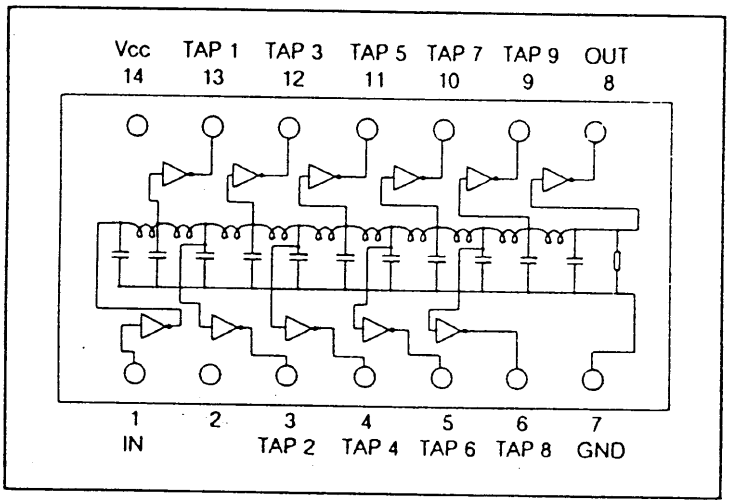
203 208

newport components

DIGITAL DELAY MODULES 50A, 52A, 52S Series
10 Tap 14 Pin Moulded DIP

- ☐ Schottky TTL compatible
- ☐ 10 equally spaced taps
- ☐ 14 pin package
- ☐ Low profile
- ☐ TTL compatible
- ☐ Auto insert or surface mount package styles

DUAL - IN - LINE PACKAGE (TOP VIEW)



description

The 50A series of Digital Delay Modules are Schottky TTL buffered delay lines providing precise delay times and direct compatibility with TTL. Ten equally spaced fixed delay taps are packaged in a low profile 14 pin dual-in-line configuration. Internal termination of the delay line and compensation for propagation delays and thermal drift are incorporated in the design so that no additional external components are required. These modules are particularly suitable for high density board designs.
The 52A series is the auto insertable version.
The 52S series is the surface mount version which may be vapour phased at temperatures below 218C for durations of up to 2 minutes.

absolute maximum ratings over operating free-air temperature range

Supply voltage V_{cc}	7V
Input voltage	5.5V
Min. pulse width as % of total delay	40%
Input pulse repetition rate PRR	3 x pulse width min.
Operating free-air temperature range	0C to 70C
Storage temperature range	–55C to 125C
Temperature coefficient of delay	±500ppm/C
Lead temperature 1.5mm from case for 10 seconds	300C

drive capabilities

Logic 0 output	10 TTL loads per tap max. 20 TTL loads per unit max.
Logic 1 output	20 TTL loads per unit max.

10 Tap 14 Pin Moulded DIP

electrical specifications over operating free-air temperature range

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
V_{IH} High-level input voltage		2			V
V_{IL} Low-level input voltage				0.8	V
V_{OH} High-level output voltage	V_{IH} =2V, I_{OH} =–1mA Vcc =4.75V	2.7	3.4		V
V_{OL} Low-level output voltage	Vcc =4.75V I_{OL}=20mA,V_{IL} =0.8V			0.5	V
I_{IH} High-level input current	Vcc=5.25V,V_{IH}=2.7V			50	μA
I_{IL} Low-level input current	Vcc=5.25V, V_{IL}=0.5V			–2	mA
Icc Supply current outputs high	Vcc=5.25V			48	mA
Icc Supply current outputs low	Vcc=5.25V			108	mA

delay characteristics Vcc = 5V, Ta = 25C, no load at taps, input pulse width 100% of total delay, input rise time 3ns.

delay tolerance from input to tap ±2ns or ±5% whichever is greater

50A SERIES 10 Tap 14 Pin DIP
Package style I

PART No. (1)	TOTAL DELAY (ns) ±5%	TAP TO TAP DELAY (ns)	OUTPUT RISE TIME (ns)
50A - 10250	25	2.5 ± 2	3
50A - 10500	50	5 ± 2	3
50A - 10750	75	7.5 ± 2	3
50A - 10101	100	10 ± 2	3
50A - 10151	150	15 ± 2	3
50A - 10201	200	20 ± 2	4
50A - 10251	250	25 ± 3	4
50A - 10301	300	30 ± 3	4
50A - 10351	350	35 ± 4	4
50A - 10401	400	40 ± 4	4
50A - 10451	450	45 ± 5	4
50A - 10501	500	50 ± 5	4

Note: Delays measured at 1.5V on leading edge, Rise Time measured from 0.75V to 2.4V
(1) Auto insert part No. starts with 52A package style C. Surface mount part No. starts with 52S package style D