



**aselsan**

MESLEKİ VE TEKNİK ANADOLU LİSESİ

“güven veren gelecek”

# 11/A -67 Yağız YILDIRIM

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*Nuvoton M031FB0AE*

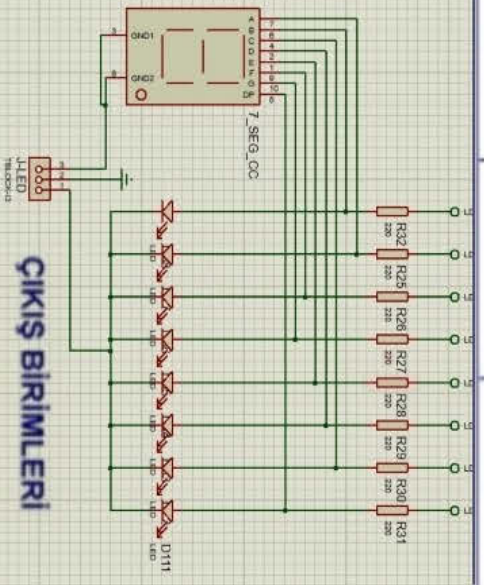
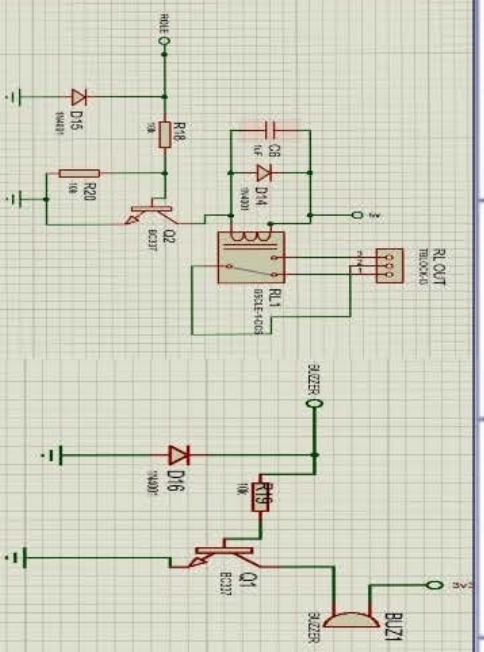
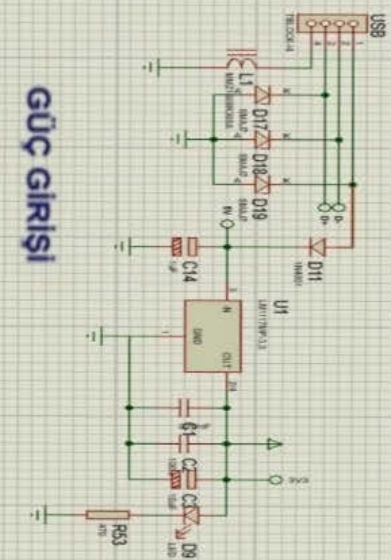
Bu belge geliştirdiğim kartın özelliklerini bulundurmaktadır.

*21.04.2023*

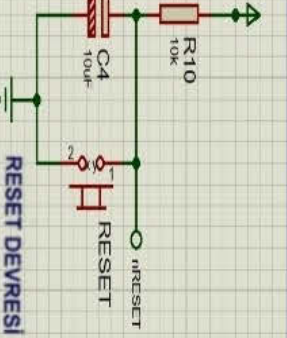
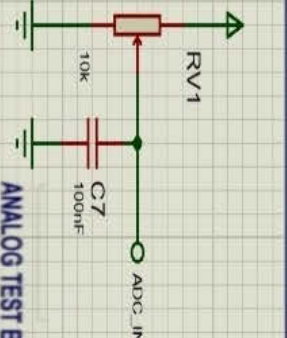
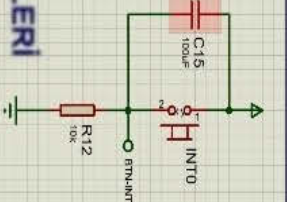
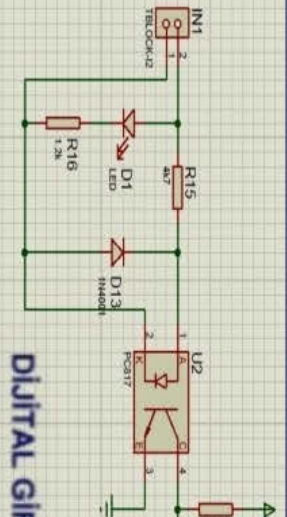
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## GÜÇ GİRİŞİ



