PMR3406 - Microprocessadores - Aula 18/05/2020

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$F_{osc} = 10\,MHz$

a) $PR2 = \frac{F_{osc}}{(TM2\ Pres).4\ F_{PWM}} - 1 =$

$= \frac{10 \cdot 10^6}{4 \cdot 4 \cdot 7 \cdot 10^3} - 1 = 88$

b) $F_{PWM} = \frac{10 \cdot 10^6}{4 \cdot 4 \cdot (88+1)} = 7022,47\,Hz$ erro = 0,3%

c) Pulse width = $0,4 \cdot T_{PWM} = 5,7 \cdot 10^{-5}$

$n = \frac{5,7 \cdot 10^{-5} \cdot F_{osc}}{(TMR2\ Presc)} = \frac{5,7 \cdot 10^2}{4} = 142,4 = 0b10001110$

d) CCPR1L = 0x23; CCP1CONbits.DC1B = 0b10;

e) Resolution = $\frac{\log(4(PR2+1))}{\log(2)} = 8,47 \rightarrow 8$ bits

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