





		tH	200			ns
		tBW	2/FCLK		5/FCLK	μs
		tWL	16/FCLK			μs
		VIL			0.2	VDD
		VIH	0.8			VDD
	VOL>(VDD-1V)	IOH			-200	μA
	VOL<1V	IOL	200			μA
				5		pF
		TFR	2/FCLK			
		tCL	2/FCLK			
		tL	200		tRA	ns
		tH	200			ns
		tRA	4/F			μs
			590	650	720	μV/count
ADC			2 ¹³	2 ¹⁴ -511		Counts
				80		Counts/K
ADC			511		2 ¹⁴ -511	Counts
Value at 300K			6700	8200	9900	Counts
			FCLK * 1.41 / 2048 / PI			Hz
HPF			FCLK / 16 * 1.41 / 2048 / PI			Hz
		FOSC	56	64	74	kHz
		FCLK		FOSC/2		

3.

RM412

PIR

RM412

ADC





0 = 1 =

7) ADC

ADC ADC :
PIR BFP = 0
PIR LPF = 1
 = 2
 = 3
 “ 0 ” “ 1 ”

8)

9
1= 0=

3.3 SERIN

(0/1) “ ” “ ” (SERIN 0 1
 (tbit) RM412) TBW RM412
 16 (tR)

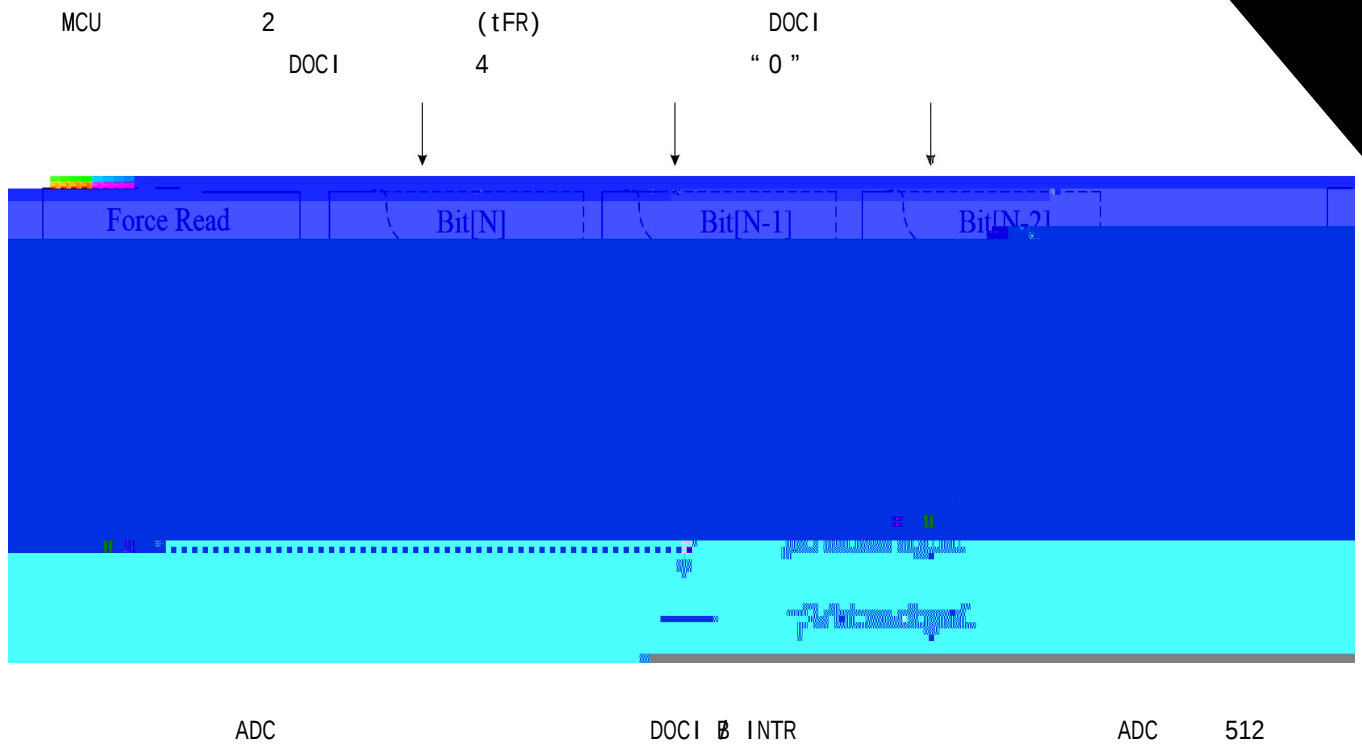


1.