## ÇIKIŞ BİRİMLERİ

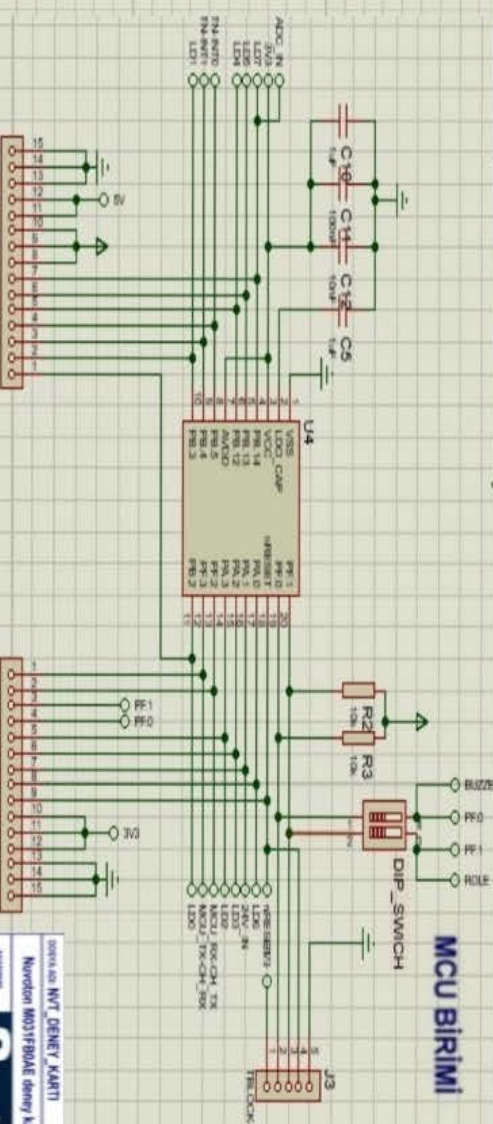


## DİJİTAL GİRİŞ BİRİMLERİ

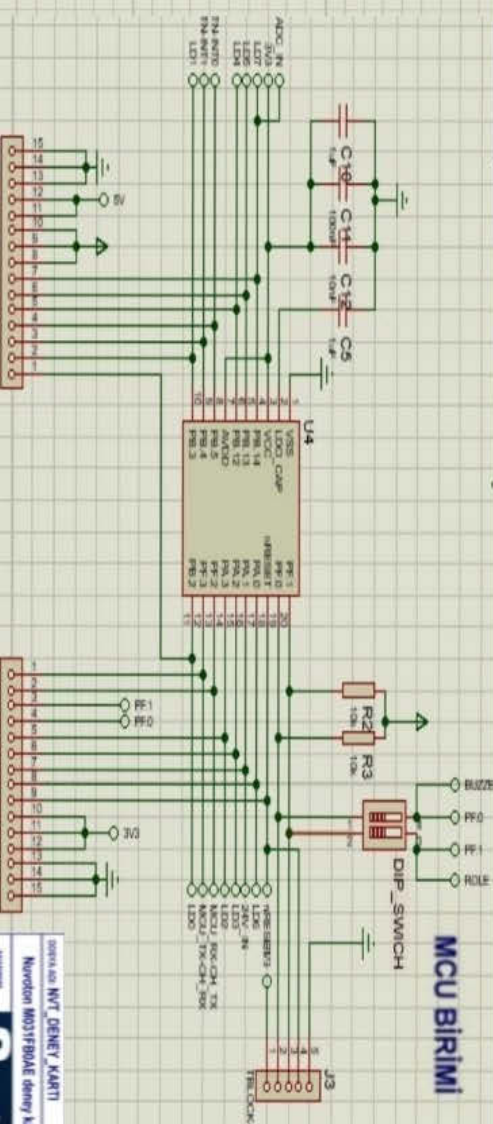
