sub> (High level input voltage)	2.0 to 5.0V
I <sub>IH</sub> (High level input current)	50 μA Max.
V <sub>IL</sub> (Low level input voltage)	0.8 V Max.
I <sub>IL</sub> (Low level input current)	-2 ma Max.
V <sub>OH</sub> (High level output voltage)	2.5 V Min.
V <sub>OL</sub> (Low level output voltage)	0.5 V Max.
V <sub>CC</sub> (Supply voltage)	5.0 V ±0.25 V DC
I <sub>CC</sub> (Supply current)	75 ma Max.

### Mechanical Specifications:

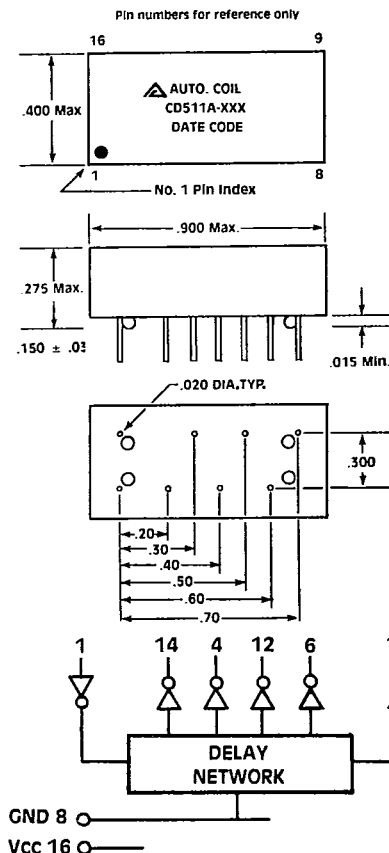
Case: Epoxy filled D.A.P.  
Leads: Phosphor bronze or equiv. solder coated  
Marking: White epoxy ink

### Also Available:

- Intermediate delays
- Non-symmetrical tap delays
- Tighter delay tolerances
- Falling edge delay specifications
- Non-tapped modules
- Lower profiles
- Military versions

Specifications subject to change without notice.

Input & test conditions are not limiting parameters. All digital delay modules can be operated at conditions other than specified. Since accuracies may be slightly affected, we suggest that the module be evaluated under specific operating conditions.



### Test Conditions:

- 1) All measurements are made @ 25°C
- 2) V<sub>CC</sub> is maintained @ 5.0 VDC
- 3) All measurements are made with no loads on outputs
- 4) Delays are measured @ 1.5V level
- 5) Delays & tolerances for leading edges only (TPLH) - falling edges (TPHL) closely matched to TPLH

### Input Conditions:

- 1) Pulse amplitude: 3.20V
- 2) Input rise time 3.0 NS (10 to 90%)
- 3) Pulse width 2 × total delay
- 4) Duty cycle < 25%

Nominal Delays (in NS) ±2 NS or 5% Whichever Is Greater

Automatic Coil Part Number	PIN 14	PIN 4	PIN 12	PIN 6	PIN 10
CD511A-101	5	10	15	20	25
CD511A-102	6	12	18	24	30
CD511A-103	7	14	21	28	35
CD511A-104	8	16	24	32	40
CD511A-105	9	18	27	36	45
CD511A-106	10	20	30	40	50
CD511A-107	15	30	45	60	75
CD511A-108	20	40	60	80	100
CD511A-109	25	50	75	100	125
CD511A-110	30	60	90	120	150
CD511A-111	40	80	120	160	200
CD511A-112	50	100	150	200	250
CD511A-113	60	120	180	240	300
CD511A-114	70	140	210	280	350
CD511A-115	80	160	240	320	400
CD511A-116	90	180	270	360	450
CD511A-117	100	200	300	400	500

Output rise times (TPLH) 4.0 NS max. (0.75 to 2.4 V level).