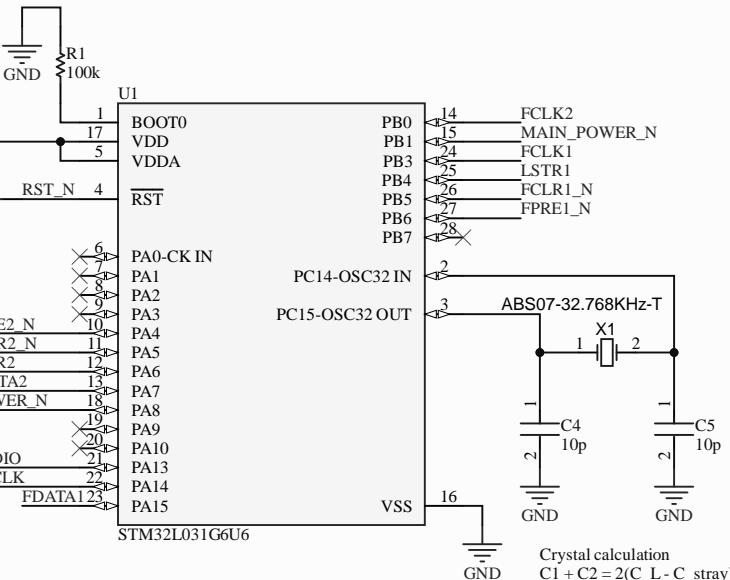
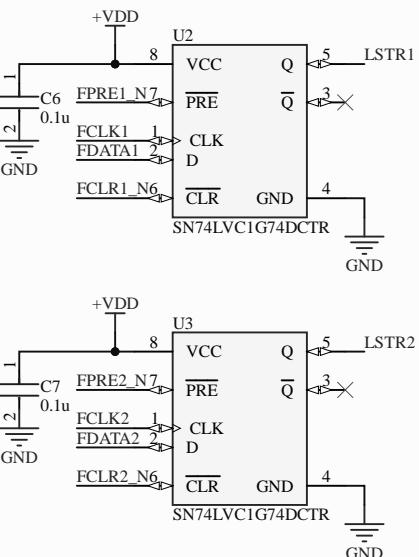
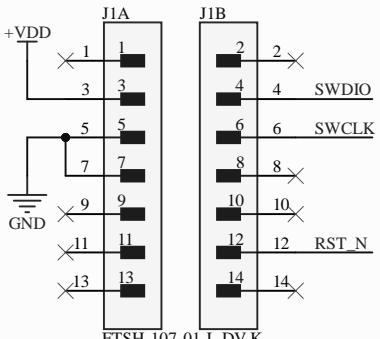
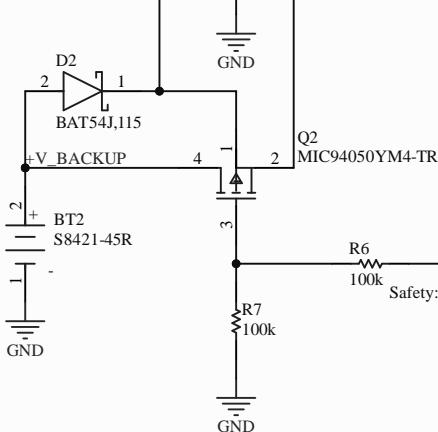


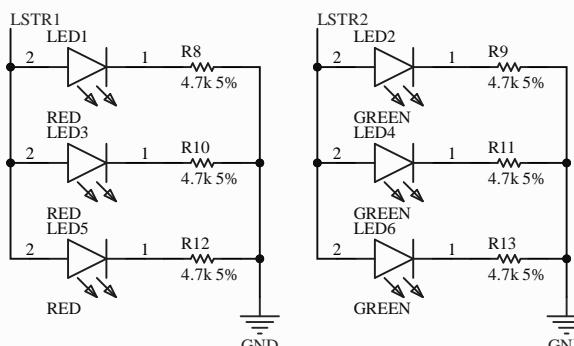
VDD and VDDA decoupling
C1 = 0.1uF, C2 = 0.1uF, C3 = 0.1uF

Safety: on reset, assert backup power high.



Crystal calculation
 $C_1 + C_2 = 2(C_{L\text{-}} - C_{\text{stray}})$
 $C_1 + C_2 = 2(12.5\text{p} - 2.5\text{p})$
 $C_1 + C_2 = 2(12.5\text{p} - 2.5\text{p})$
 $C_1 + C_2 = 20$
 $C_1 = 10\text{p}, C_2 = 10\text{p}$

$VF = 1.8V$ $I_{target} = 250\mu A$
 $R = (3.0V - 1.8V) / 0.000025A$
 $R = 4800\text{ohm}$ (standard 4700ohm)
 $I_{actual} = (3.0V - 1.8V) / 4700\text{ohm}$
 $I_{actual} = 255\mu A$



Title
Christmas Ornament

Size	Number	Revision
A		
Date:	11/28/2025	Sheet of
File:	C:\Users\...\Christmas.SchDoc	Drawn By: Katelyn Caron