## ANALOG TEST BİRİMİ

## RESET DEVRESİ

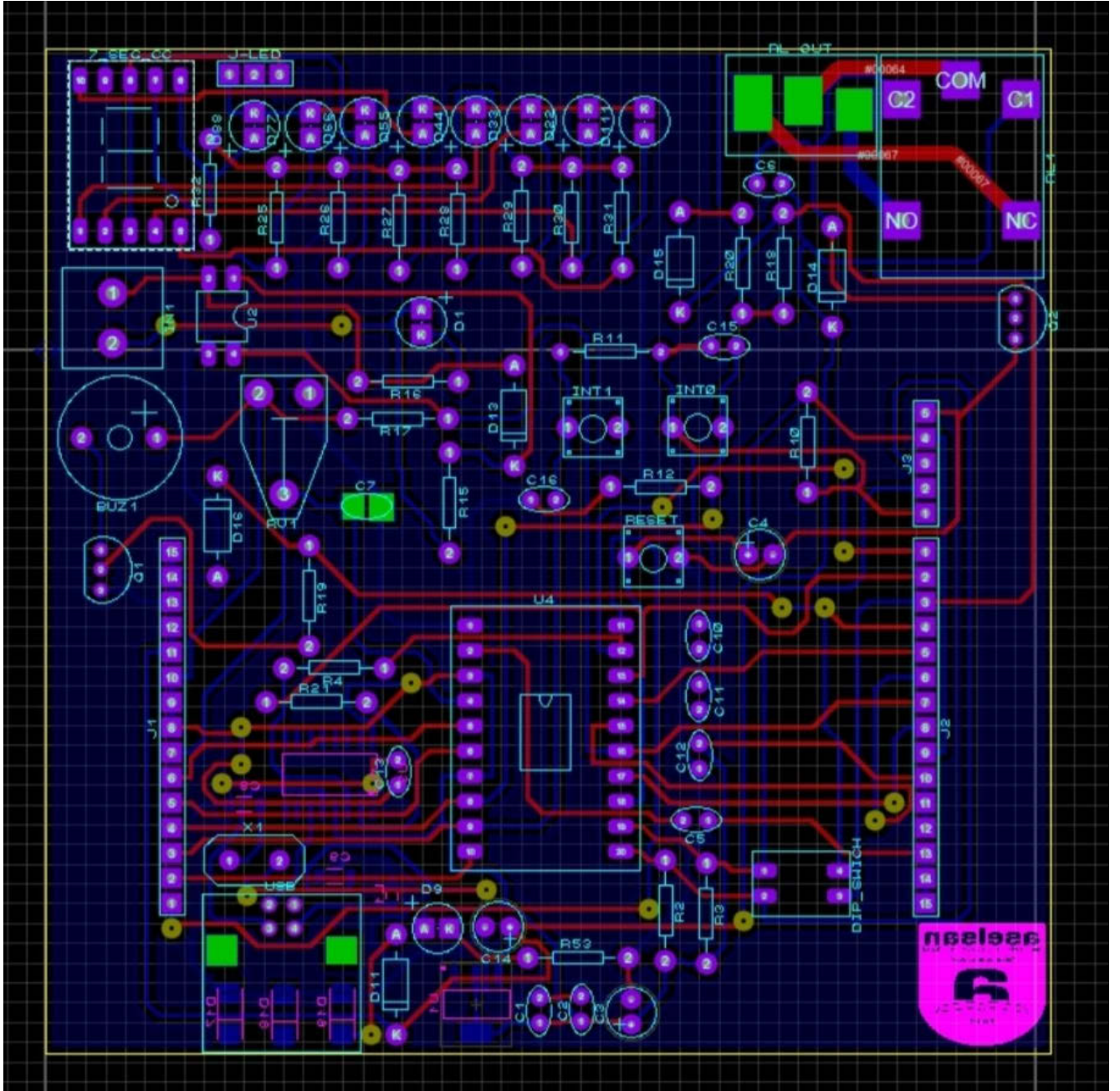
## USB -> UART DÖNÜŞTÜRÜCÜ



