

Ex no 7

Abdi Mahajan
19BEE0032

Date → 31st March 2021

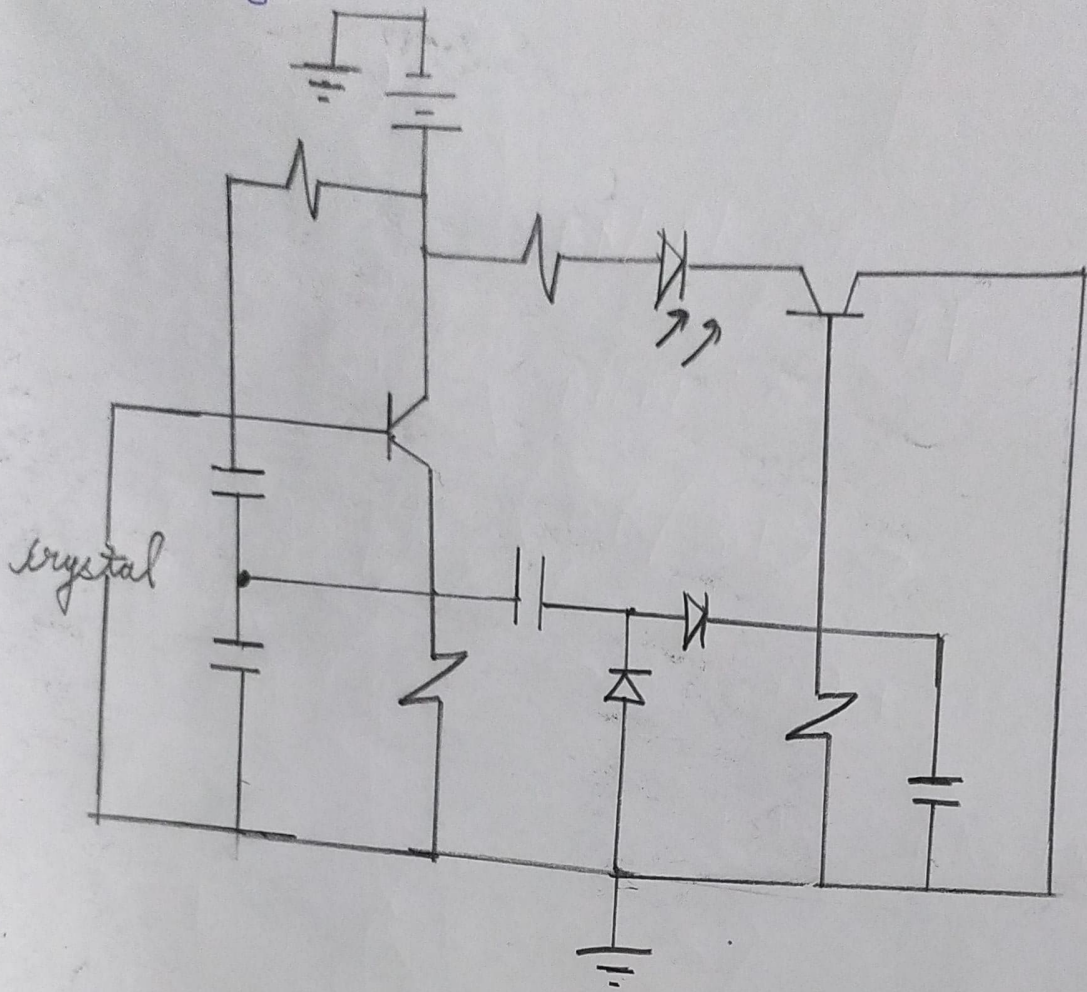
Aim → PCB design of crystal tester circuit

