7 Pin SIP Passive Delay Line

The 7 Pin SIP Passive Delay Lines manufactured by Engineered Components Company are designed to provide precise and stable delays for analog delay line applications. These untapped delay lines are provided in a small 7-pin SIP package and available in impedances of 50, 100, and 200 ohms.

These delay lines are designed and tested in accordance with MIL-D-23859 and they are capable of meeting the environmental requirements of MIL-STD-202 for moisture resistance, vibration, temperature cycling, humidity, and life. The MTBF on these delay lines, when calculated per MIL-HDBK-217, for a 50 deg.C ground fixed environment and with 50VDC applied, is in excess of 12 million hours. The temperature coefficient of delay is less than 75 ppm/deg.C over the operating temperature range of -55 to +125 deg. C.

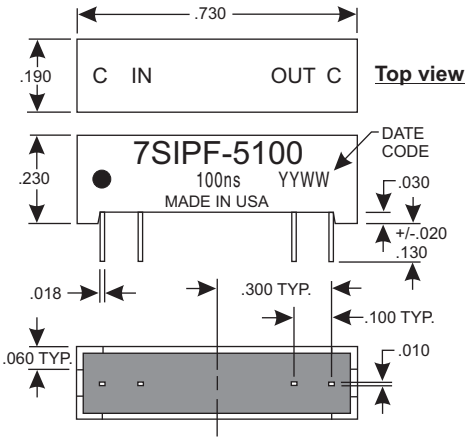
The delay line is fully encapsulated in epoxy resin and is housed in a Diallyl Phthalate case, green in color. The case marking is applied by silkscreen using white epoxy paint. The 4 beryllium copper leads are tin plated and meet the solderability requirements of MIL-STD-202, Method 208.