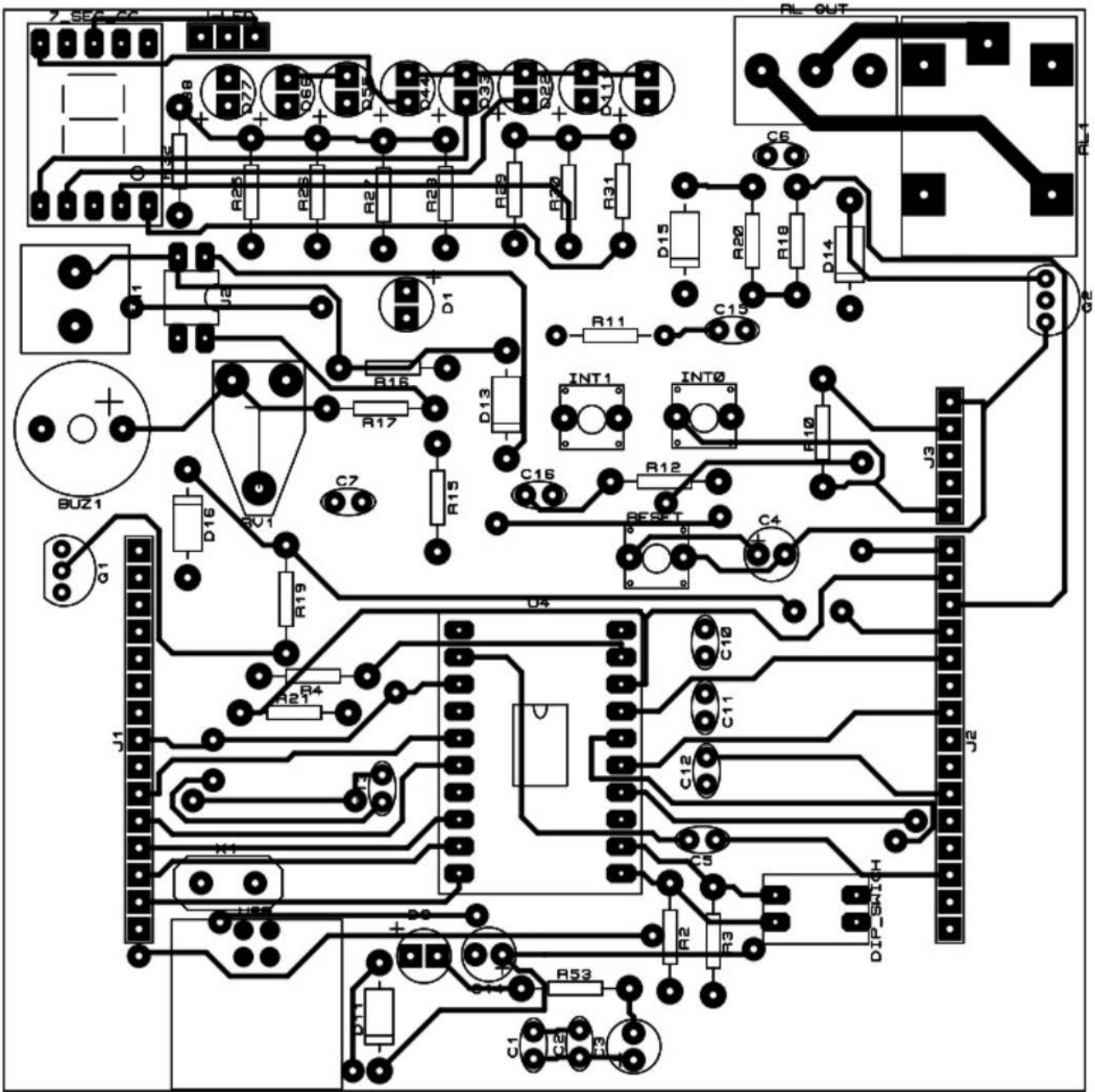
## MCU BİRİMİ



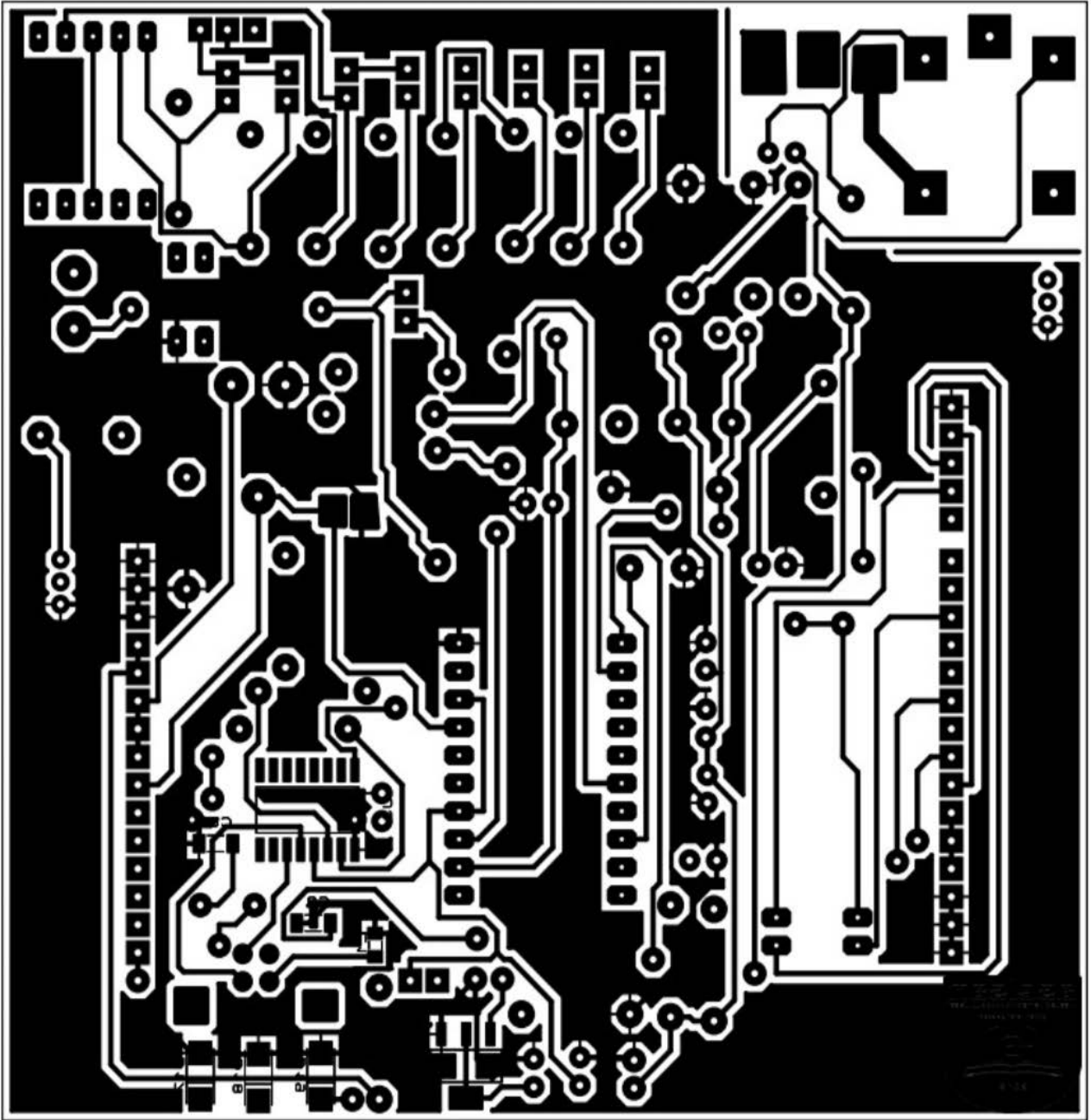




GENEL BASKI DEVRE GÖRÜNÜŞÜ



