

TDP SIP 5-Tap Output Delay Lines

FEATURES

- 7-pin Single In-line Package, Passive 5-tap Output Delay Line.
- By adopting a non-magnetic-core coil, we have realized high reproducibility and very stable electrical characteristics over a wide temperature range.
- Suitable for use with timing adjustments in TTL and CMOS as well as analog circuits.
- Impedance choices have increased to 100Ω/200Ω/300Ω/350 Ω and so can now be used in a variety of applications.
- Please contact us for optional Impedance values less than 350Ω or Total Delay Times less than 200ns.
- This product is completely Lead-free. Terminal plating is a Ni base with a Sn finish.

COMMON SPECIFICATIONS

Waveform Distortion:	Overshoot/preshoot under ±20%
Temperature Coefficient:	-50 to +200ppm/°C
Insulation Resistance:	DC50V, over 100MΩ
Durable Voltage:	DC50V, 1 minute
Operating Temperature Range:	-40°C to +85°C
Storage Temperature Range:	-40°C to +120°C



SPECIFICATIONS

100 Ω, Impedance±10%

Part Number	Total Delay Time	Tap-to-Tap Delay Time			Rise Time (*) (20%-80%)	-3dB Passband Guarantee(*)	DC Resistance (*)
		In-T1	T1-T2 T2-T3 T3-T4	T4-T5			
TDP10010	10ns±1.0ns	1.9ns±0.4ns	2ns±0.4ns	2ns±0.4ns	3.0ns Max	DC~120MHz	2.0 Ω Max
TDP20010	20ns±1.0ns	3.7ns±0.6ns	4ns±0.6ns	3.9ns±0.6ns	5.0ns Max	DC~60MHz	2.5 Ω Max
TDP30010	30ns±1.5ns	5.5ns±1.0ns	6ns±1.0ns	5.8ns±1.0ns	8.0ns Max	DC~40MHz	3.0 Ω Max
TDP40010	40ns±2.0ns	6.7ns±1.5ns	8ns±1.5ns	7.3ns±1.5ns	10.0ns Max	DC~30MHz	3.5 Ω Max
TDP50010	50ns±2.5ns	8.5ns±1.8ns	10ns±1.8ns	9.0ns±1.8ns	13.0ns Max	DC~24MHz	6.0 Ω Max
TDP80010	80ns±4.0ns	14ns±2.0ns	16ns±2.0ns	15ns±2.0ns	20.0ns Max	DC~15MHz	9.5 Ω Max
TDP10110	100ns±5.0ns	18ns±2.0ns	20ns±2.0ns	18ns±2.0ns	25.0ns Max	DC~12MHz	14.5 Ω Max

(*) For Pins 2-7, when Pins 3,4,5,6 is unconnected.

200 Ω, Impedance±10%

Part Number	Total Delay Time	Tap-to-Tap Delay Time			Rise Time (*) (20%-80%)	-3dB Passband Guarantee(*)	DC Resistance (*)
		In-T1	T1-T2 T2-T3 T3-T4	T4-T5			
TDP10020	10ns±1.0ns	1.9ns±0.4ns	2ns±0.4ns	2ns±0.4ns	3.0ns Max	DC~120MHz	2.5 Ω Max
TDP20020	20ns±1.0ns	3.7ns±0.6ns	4ns±0.6ns	3.9ns±0.6ns	5.0ns Max	DC~60MHz	3.5 Ω Max
TDP30020	30ns±1.5ns	5.6ns±1.0ns	6ns±1.0ns	5.8ns±1.0ns	8.0ns Max	DC~40MHz	6.5 Ω Max
TDP40020	40ns±2.0ns	7.3ns±1.5ns	8ns±1.5ns	7.6ns±1.5ns	10.0ns Max	DC~30MHz	9.5 Ω Max
TDP50020	50ns±2.5ns	9.1ns±1.8ns	10ns±1.8ns	9.5ns±1.8ns	13.0ns Max	DC~24MHz	14.5 Ω Max

(*) For Pins 2-7, when Pins 3,4,5,6 is unconnected.

