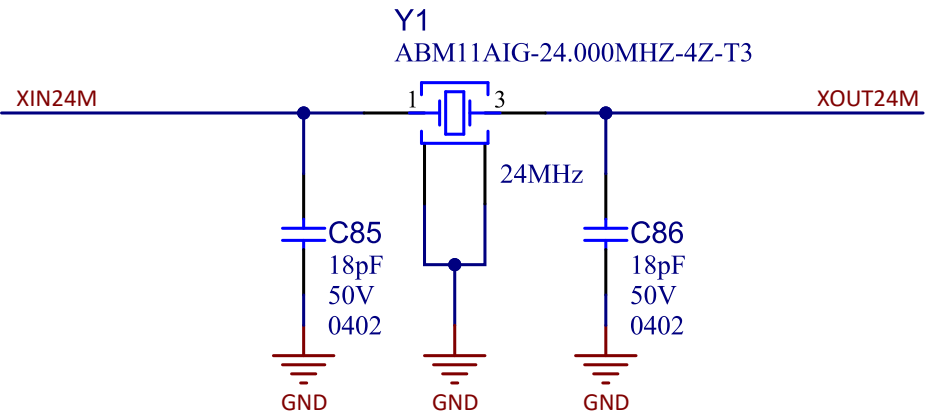
24MHZ CLOCK



Y1, 24MHz Crystal datasheet (ABM11AIG-24.000MHZ-4Z-T3):
-Frequency: 24.000MHz
-Accuracy: ±30ppm
-max ESR: 80Ω
-CLcrystal: 10pF
-Cshunt: <2pF

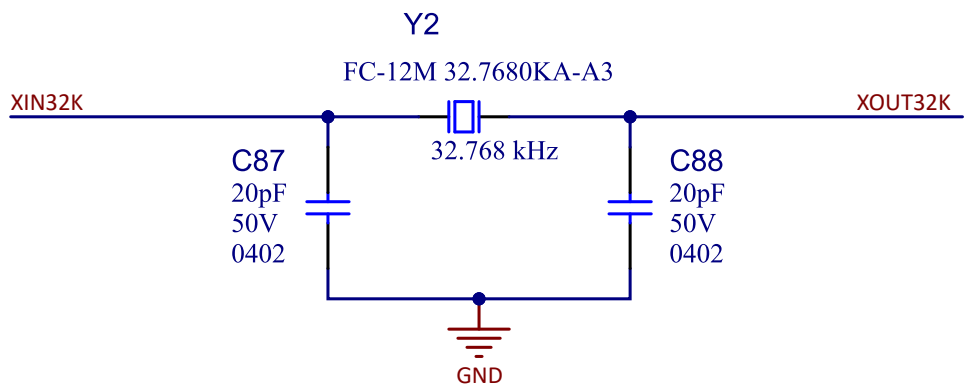
SAM9X75 datasheet:
-Cpara: 1pF

-f0: 24MHz
-CLcrystal: between 6-12.5pF
-Rs: <100Ω
-Cshunt <3pF

Cpcb: 1pF (estimate)

CLext = 2x (CLcrystal - Cpara - Cpcb/2) = 2x (10 - 1 - 0.5) = 17pF ~ 18pF

32KHZ CLOCK



Y2, 32.768kHz Crystal datasheet (FC-12M 32.7680KA-A3):
-Accuracy: ±20ppm
-max ESR: 90kΩ
-CLcrystal: 12.5pF
-Cshunt: Typ 1.3pF
-dL <0.5uW

SAM9X75 datasheet:
-Cpara: 2pF

-f0: 32.768kHz
-CLcrystal: between 6-12.5pF
-Rs: <90kΩ
-Cshunt: between 0.6-2pF
-Pon min 0.2uW

Cpcb: 1pF (estimate)

CLext32k = 2x (CLcrystal - Cpara - Cpcb/2) = 2x (12.5 - 2- 0.5) = 20pF