

N32H473														32 bit ARM Cortex-M4F														200MHz														DSP																																																																																																	
512KB														Flash														192KB SRAM(														32KB CCM SRAM) + 4KB Backup SRAM														4														12bit 4.7Msps																																																																					
ADC 8														12bit DAC														4														PGA 7														COMP														USB FS Device														U(S)ART														I2C														SPI														CAN-FD													
xSPI																												FEMC																												I2S																																																																																			
																												Cordic														FMAC																																										AES/TDES														SHA														SM3																											
SM4														MD5														TRNG																												CRC16/32																																																																																			

- CPU**

32 ARM Cortex-M4F + FPU DSP MPU

8KB Cache Flash 0

200MHz 250DMIPS
- 512KByte Flash 1 10

160KB SRAM

32KB CCM SRAM SRAM CCM SRASM ECC

4KB Backup SRAM ECC Standby
- Run 45mA @200MHz 3.3V@25

Stop0 SRAM RTC Run

Standby 6uA Backup SRAM RTC Run IO
- 4MHz~48MHz

32.768KHz

PLL

2

RC 8MHz -1.5%~+2%

RC 32KHz +/-10%
- / /

107 GPIOs

1 USB FS Device PHY
6 SPI 2 I2S / SPI
4 USART /4 UART 7816 IrDA LIN USART3/UART5/UART8 TX/RX
4 I2C 1 MHz
2 CAN-FD

4 12bit 4.7Mps ADC 12bit 10bit 8bit 6bit 16bit ADC 16
3
8 12 DAC
● DAC1~4 DAC 1 1Msps Buffer
Buffer
● DAC5~8 DAC 1 15Msps BUFFER
4 PGA
7 COMP

1 xSPI 1/2/4/8 SRAM PSRAM Flash XIP
1 FEMC(Flexible External Memory Controller) 8/16 SRAM PSRAM NOR Flash
NAND Flash

Cordic

FMAC FIR IIR

2 DMA 8

RTC

3 16bit 5ns 6
4 4 PWM
10 16 (GTIM1~10)
● GTIM1~7 5.56ns 4 PWM
● GTIM8~10 5ns 4 PWM
1
2 32bit
2 16bit Stop0 Standby
1x 24bit SysTick 1x 14bit (WWDG) 1x 12bit (IWDG)

SWD/JTAG

USB UART Bootloader

Flash

SMPU

WRP

RDP

L0/L1/L2

AES/TDES SHA SM3 SM4 MD5

TRNG

CRC16/32

96 UID 128 UCID

1.8V~3.6V

-40 105 125

ESD ±4KV HBM , ±1KV CDM

EFT VDD +/-4KV A I/O +/-2KV A

UQFN32(5mm x 5mm)

UQFN48(7mm x 7mm)

LQFP48(7mm x 7mm)

LQFP64(10mm x 10mm)

LQFP80(12mm x 12mm)

LQFP100(14mm x 14mm)

LQFP128(14mm x 14mm)

N32H473xC	N32H473KCU7, N32H473CCU7 N32H473CCL7, N32H473RCL7, N32H473MCL7, N32H473VCL7, N32H473QCL7 N32H473KCU8, N32H473CCU8 N32H473CCL8, N32H473RCL8, N32H473MCL8, N32H473VCL8, N32H473QCL8
N32H473xE	N32H473KEU7, N32H473CEU7 N32H473CEL7, N32H473REL7, N32H473MEL7, N32H473VEL7, N32H473QEL7 N32H473KEU8, N32H473CEU8 N32H473CEL8, N32H473REL8, N32H473MEL8, N32H473VEL8, N32H473QEL8

N	32	H	4	73	C	E	U	7
Company Abbreviation Nationtech								
MCU Bit Width 32bit								
Types of Product High performance								Temperature Range 7 : -40 ℃~105℃ 8 : -40 ℃~125℃
MCU Core 4 = ARM Cortex-M4								
Product Series 73 = Analog Enhanced Type						Package Type L = LQFP U = UQFN		
Number of Pins K = 32 Pins C = 48 Pins R = 64 Pins M = 80 Pins V = 100 Pins Q = 128 Pins						Flash Size C = 256KB Flash E = 512KB Flash		

2

2-1 N32H473

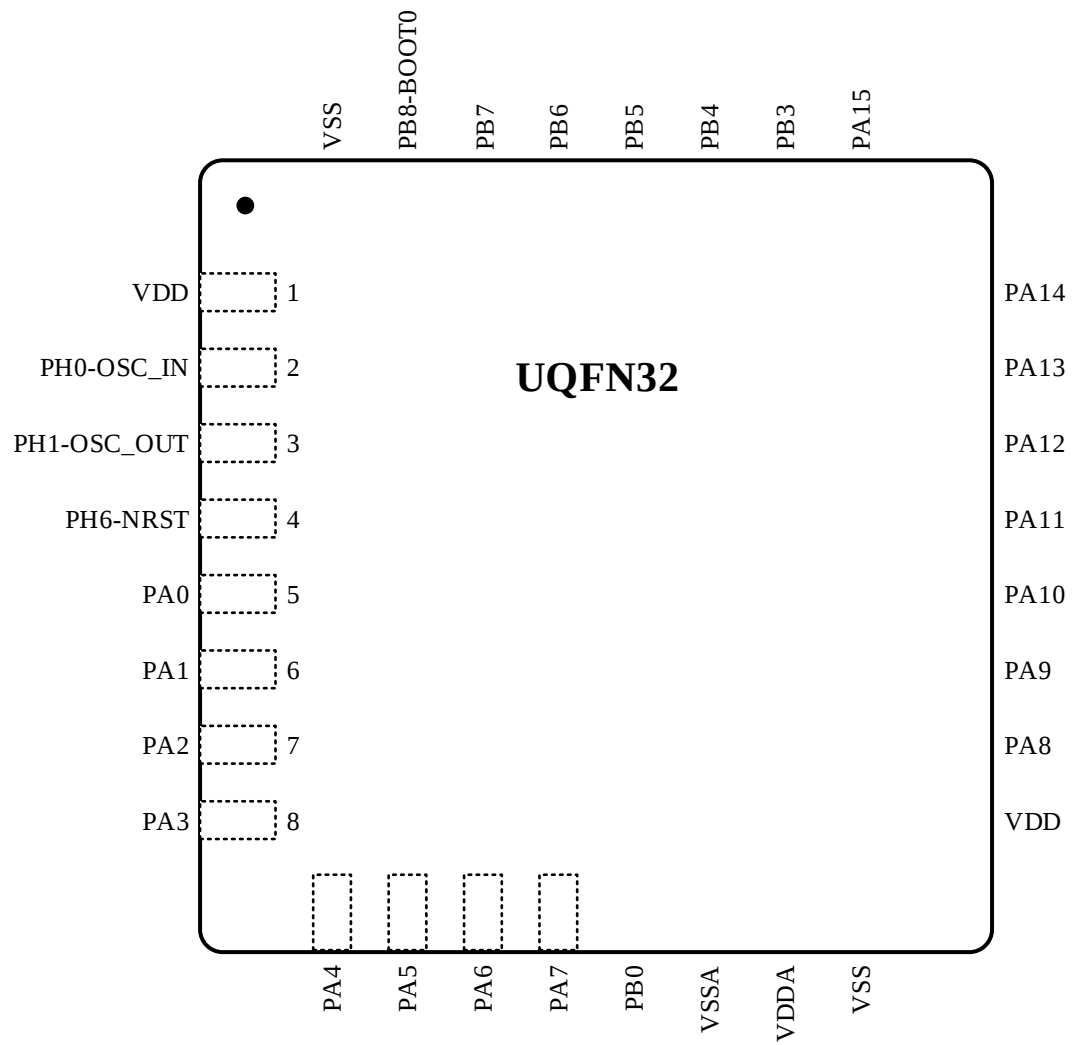
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		1.7~3.6V/-40~105 125													
CPU		ARM Cortex-M4F @200MHz, 250DMIPS													
Flash KB		256	512	256	512	256	512	256	512	256	512	256	512	256	512
Total SRAM (KB)	General SRAM	112	160	112	160	112	160	112	160	112	160	112	160	112	160
	CCM SRAM	32 ⁽¹⁾													
	Backup SRAM	4													
	ATIM	3*16bit													
	GTIM	7*16bit 3*16bit ⁽²⁾													
	BTIM	2*32bit													
	LPTIM	2*16bit													
	SysTick timer	1													
	WWDG	1*14bit													
	IWDG	1*12bit													

