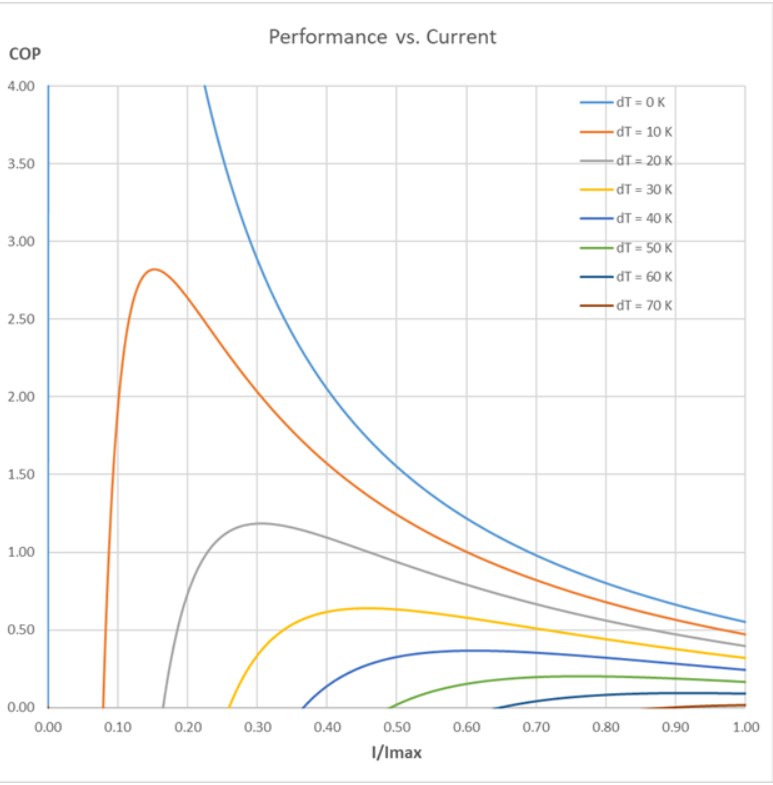
Peltier efficiency calculation  
TEC-12706  
  
Assume input voltage is nominal 12V.  
  
COP of Peltier:  
20% duty cycle:  
~2.5COP, dt 10 K (or c)  
6A \* 4 module \* 20% duty cycle = 4.8A \* 12V = 57.6W x 2.5 COP = 144W cooling, 57.6W input. Assume ~15W for fan, 72.6W input power for 144W Cooling.  
x2 (2 module =  
288W cooling, 145.2W input. Actual COP = ~1.98  
Heat generation calculation. Use LG m50lt datasheet for internal resistance calculation.

Battery heat dissipation at 1C (20s 12p, 72v 60ah)  
5A\*5A\*(23) = 0.65W heat dissipation per cell.=156W total (\*240 cells)  
5.5A (1.1C) = 0.79W = 189.6W  
6A (1.2C) = 0.936W = 224.64W  
6.2A (1.240C) = 1W = 240W  
6.93A (~7A, 1.386C) = 1.25W = 300W(!)  
7.6A (1.520C) = 1.5W = 360W  
8.2A (1.640C) = 1.75W = 420W  
8.77A (1.754C) = 2W = 480W  
  
1:1 Cooling-heat generation:  
1.2W per cell, 6.79A, 1.358C… ~ 1.36C = 5875W