Apparatus required →

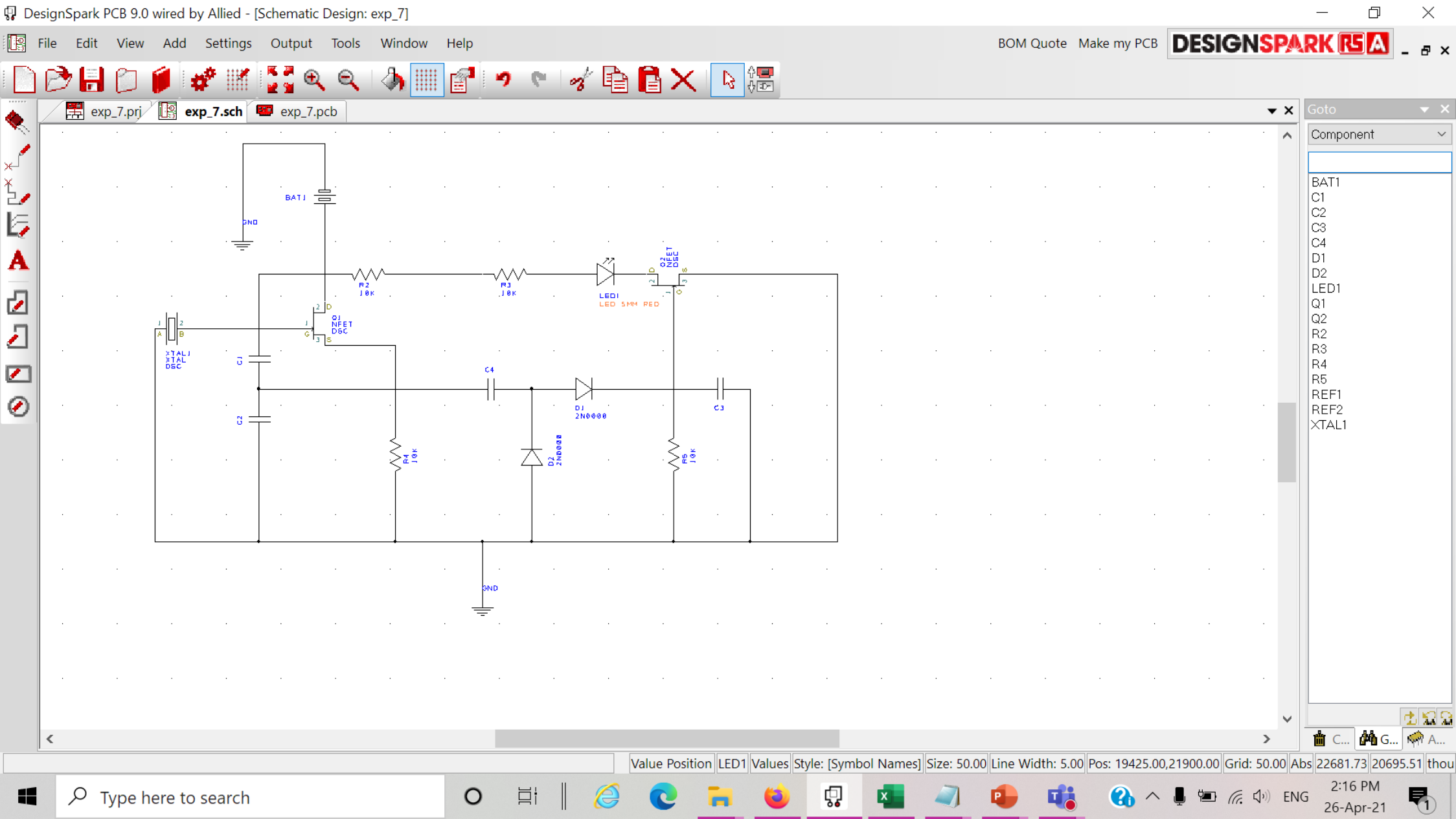
Name	Quantity	Library
Resistance	4	Designspark
Battery	1	Designspark
Ground	2	Designspark
Capacitance	4	Designspark
Diode	2	Designspark
LED	1	Designspark
XTAL	1	Designspark
NFET	2	Designspark