	CCM SRAM	SRAM	CCM SRAM
1.			
2.	1		
3.	XSPI	4	
4.	FMEC		

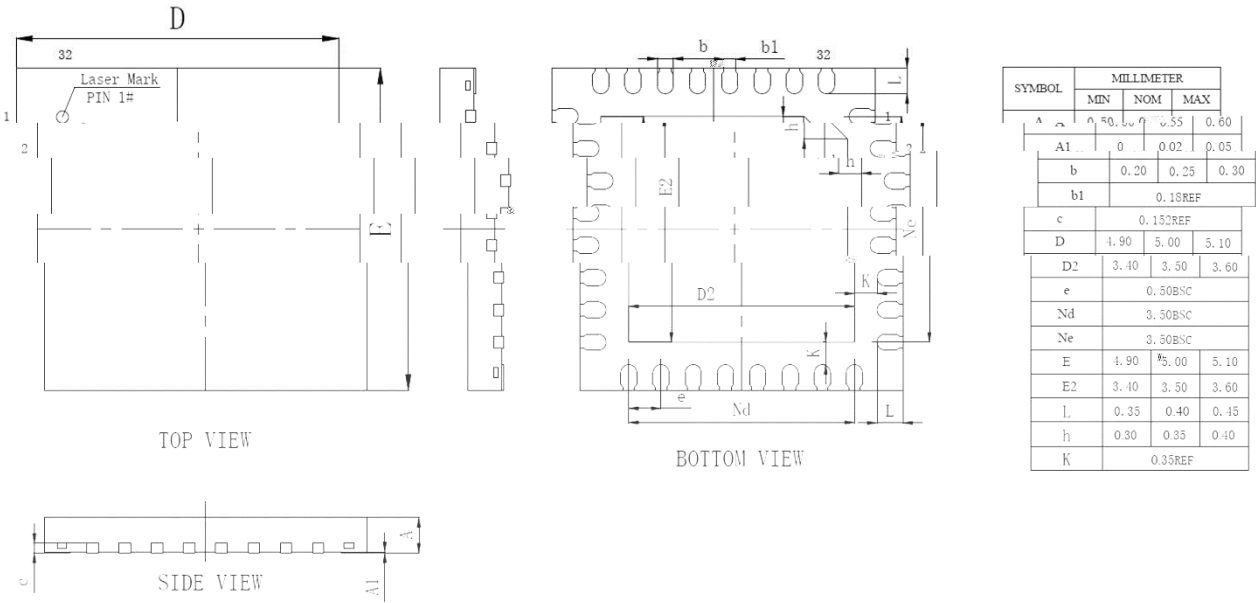
3

3.1

3.1.1



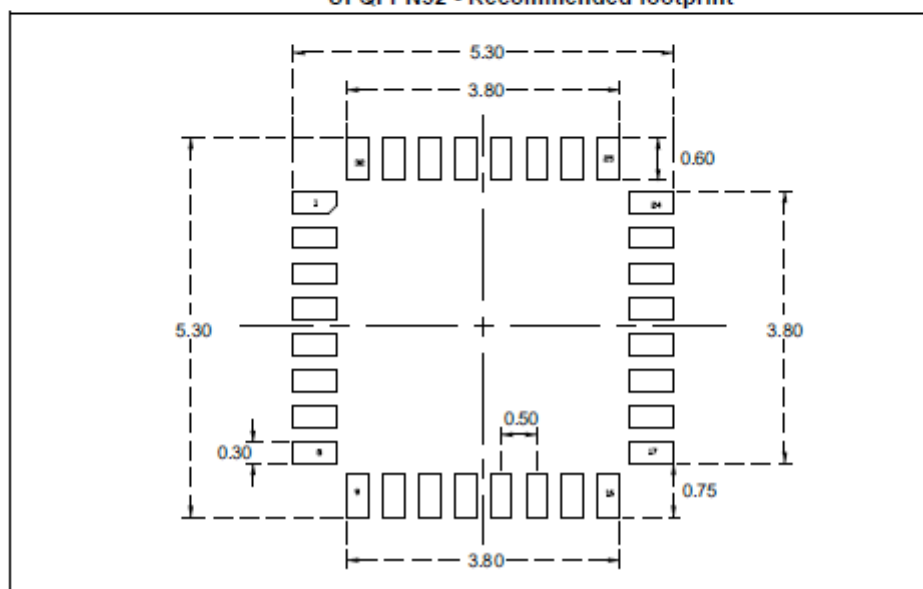
3.1.2



Symbol	millimeters			inches ⁽¹⁾		
	Min	Typ	Max	Min	Typ	Max
A ⁽²⁾	0.500	0.550	0.600	0.0197	0.0217	0.0238
A1	0	0.020	0.050	0	0.0008	0.0020
A3	-	0.152	-	-	0.0060	-
b	0.180	0.250	0.300	0.0071	0.0098	0.0118
D ⁽³⁾	4.900	5.000	5.100	0.1929	0.1969	0.2008
D1	3.400	3.500	3.600	0.1339	0.1378	0.1417