ÜST KATMAN YERLEŞİM PLANI



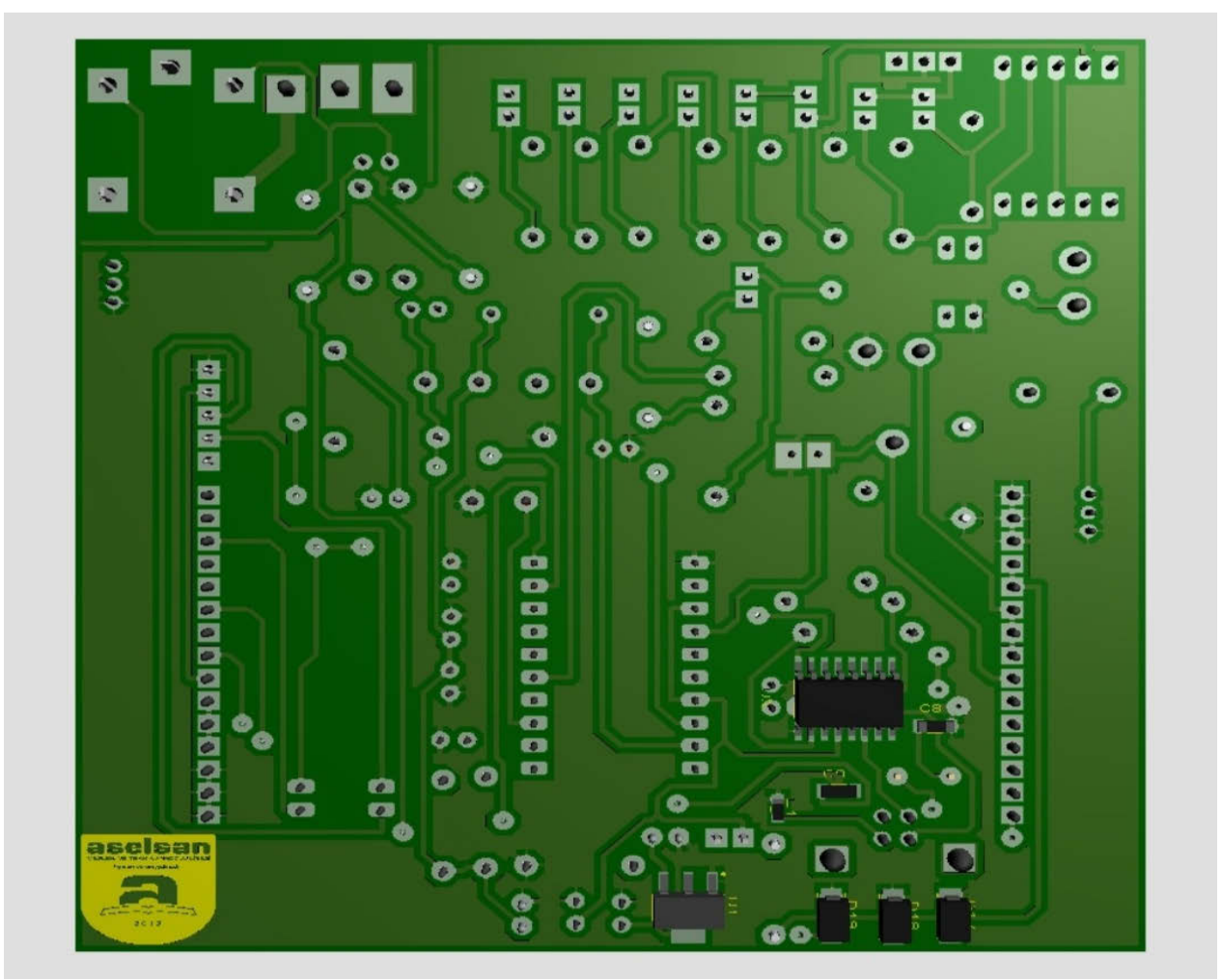
ALT KATMAN YERLEŞİM PLANI

## Bill Of Materials for