Bit-No		
[24:17]	[7:0]	6.5μv
[16:13]	[3:0]	(0.5s ..8s)
[12:11]	[1:0]	
[10:9]	[1:0]	(2s ..8s)
[8]	[0]	1= 0=
[7]	[0]	0= 1 =
[6:5]	[1:0] ADC /	0 = PIR (BPF) 1 = PIR (LPF) 2 = (LPF) 3= (LPF)
[4:1]	[0]	
[0]		1= 0=



%00000000



[16:13]	[3:0]	"H" "L"
[12:11]	[1:0]	
[10:9]	[1:0]	
[8]		0= 1 =
[7]		0= 1 =
[6:5]	[1:0] ADC	0 = PIR (HPF) 1 = PIR (LPF) 2 = 3 =
[4:1]		
[0]		1= 0=

4.

4.1 PIR

1)

$$\text{ADC [6:5] PIR LPF (=1)}$$

$$\text{VPIR} = (\text{ADC_out} - \text{ADC_offset}) * 6.5\mu\text{v}$$

2)

$$\text{ADC [6:5] PIR HPF (=0)}$$

$$\text{VPIR} = \text{ADC_out} * 6.5\mu\text{v}$$

4.2

$$\text{ADC [6:5] (=2)}$$

$$\text{VDD} = (\text{ADC_out} - \text{ADC_offset}) * 650\mu\text{V}.$$

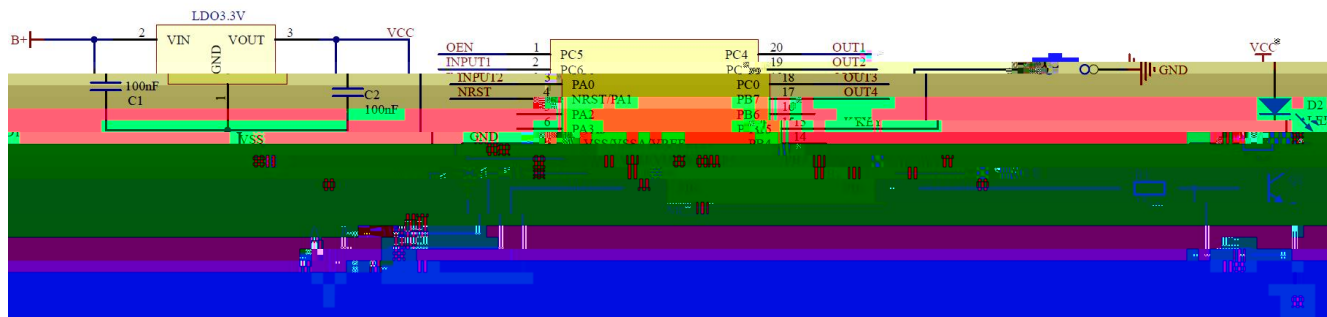
4.3

$$\text{ADC [6:5] (=3)}$$

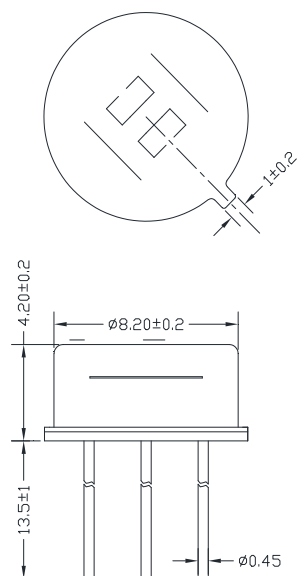
$$= \text{Tcal} + (\text{ADC_out} - \text{ADC_offset}(\text{Tcal})) / 80 * \text{count} / \text{K}$$

$$\text{ADC_offset} = \text{ADC @ VIN} = 0 = 2^{13}$$

$$\text{ADC_offset}(\text{Tcal}) = \text{ADC} = 8200@300\text{k}$$



/ /





1	35	95	RH	500H		
2	-40	500H			3H	:1
3	80	500H				
4	-40	1H/	1H/40	1H/10	2	
5	260 ± 5	10S			15	



