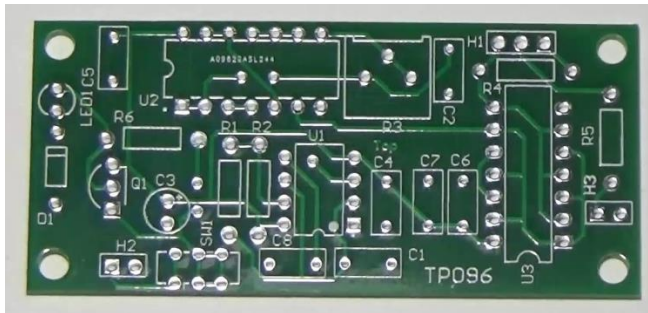
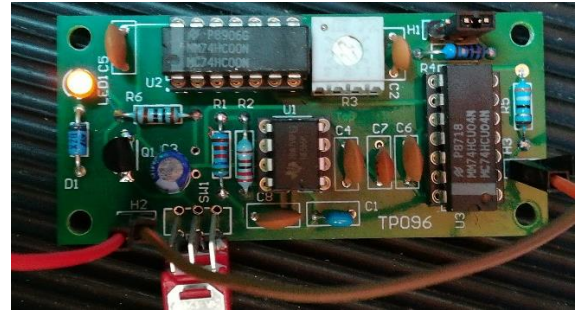


- Able to detect degradations on coaxial cables
- Pulse with very short width generation
- Pulses High Repetition frequency
- Power Supply 9V
- Low power consumption
- Configurable Output Impedance matching



TDR PCB Top View



TDR in running mode

DESCRIPTION

The TDR (Time Domani Reflectometer) is a tool designed for measure integrity of coaxial cables by using the reflectometry technique: a short pulse is generated and by analyzing the signal on the scope, the cable property can be found.

TDR TECHNICAL DATA

PARAMETER	VALUE	UNIT
Pulse Width (adjustable)	20..250	ns
Repetition Frequency (fixed)	250..500	KHz
Output impedance (configurable)	50 or 75	ohm
Power Supply	+9	V
Cable length	10..200	m

PCB TECHNICAL DATA

PARAMETER	VALUE	UNIT
Dimensions Lenght x Width	67 x 31	mm
Colors	GREEN, BLUE	
PCB thickness (RED, YELLOW)	1.6	mm
Layers	2	
Surface finish	HASL	
Copper Weight	1	oz
Material Details	FR4-Standard Tg 130-140C	

BILL OF MATERIALS

- | | |
|--|-------------------------|
| 1. C1: 100pF ceramic | 13. LED1: DIODE LED RED |
| 2. C2: 100pF ceramic | 14. Q1:BC547 Transistor |
| 3. C3: 10uF electrolytic | 15. R1: 5.600 ohm |
| 4. C4: 100nF polyester | 16. R2: 2.200 ohm |
| 5. C5: 100nF polyester | 17. R3: 1.000 phm |
| 6. C6: 100nF polyester | 18. R4: 27 ohm |
| 7. C7: 100nF polyester | 19. R5: 39 ohm |
| 8. C8: 100nF polyester | 20. R6: 1.000 ohm |
| 9. D1: zener 3,9V 0.5W | 21. SW1: switch 2 way |
| 10. H1: header male 3 (output impedance selection) | 22. U1: NE.555CN |
| 11. H2: header male 2 (power supply input) | 23. U2: TTL SN74HC00N |
| 12. H3: header male 2 (output) | 24. U3:TTL SN74HC04N |

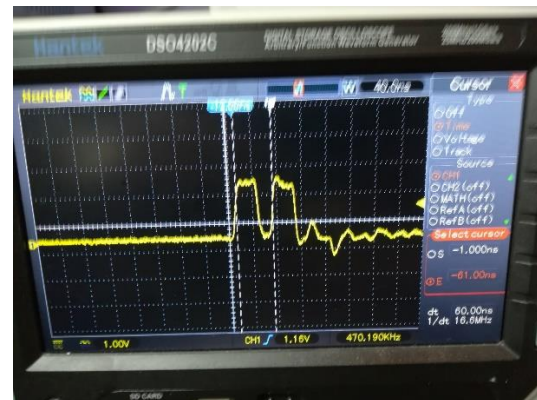


USER INFORMATION

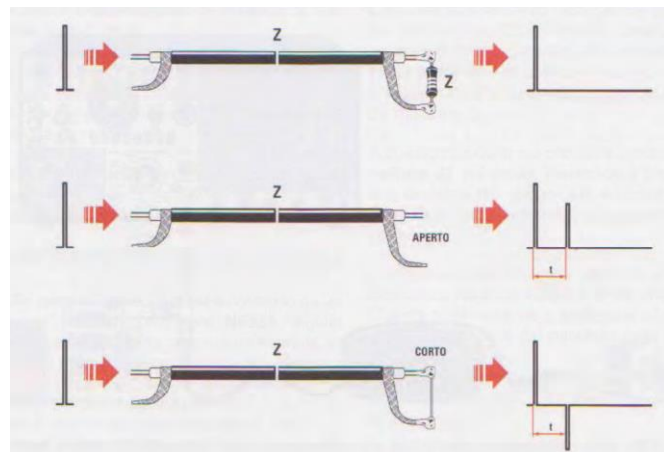
1. Select the output impedance, by placing a jumper on 2-3 for 50 ohm or 1-2 for 75 ohm impedance matching
2. Connect the output connector H3 on the cable to be measured and to the oscilloscope ()
3. Provide a 9V input on the H2 Header (Left pin is positive – Right pin is Ground)
4. Adjust the pulse width by modifying the R3 potentiometer
5. Check the transmitted pulse on the scope and the reflection (refer to Figure):
 - a. If the received pulse has the same polarity of the transmitted pulse the cable is in open circuit
 - b. If the received pulse has the opposite polarity of the transmitted pulse the cable is in short circuit
 - c. If the received pulse has no amplitude the cable is closed on and impedance equal to the characteristic impedance of the cable



TDR Coaxial cable measure



TDR scope time delay measurement

**ORDERING INFORMATION**

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