E ⁽³⁾	4.900	5.000	5.100	0.1929	0.1969	0.2008
E1	3.400	3.500	3.600	0.1339	0.1378	0.1417
e	-	0.500	-	-	0.0197	-
L	0.300	0.400	0.500	0.0118	0.0157	0.0197
ddd	-	-	0.080	-	-	0.0031

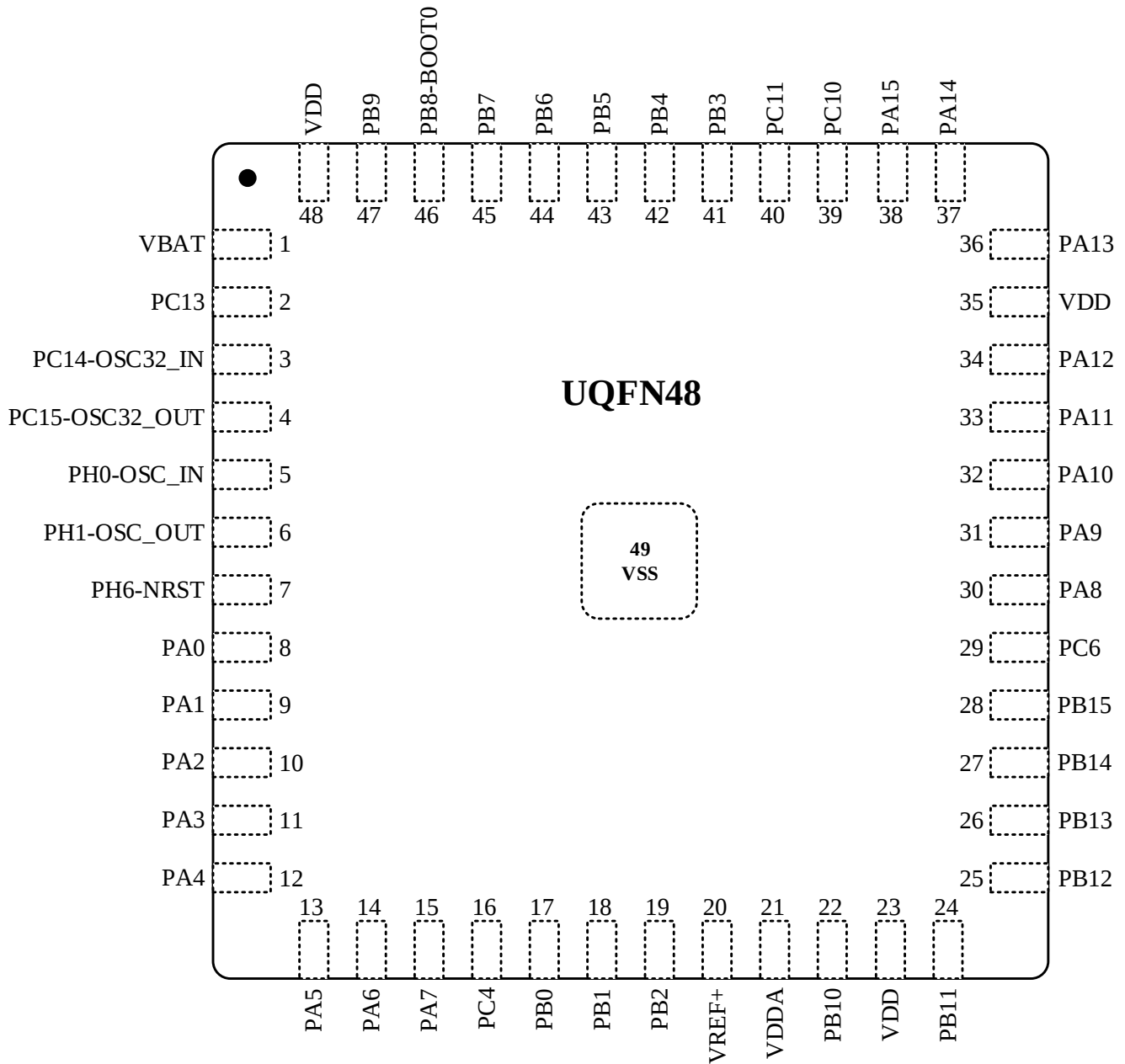
1. Values in inches are converted from mm and rounded to 4 decimal digits.
2. UFQFPN stands for thermally enhanced ultra thin fine pitch quad flat package no lead.
3. Dimensions D and E do not include mold protrusion (it cannot exceed 0,15 mm).

