Leak 2

WORKING
50-31-90
E-800

QUADRUPLE 2-INPU...

SCAS016C – A...

D, N, OR PW P...
(TOP VIE...

1A	1	
1Y	2	
2Y	3	
GND	4	
GND	5	
3Y	6	
4Y	7	
4B	8	

... Architecture Optimizes

... CC and GND Configurations
...-Speed Switching Noise
...nced-Performance Implanted
... Process
...cal Latch-Up Immunity at

...ions Include Plastic
...e (D) and Thin Shrink
...e (PW) Packages, and
...astic 300-mil DIPs (N)

... contains four independent 2-input AND gates. It perform...

... Y = A + B in positive logic.

...08 is characterized for operation from –40°C to 85°C

FUNCTION TABLE
(each gate)

INPUTS		OUTPUT
A	B	Y
H	H	H
L	X	L
X	L	L

...mbol†

1A	1		&	2	1Y
1B	16			3	2Y
2A	14				
2B	11			6	3Y
3A	10				
3B	9			7	4Y
4A	8				
4B					
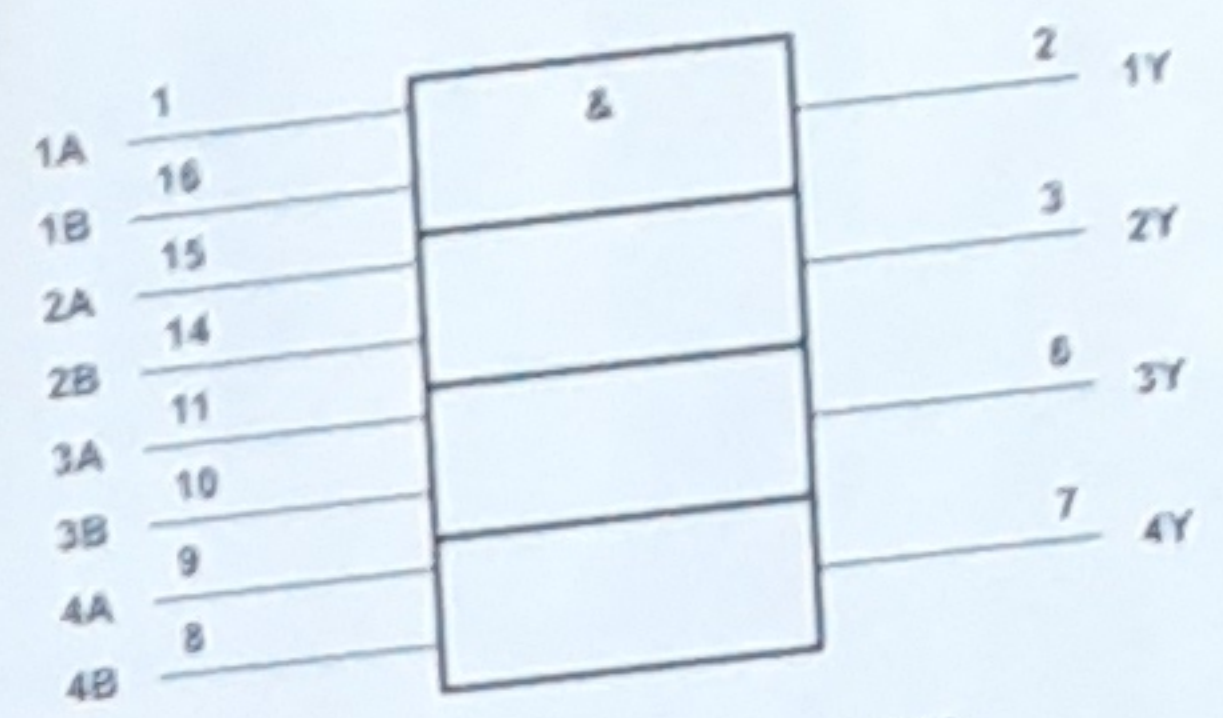
† This symbol is in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

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Products conform to specifications per the terms of Texas Instruments
standard warranty. Production processing does not necessarily include
testing of all parameters.