Product Selection Table

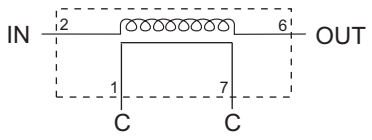
Delay Time (nS)	50 Ohm Impedance			100 Ohm Impedance			200 Ohm Impedance		
	Part Number	Rise Time (nS)	DCR (Ohms)	Part Number	Rise Time (nS)	DCR (Ohms)	Part Number	Rise Time (nS)	DCR (Ohms)
1 +/- 0.2	7SIPF-501	2.0	0.2	7SIPF-1001	2.0	0.2	7SIPF-2001	2.5	0.2
2 +/- 0.2	7SIPF-502	2.3	0.3	7SIPF-1002	2.3	0.3	7SIPF-2002	2.7	0.3
3 +/- 0.3	7SIPF-503	2.7	0.4	7SIPF-1003	2.7	0.4	7SIPF-2003	3.1	0.4
4 +/- 0.4	7SIPF-504	3.0	0.5	7SIPF-1004	3.0	0.5	7SIPF-2004	3.4	0.5
5 +/- 0.5	7SIPF-505	3.4	0.5	7SIPF-1005	3.4	0.5	7SIPF-2005	3.8	0.5
6 +/- 0.5	7SIPF-506	3.7	0.5	7SIPF-1006	3.7	0.5	7SIPF-2006	4.1	0.5
7 +/- 0.5	7SIPF-507	4.0	0.5	7SIPF-1007	4.0	0.5	7SIPF-2007	4.4	0.5
8 +/- 0.6	7SIPF-508	4.4	0.5	7SIPF-1008	4.4	0.5	7SIPF-2008	4.7	0.5
9 +/- 0.6	7SIPF-509	4.7	0.6	7SIPF-1009	4.7	0.6	7SIPF-2009	5.0	0.6
10 +/- 0.7	7SIPF-510	5.0	0.8	7SIPF-1010	5.0	0.8	7SIPF-2010	5.3	0.8
12 +/- 0.7	7SIPF-512	5.7	0.8	7SIPF-1012	5.7	0.8	7SIPF-2012	6.0	0.8
14 +/- 0.8	7SIPF-514	6.4	0.8	7SIPF-1014	6.4	0.8	7SIPF-2014	6.6	0.8
16 +/- 0.8	7SIPF-516	7.1	0.8	7SIPF-1016	7.1	0.8	7SIPF-2016	7.2	0.8
18 +/- 1.0	7SIPF-518	7.8	1.0	7SIPF-1018	7.8	1.0	7SIPF-2018	7.9	1.0
20 +/- 1.0	7SIPF-520	8.5	1.1	7SIPF-1020	8.5	1.1	7SIPF-2020	8.5	1.1
22 +/- 1.0	7SIPF-522	9.1	1.1	7SIPF-1022	9.1	1.1	7SIPF-2022	9.1	1.1
24 +/- 1.0	7SIPF-524	9.9	1.1	7SIPF-1024	9.9	1.1	7SIPF-2024	9.9	1.1
26 +/- 1.2	7SIPF-526	10.5	1.2	7SIPF-1026	10.5	1.2	7SIPF-2026	10.5	1.2
28 +/- 1.2	7SIPF-528	11.0	1.2	7SIPF-1028	11.0	1.2	7SIPF-2028	11.0	1.2
30 +/- 1.5	7SIPF-530	12.0	1.4	7SIPF-1030	12.0	1.4	7SIPF-2030	12.0	1.4
35 +/- 1.5	7SIPF-535	13.5	1.6	7SIPF-1035	13.5	1.6	7SIPF-2035	13.5	1.6
40 +/- 2.0	7SIPF-540	15.0	2.6	7SIPF-1040	15.0	2.6	7SIPF-2040	15.0	2.6
45 +/- 2.0	7SIPF-545	16.5	2.6	7SIPF-1045	16.5	2.6	7SIPF-2045	16.5	2.6
50 +/- 2.5	7SIPF-550	18.5	2.8	7SIPF-1050	18.5	2.8	7SIPF-2050	18.5	2.8
60 +/- 2.5	7SIPF-560	22.0	3.0	7SIPF-1060	22.0	3.0	7SIPF-2060	22.0	3.0
70 +/- 3.0	7SIPF-570	25.0	3.2	7SIPF-1070	25.0	3.2	7SIPF-2070	24.0	3.2
80 +/- 3.0	7SIPF-580	28.0	3.5	7SIPF-1080	28.0	3.5	7SIPF-2080	27.0	3.5
90 +/- 4.0	7SIPF-590	32.0	5.2	7SIPF-1090	32.0	5.2	7SIPF-2090	32.0	5.2
100 +/- 4.0	7SIPF-5100	35.0	5.6	7SIPF-10100	35.0	5.6	7SIPF-20100	35.0	5.6
110 +/- 4.5	7SIPF-5110	38.0	5.6	7SIPF-10110	38.0	5.6	7SIPF-20110	38.0	5.6
120 +/- 4.5	7SIPF-5120	42.0	5.8	7SIPF-10120	42.0	5.8	7SIPF-20120	42.0	5.8
130 +/- 5.0	7SIPF-5130	45.0	5.8	7SIPF-10130	45.0	5.8	7SIPF-20130	45.0	5.8
140 +/- 5.0	7SIPF-5140	48.0	6.8	7SIPF-10140	48.0	6.8	7SIPF-20140	48.0	6.8
150 +/- 5.5	7SIPF-5150	51.0	6.8	7SIPF-10150	51.0	6.8	7SIPF-20150	51.0	6.8
160 +/- 5.5	7SIPF-5160	55.0	6.8	7SIPF-10160	55.0	6.8	7SIPF-20160	55.0	6.8
170 +/- 6.0	7SIPF-5170	58.0	7.0	7SIPF-10170	58.0	7.0	7SIPF-20170	58.0	7.0
180 +/- 6.0	7SIPF-5180	61.0	7.5	7SIPF-10180	61.0	7.5	7SIPF-20180	61.0	7.5
190 +/- 7.0	7SIPF-5190	65.0	7.5	7SIPF-10190	65.0	7.5	7SIPF-20190	65.0	7.5
200 +/- 8.0	7SIPF-5200	68.0	8.0	7SIPF-10200	68.0	8.0	7SIPF-20200	68.0	8.0
210 +/- 8.5	7SIPF-5210	71.0	8.0	7SIPF-10210	71.0	8.0	7SIPF-20210	71.0	8.0
220 +/- 9.0	7SIPF-5220	75.0	8.0	7SIPF-10220	75.0	8.0	7SIPF-20220	75.0	8.0
230 +/- 9.5	7SIPF-5230	78.0	8.0	7SIPF-10230	78.0	8.0	7SIPF-20230	78.0	8.0
240 +/- 10.0	7SIPF-5240	81.0	8.0	7SIPF-10240	81.0	8.0	7SIPF-20240	81.0	8.0
250 +/- 10.0	7SIPF-5250	84.0	8.0	7SIPF-10250	84.0	8.0	7SIPF-20250	84.0	8.0

Special modules can often be manufactured to provide for customer specific applications.

MECHANICAL DIAGRAM



BLOCK DIAGRAM



Operating Specifications:

All measurements made at 25 deg. C
Delays measured at 50% level on the leading edge
Impedance tolerance is +/-10%
Maximum attenuation is .5db
Maximum distortion is +/-5%
Maximum overshoot is 10%
Maximum working voltage is 25VDC
Dielectric strength is 100VDC @ 50uA
Minimum insulation resistance is10,000 megohms @ 100VDC

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