UFQFPN32 - Recommended footprint

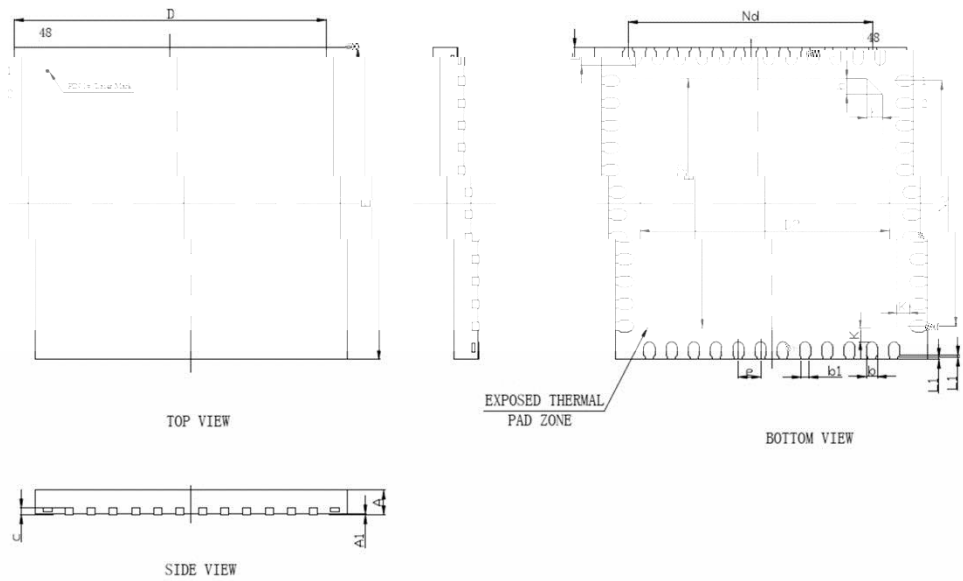


3.2

3.2.1



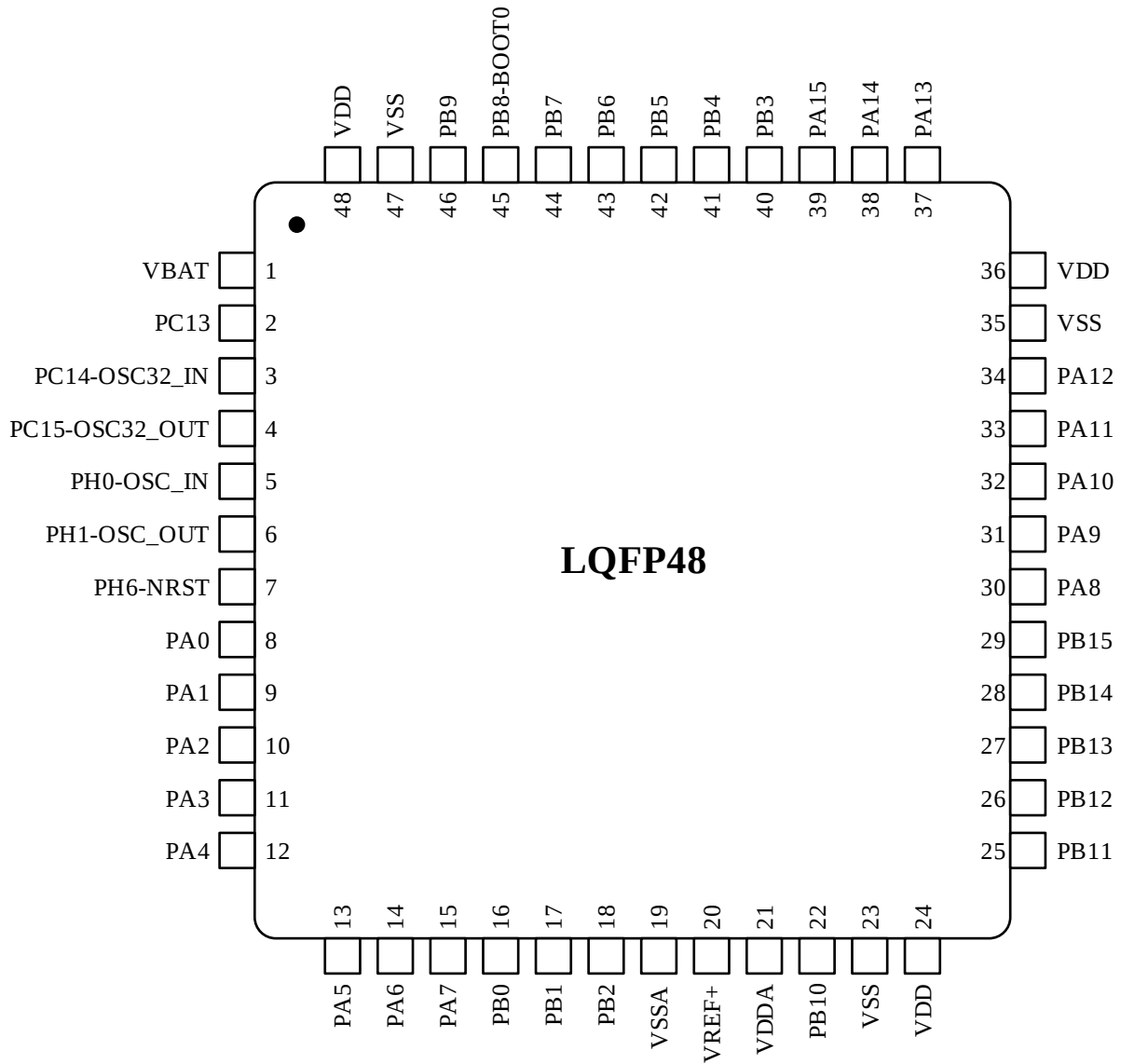
3.2.2



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.50	0.55	0.60
A1	0	0.02	0.05
b	0.20	0.25	0.30
b1	0.18REF		
c	0.152REF		
D	6.90	7.00	7.10
D2	5.50	5.60	5.70
Nda	5.40BSC		
e	0.50BSC		
E	6.90	7.00	7.10
E2	5.50	5.60	5.70
Ne	5.50BSC		
L	0.35	0.40	0.45
L1	0	0.05	0.10
K	0.30REF		
h	0.30	0.35	0.40