300 Ω, Impedance±10%

Part Number	Total Delay Time	Tap-to-Tap Delay Time			Rise Time (*) (20%-80%)	-3dB Passband Guarantee(*)	DC Resistance (*)
		In-T1	T1-T2 T2-T3 T3-T4	T4-T5			
TDP10030	10ns±1.0ns	1.9ns±0.4ns	2ns±0.4ns	2ns±0.4ns	3.0ns Max	DC~120MHz	3.0 Ω Max
TDP20030	20ns±1.0ns	3.8ns±0.6ns	4ns±0.6ns	3.9ns±0.6ns	5.0ns Max	DC~60MHz	6.5 Ω Max
TDP30030	30ns±1.5ns	5.7ns±1.0ns	6ns±1.0ns	5.9ns±1.0ns	8.0ns Max	DC~40MHz	10.0 Ω Max
TDP80030	80ns±4.0ns	14ns±2.0ns	16ns±2.0ns	16ns±2.0ns	24.0ns Max	DC~9.4MHz	11.0 Ω Max
TDP10130	100ns±5.0ns	18ns±2.0ns	20ns±2.0ns	20ns±2.0ns	30.0ns Max	DC~7.5MHz	12.0 Ω Max
TDP15130	150ns±7.5ns	25ns±4.0ns	30ns±4.0ns	30ns±4.0ns	45.0ns Max	DC~5.0MHz	15.5 Ω Max

(*) For Pins 2-7, when Pins 3,4,5,6 is unconnected.

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SPECIFICATIONS

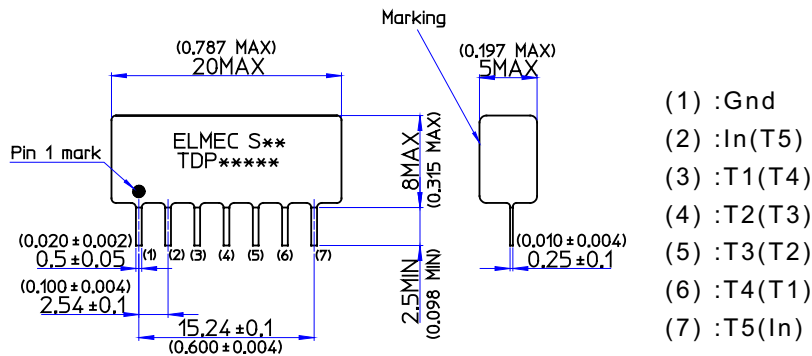
350Ω, Impedance±10%

Part Number	Total Delay Time	Tap-to-Tap Delay Time			Rise Time (*) (20%-80%)	-3dB Passband Guarantee(*)	DC Resistance (*)
		In-T1	T1-T2 T2-T3 T3-T4	T4-T5			
TDP10035	10ns±1.0ns	1.9ns±0.4ns	2ns±0.4ns	2ns±0.4ns	3.0ns Max	DC~120MHz	3.0Ω Max
TDP20035	20ns±1.0ns	3.8ns±0.6ns	4ns±0.6ns	3.9ns±0.6ns	5.0ns Max	DC~60MHz	7.0Ω Max
TDP30035	30ns±1.5ns	5.8ns±1.0ns	6ns±1.0ns	5.9ns±1.0ns	8.0ns Max	DC~40MHz	15.0Ω Max

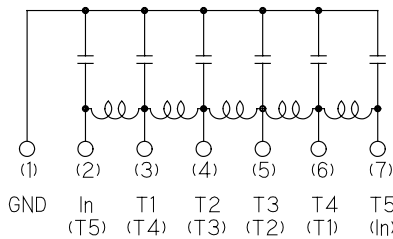
(*) For Pins 2-7, when Pins 3,4,5,6 is unconnected.

PACKAGE DIMENSIONS & PIN CONFIGURATION

Unit:mm (inch)



EQUIVALENT CIRCUIT



SOLDERING CONDITIONS

- Flow Solder 260°C, under 10 seconds
- Soldering Iron 350°C, under 5 seconds

RoHS Compliance Status

1. Compliance Status
Completed.
2. Terminal Plating
Ni base, Sn coating