... "...ep" as a function of

... rch of 50mV/100mV
... different scope

...des

... charge early dynode Bias?

Protrino 11.06 – 02.07.2018

... Measurements of TF of characterion
... cable # 43 (~40m)

All meas to done with pulser 83K 4005
mode pulse period 1ns PW 200ns
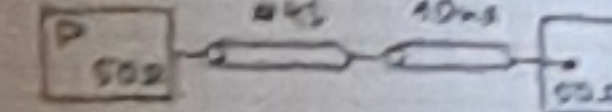and oscilloscope T3S 2054, CH1 in sample
mode, TRIG from CH1

1. TDR-like waveform
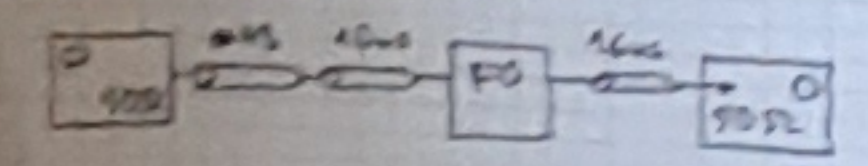Vp ~ 1V H scale 200ns/div 500 pt
file tek 0000.txt
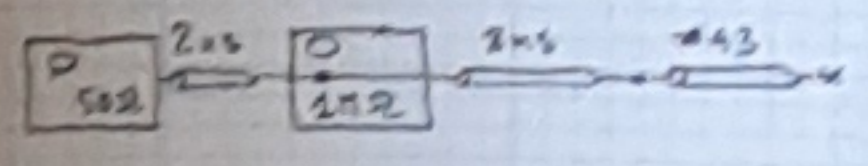
2. Pulser waveform
Vp ~ 500mV H scale 100ns/div 10n pt
file tek0001.txt
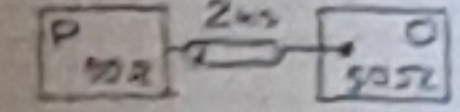
3. Long cable TF
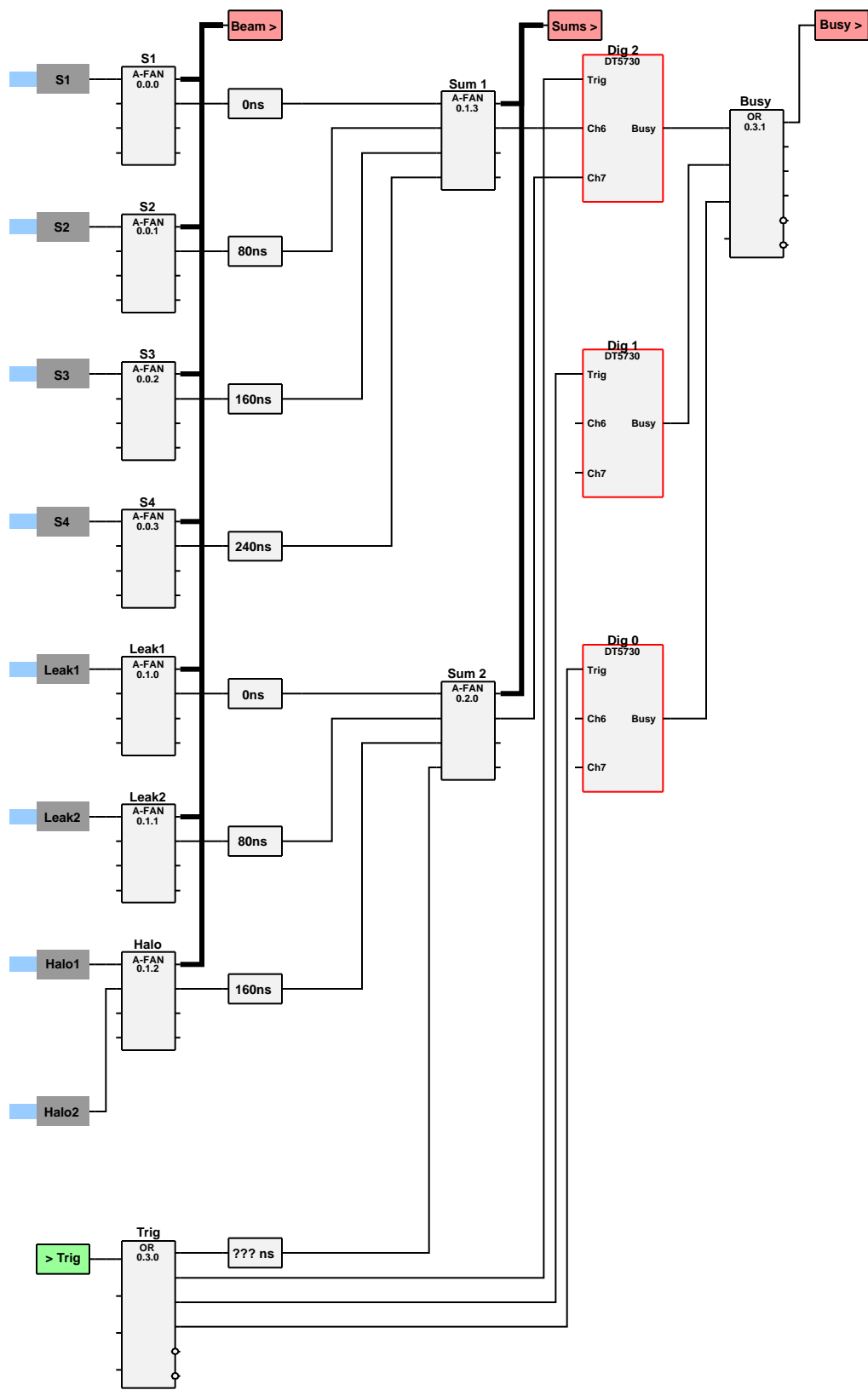Vp ~ 500mV H scale 100ns/div 10 x pt
file tek 0002.txt