3.3

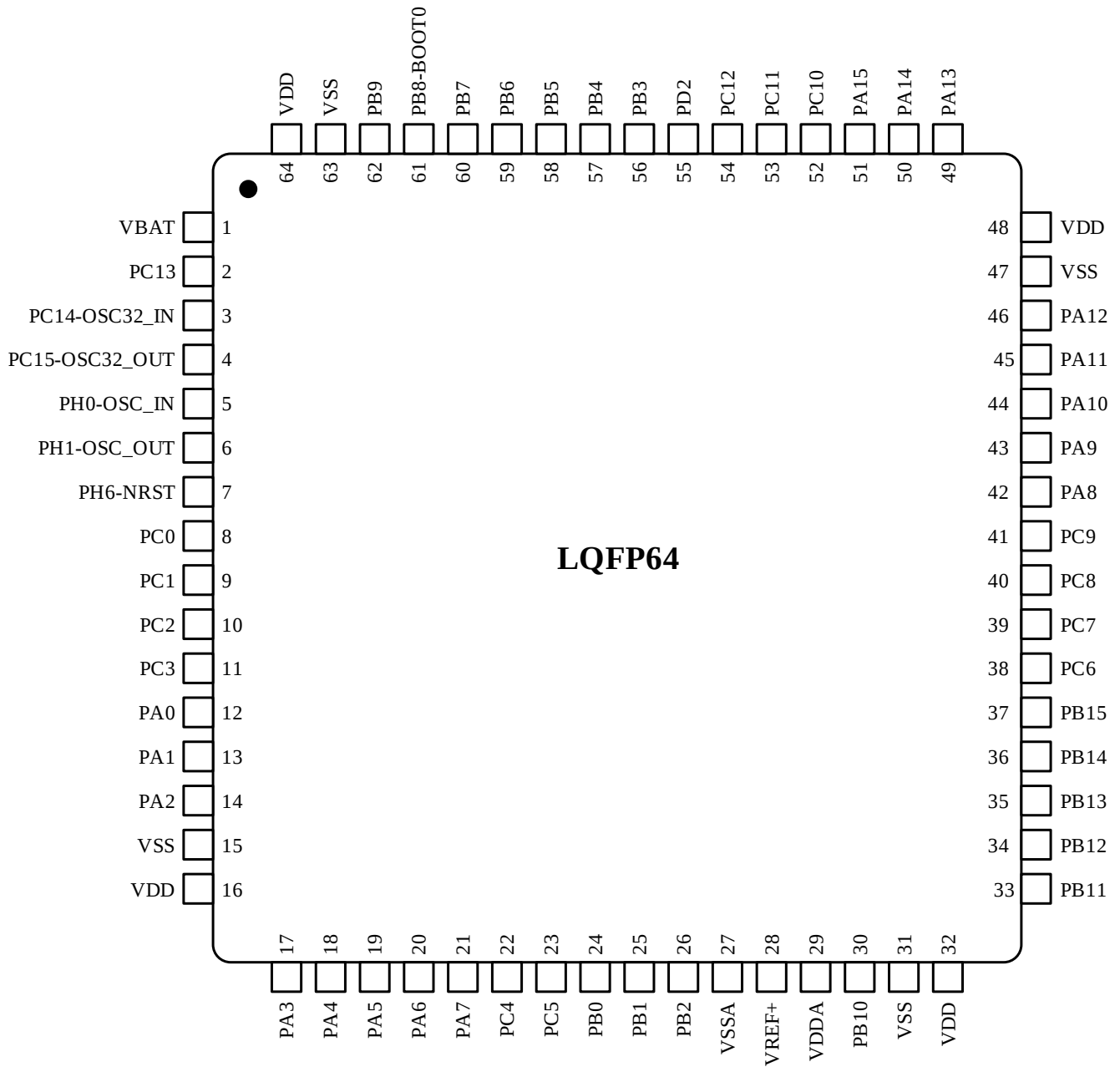
3.3.1



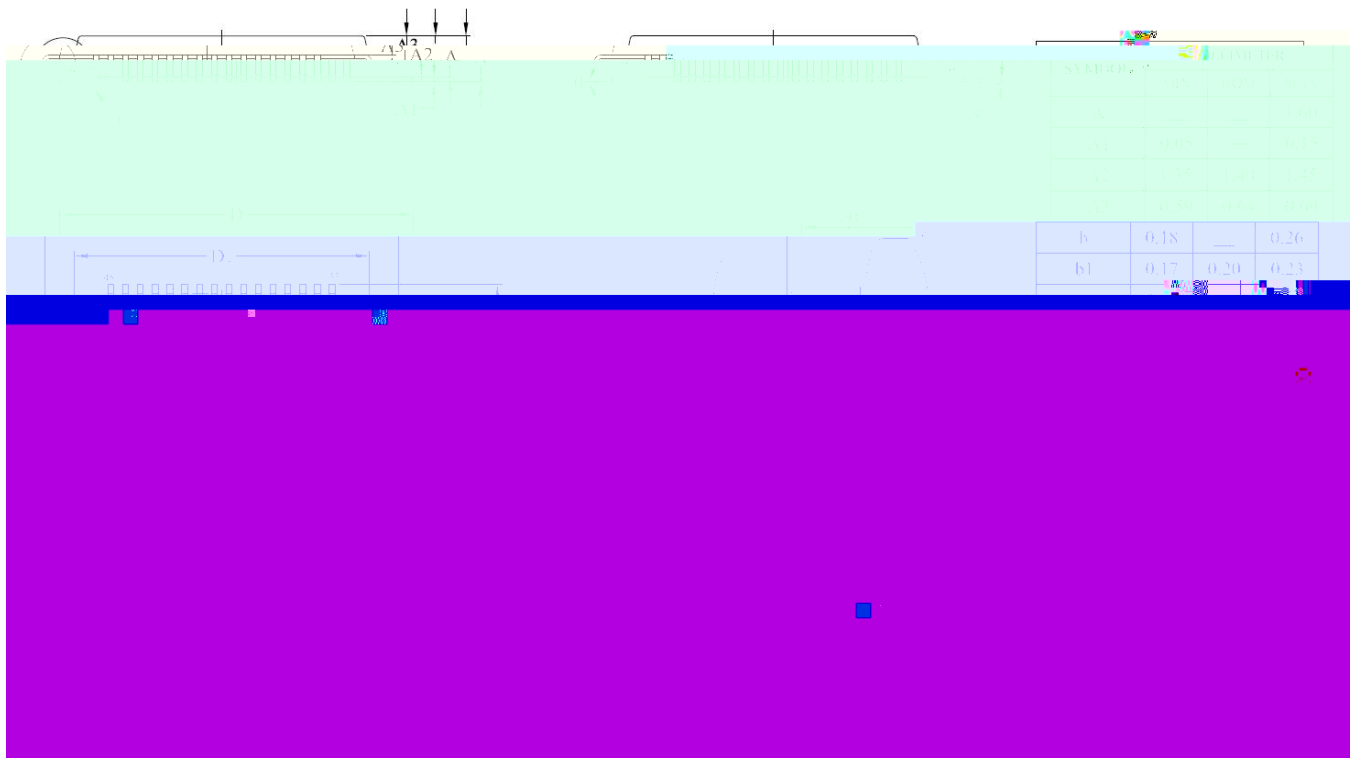
3.3.2

3.4

3.4.1

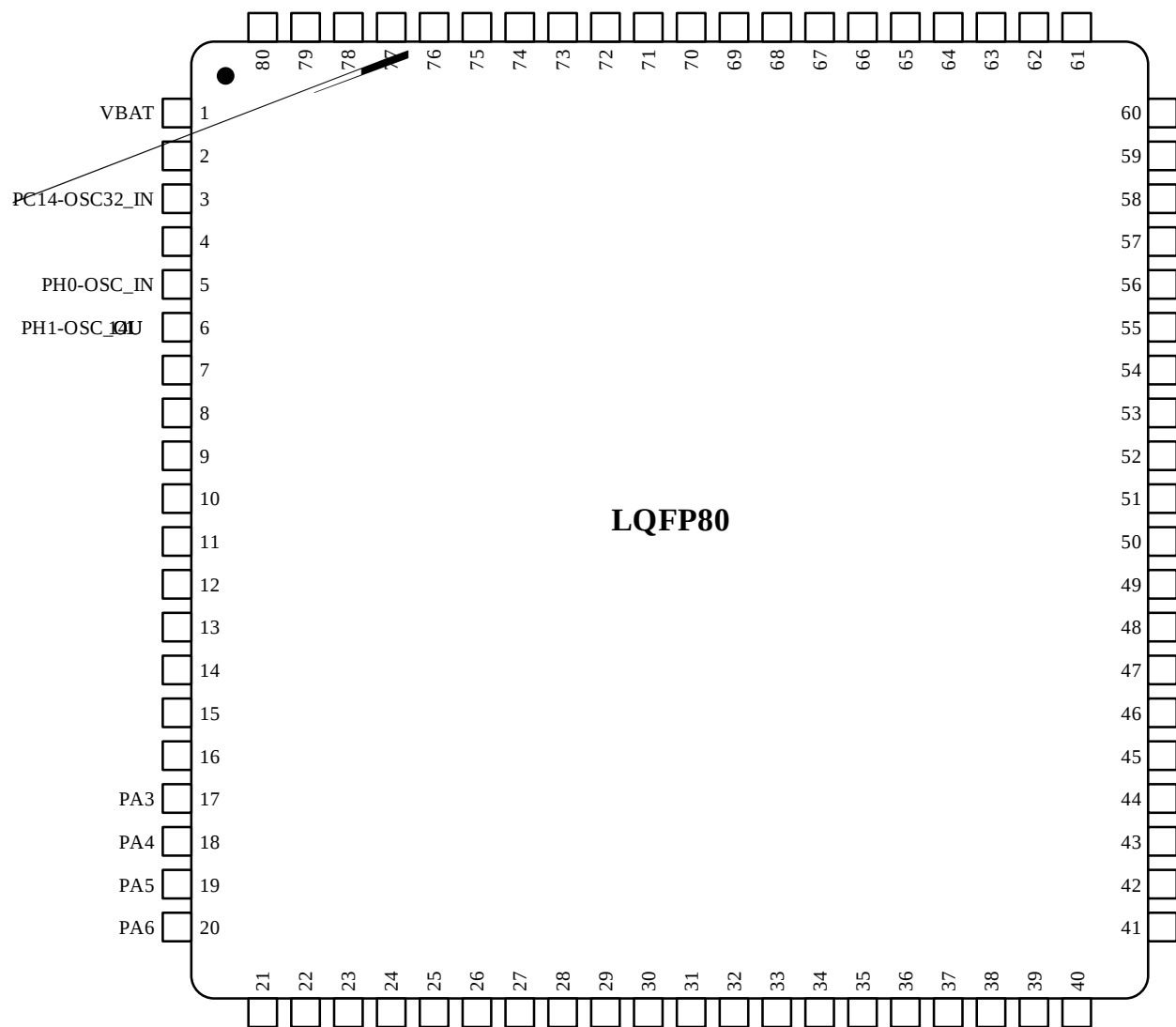


3.4.2



3.5