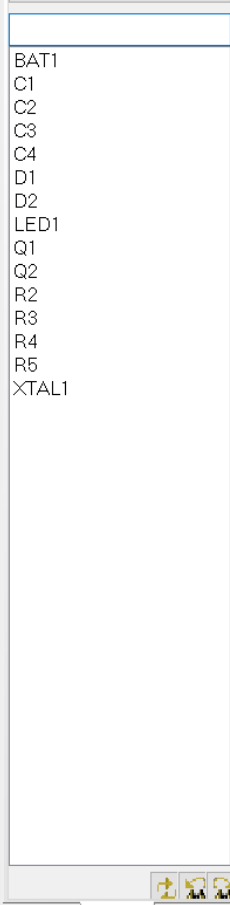
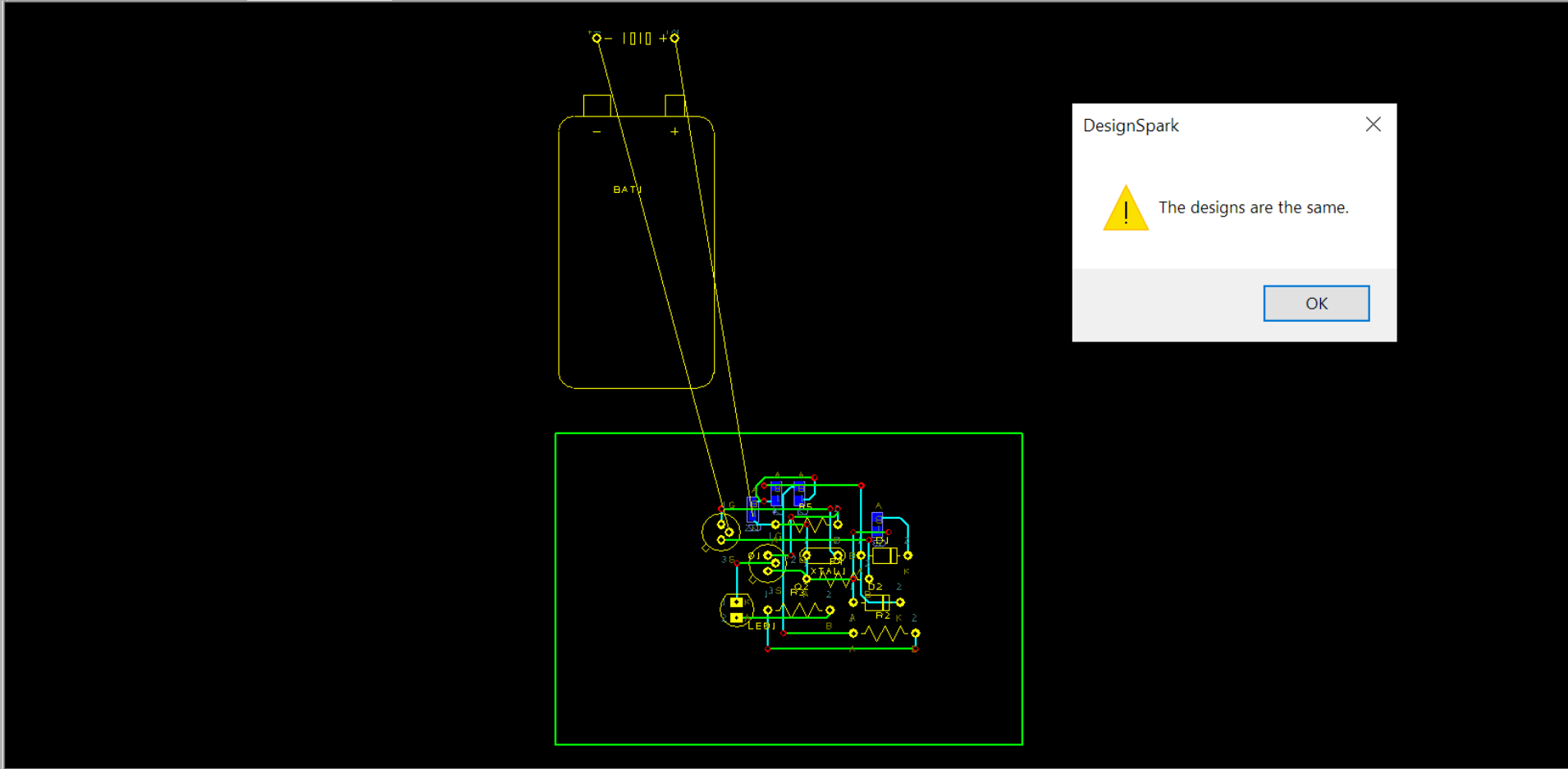
Description → We used NFET as transistor was causing issues resulting in test faults.

Schematic design →



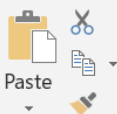
Result → Both the design and schematic diagram have been made and verified.