NVT\_DENEY\_KARTI\_V1\_REV2\_6

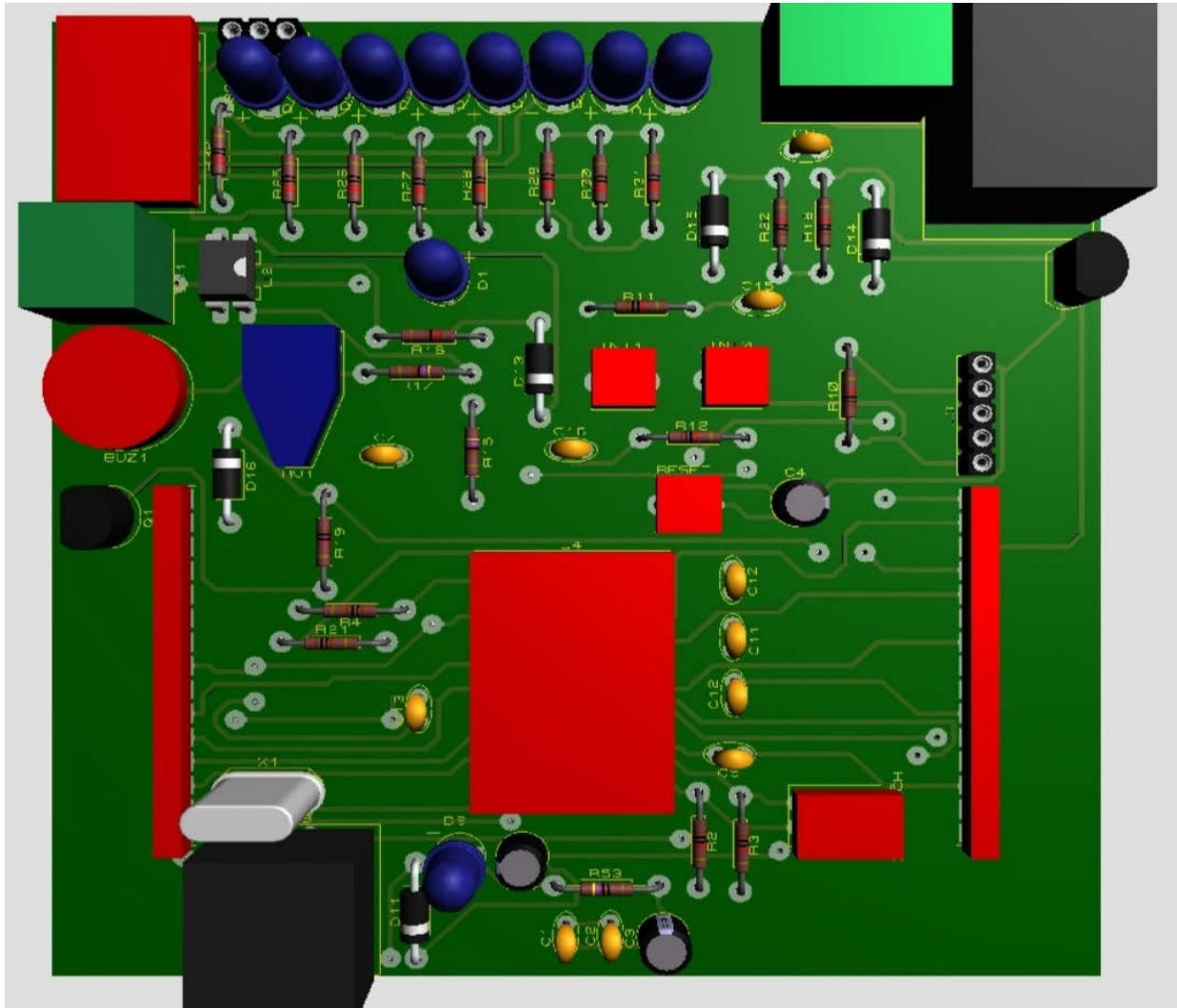
Design Title	NVT_DENEY_KARTI_V1_REV2_6
Author	
Document Number	
Revision	
Design Created	26 Şubat 2023 Pazar
Design Last Modified	19 Mart 2023 Pazar
Total Parts In Design	79