4. Full setup
With random sequent - the same CH as
used in data taking
Vp ~ 100mV H scale 100ns/div 10K pt
file tek0003.txt

Beam Area

S1
A-FAN
0.0.0

S1

Beam >

S2
A-FAN
0.0.1

S2

0ns

Sum 1
A-FAN
0.1.3

Sums >

Dig 2
DT5730

Trig

Ch6   Busy

Ch7

Busy
OR
0.3.1

Busy >

80ns

S3
A-FAN
0.0.2

S3

160ns

Dig 1
DT5730

Trig

Ch6   Busy

Ch7

S4
A-FAN
0.0.3

S4

240ns

Leak1
A-FAN
0.1.0

Leak1

0ns

Sum 2
A-FAN
0.2.0

Dig 0
DT5730

Trig

Ch6   Busy

Ch7

Leak2
A-FAN
0.1.1

Leak2

80ns

Halo
A-FAN
0.1.2

Halo1

160ns

Halo2

Trig
OR
0.3.0

> Trig

??? ns

Trigger

> Spill 1

Spill 1

TTL 1.0.8 NIM

> Trig

> Spill 2

Spill 2

TTL 1.0.9 NIM

> Spill

> S1

> S2

> S3

> S4

> Halo

> Leak 1

> Leak 2

> Sum 1

> Sum 2

> Busy1

> Busy2

> Run

> Wide

Spill

Gate
1.11.0

S | NIM
R | NIM
OR | TTL
Blank | DEL

Beam Area Crate

A SUM	A SUM	A SUM	4-OR								
S1	Leak1	Sum 2	Trig								
S2	Leak2		Busy								
S3	Halo										
S4	Sum 1										

Trigger Crate 1

TTL-NIM											Gate
											Spill
Spill 1											
Spill 2											

Trigger Crate 2