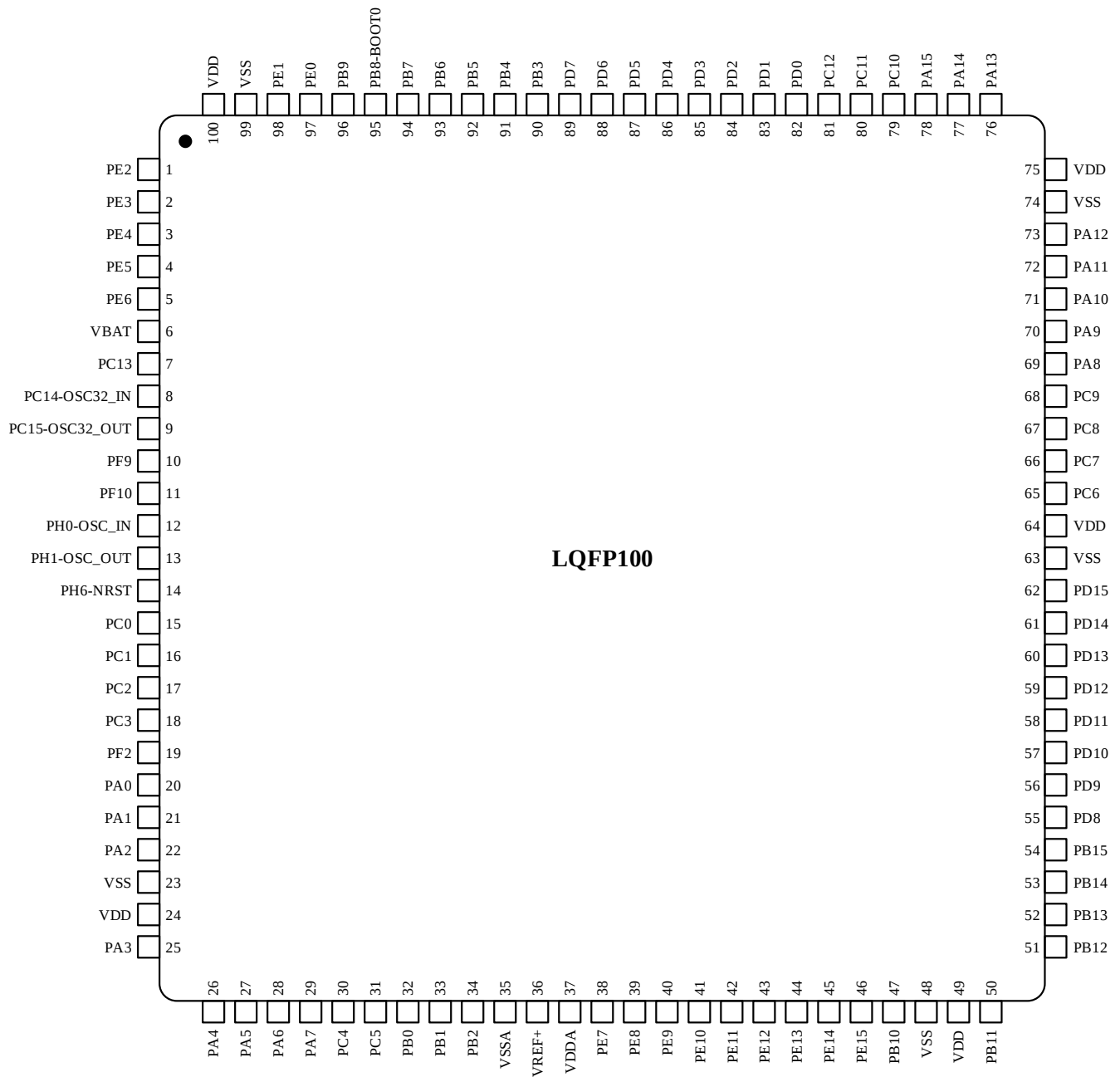
3.5.1



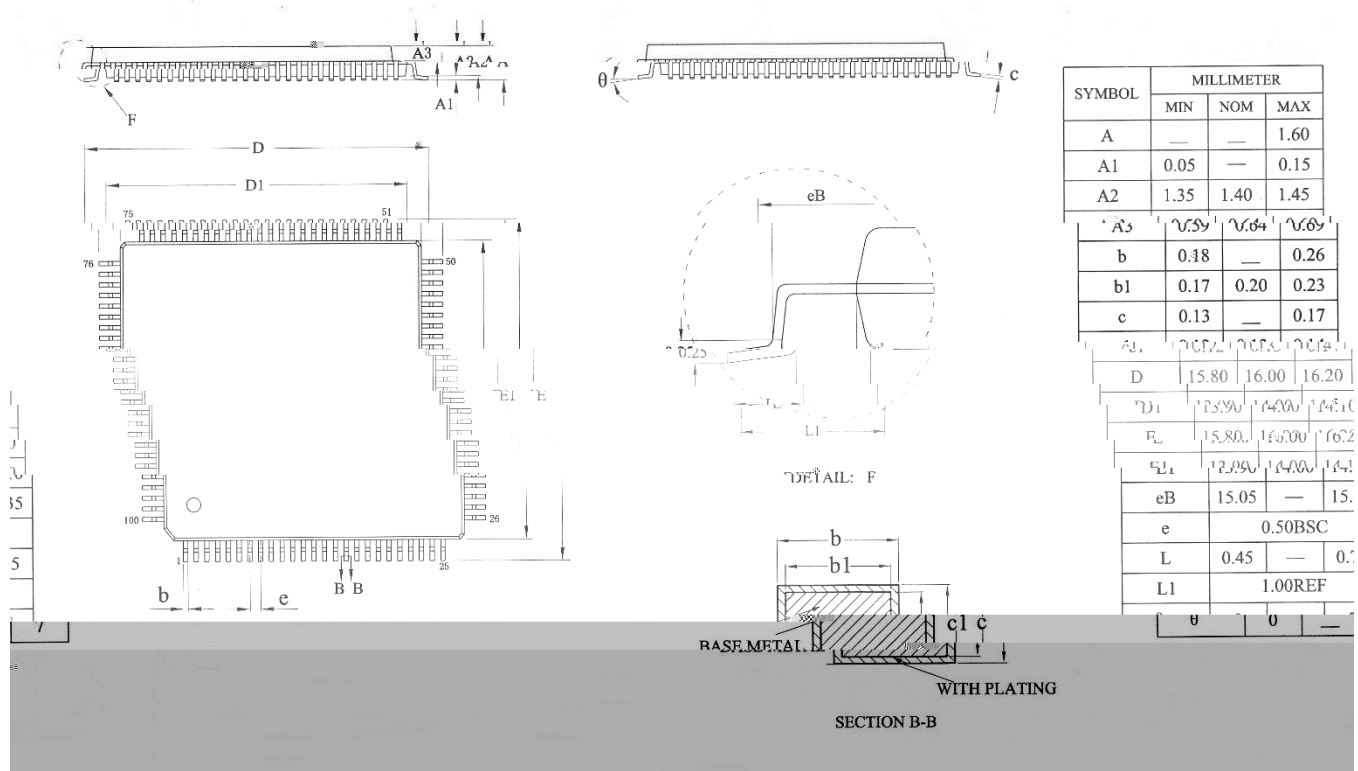
TOLERANCES			
SYMBOL	MIN	NOM	MAX
A	—	—	1.60
A1	0.05	—	0.15
A2	1.35	1.40	1.45
A3	0.59	0.64	0.69
b	0.18	—	0.26
b1	0.17	0.20	0.23
c	0.13	—	0.1
D	13.80	14.00	14
D1	11.90	12.00	12
E	13.80	14.00	14
E1	11.90	12.00	12
eB	13.05	—	13
e	0.50BSC		
L	0.45	0.60	0.
L1	1.00REE		
θ	0	—	—