Category	Quantity	References	Value	PCB Package
Capacitors	1	C1	220nF	CAP10
		C2,C6-C7,C11,C13,C15-		
Capacitors	7	C16	100nF	CAP10
Capacitors	3	C3-C4,C14	10uF	ELEC-RAD13
Capacitors	1	C5	1uf	cap10
Capacitors	2	C8-C9	22pF	1206
Capacitors	1	C10	1uF	CAP10
Capacitors	1	C12	10nF	CAP10
Resistors	1	R1	470	RES40
Resistors	8	R2-R9	220	RES40
Resistors	4	R10-R12,R20	10k	RES40
Resistors	2	R13-R14	100k	RES40
Resistors	2	R15,R17	4k7	RES40
Resistors	1	R16	1.2K	RES40
Resistors	4	R18-R19,R21-R22	1k	RES40
Integrated Circuits	1	U1	LM1117MP-3,3	SOT230P700X180-4
Integrated Circuits	1	U2	PC817	DIL04
Integrated Circuits	1	U3	M031FB0AE	TSSOP-DIL20
Integrated Circuits	1	U4	CH340G	SOP16
Transistors	2	Q1-Q2	BC337	TO92
Diodes	10	D1-D9,D12	LED	LED
Diodes	1	D10	7_SEG_CC_14MM	7_SEG_14MM_CC_DISPLAY_FOOTPRNT
Diodes	3	D11,D15-D16	1N5817	DO41
Diodes	2	D13-D14	1N4001	DO41
Diodes	3	D17-D19	SMAJ7.0A	DO214
Miscellaneous	1	BUZ1	BUZZER	HPA13A
Miscellaneous	1	IN1	TBLOCK-I2	TBLOCK-I2
			6x6 2 pin tach	
Miscellaneous	3	INT0-INT1,RESET	buton	BUTON_2
Miscellaneous	2	J3-J4	CONN-H15	CONN-SIL15
Miscellaneous	1	J-LED	CONN-SIL3	CONN-SIL3
Miscellaneous	1	L1	30R FERRITE BEAD	0805
Miscellaneous	1	PRG	CONN-SIL5	CONN-SIL5
Miscellaneous	1	RL1	G5CLE-14-DC5	RLY-OMRON-C4
Miscellaneous	1	RL OUT	TBLOCK-I3	TBLOCK-I3
Miscellaneous	1	RV1	10K	PRE-HMIN
Miscellaneous	1	S1	2_PIN_DIP_SWITCH	2_PIN_DIP_SWITCH
Miscellaneous	1	USB	CONN-H4	USB-B
Miscellaneous	1	X1	12MHz	XTAL18





ALT KATMAN 3D GÖRÜNTÜ



ÜST KATMAN 3D GÖRÜNTÜ