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General

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Number



Conditional Formatting



Format as Table



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Styles



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Editing

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A1 X ✓ fx Report Written:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
12																			
13	Ref Name	Qty	Component	Value	Package	Manufacturer	MPN	RS Part Number	Other Part	Description									
14	BAT1	1	Battery	9V	MISC					Battery									
15	C1	1	Capacitor				805			Capacitor									
16	C2	1	Capacitor				805			Capacitor									
17	C3	1	Capacitor				805			Capacitor									
18	C4	1	Capacitor				805			Capacitor									
19	D1	1	Diode	2N0000	DSC					Diode									
20	D2	1	Diode	2N0000	DSC					Diode									
21	LED1	1	LED	LED 5MM	DSC					Light Em Di									
22	Q1	1	NFET		DSC					J-FET									
23	Q2	1	NFET		DSC					J-FET									
24	R2	1	Resistor	2 10K	DSC					Resistor (USA type)									
25	R3	1	Resistor	2 10K	DSC					Resistor (USA type)									
26	R4	1	Resistor	2 10K	DSC					Resistor (USA type)									
27	R5	1	Resistor	2 10K	DSC					Resistor (USA type)									
28	XTAL1	1	XTAL	32.768KHz	DSC														
29																			
30																			
31																			

exp_7 (Bill Of Materials)



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2:16 PM
26-Apr-21


```
exp_7 (PCB - Component Heights Report) - Notepad
File Edit Format View Help

Report Written:    Monday, April 26, 2021
Design Path:      C:\Users\adima\Desktop\vit\winter sem
Design Title:
Created:          26-Apr-21 1:46:24 PM
Last Saved:       26-Apr-21 1:47:02 PM
Editing Time:     2 min
Units:            mm (precision 2)

Name  Height Side
-----
C1    -      Bottom
C2    -      Bottom
C3    -      Bottom
C4    -      Bottom
BAT1  -      Top
D1    -      Top
D2    -      Top
LED1  -      Top
Q1    -      Top
Q2    -      Top
R2    -      Top
R3    -      Top
R4    -      Top
R5    -      Top
XTAL1 -      Top

End Of Report.
```

```
exp_7 (PCB - Design Rule Check Report) - Notepad
File Edit Format View Help

Design Rule Check Report
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Report Written:    Monday, April 26, 2021
Design Path:      C:\Users\adima\Desktop\vit\winter semester 2020\automated test lab\exp_7.pcb
Design Title:
Created:          26-Apr-21 1:46:24 PM
Last Saved:       26-Apr-21 1:47:02 PM
Editing Time:     2 min
Units:            mm (precision 2)

Error Markers currently in design
=====

No errors found

End Of Report.
```

```
exp_7 (PCB - Dangling Connections Report) - Notepad
File Edit Format View Help

Dangling Connections Report
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Report Written:    Monday, April 26, 2021
Design Path:      C:\Users\adima\Desktop\vit\winter semester 2020\automated test lab\exp_7.pcb
Design Title:
Created:          26-Apr-21 1:46:24 PM
Last Saved:       26-Apr-21 1:47:02 PM
Editing Time:     3 min
Units:            mm (precision 2)

End Of Report.
```

Design Status Report

Report Written: Monday, April 26, 2021
Design Path: C:\Users\adima\Desktop\vit\winter semester 2020\automated test lab\exp_7.pcb
Design Title:
Created: 26-Apr-21 1:46:24 PM
Last Saved: 26-Apr-21 1:47:02 PM
Editing Time: 3 min
Units: mm (precision 2)

Board Area

=====

3870.96 mm squared

Board Extents

=====

X:76.20 mm Y:50.80 mm

Layers

=====

Name	Type	Side	Net
Top Copper	Electrical	Top	
Top Silkscreen	Silk Screen	Top	
Documentation	Documentation	Top	
Bottom Copper	Electrical	Bottom	
Bottom Silkscreen	Silk Screen	Bottom	

Components

< >

Ln 1, Col 1

100%

Windows (CRLF)

UTF-8



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26-Apr-21

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Total PinCount: 32

Net List

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Net Class	Nets	Track Length	Vias	Connections	Connection Length
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Signal	11	255.60	14	1	83.48
Ground	1	52.56	4	1	79.01

Total:	12	308.16	18	2	162.49
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Drill List

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Drill Diameter	Number of holes
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0.61	18
0.76	2
0.81	20
0.89	2

Total:	42
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End Of Report.