3.6

3.6.1

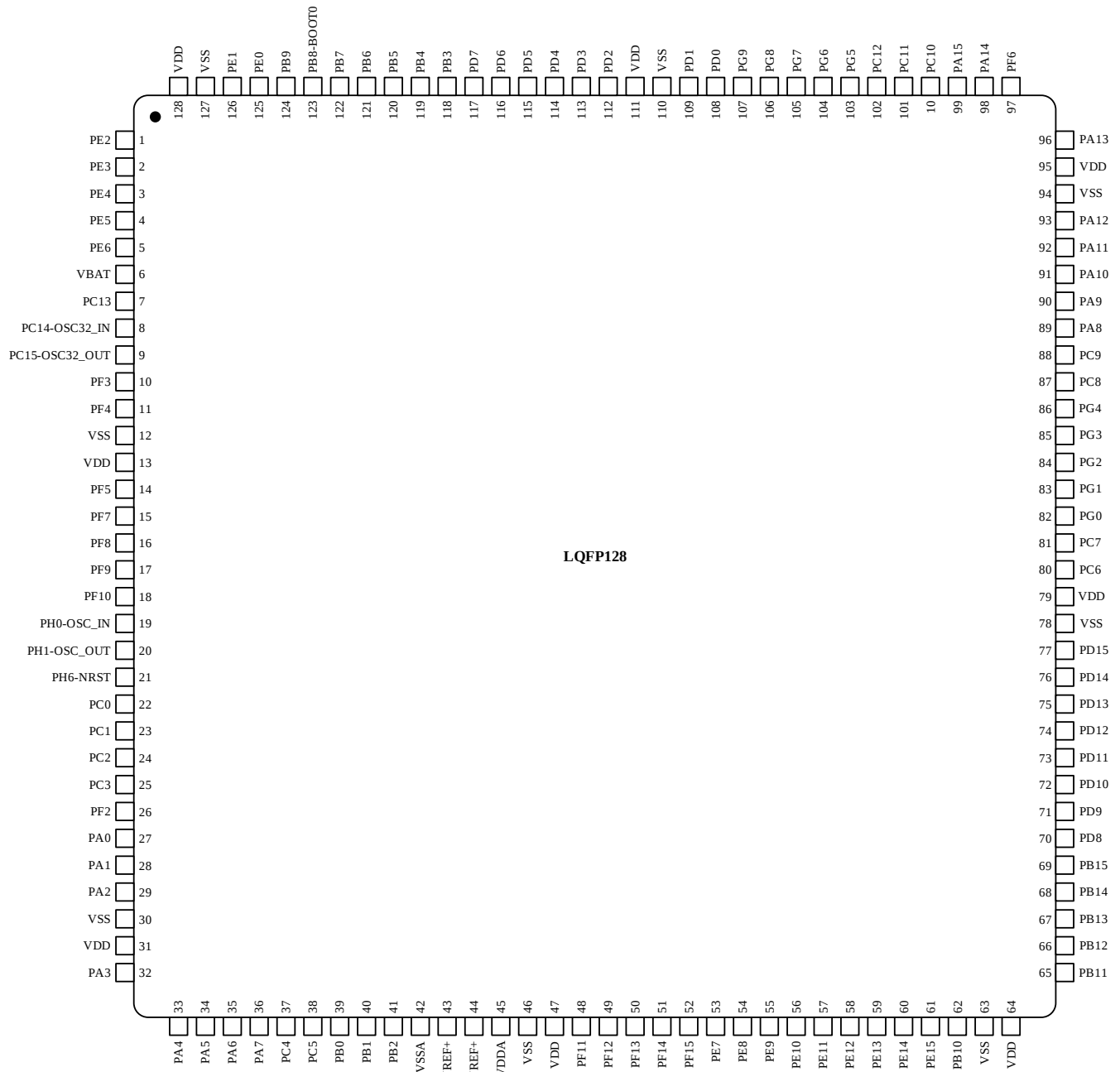


3.6.2

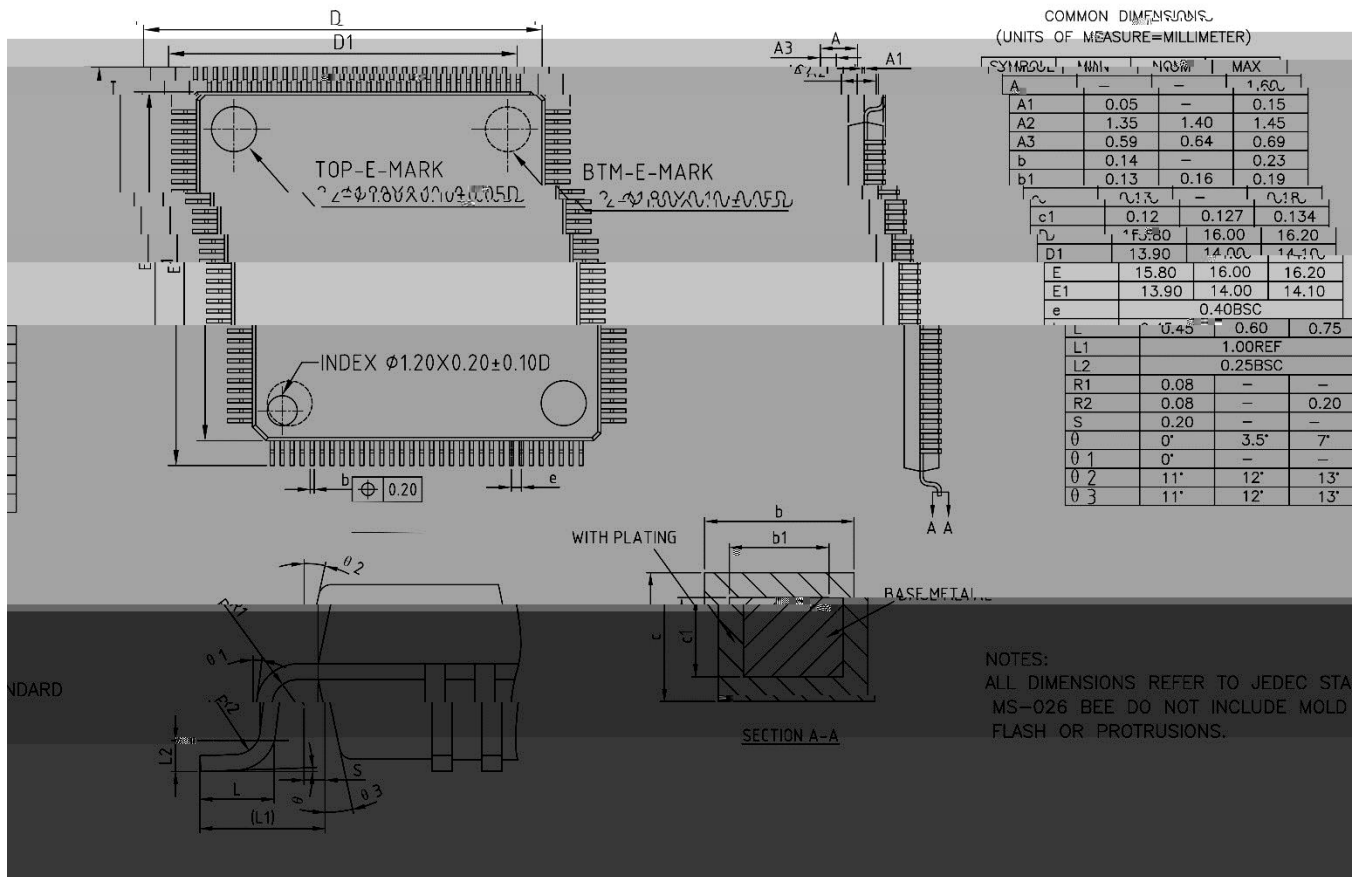


3.7

3.7.1



3.7.2



4

V0.9.3	2023.11.17	
V0.9.4	2024.4.8	1. GTIM1~7 2.

