Power Budget Example

Team Number: 105
Project Name: **EGR 304 - Electrical Blinds**
Team Member Names: **Abriana, Keith, Tim, Don**
Version: **1**

All Major Components	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	PIC 18F57Q43	150-DM164150-ND	+5V - 0V	2	500mA	1000	mA
	Brushed DC Motor Gearr	2183-3253-ND	+12V - 0V	1	50 MA	50	mA
	5V regulator	5536-LM78-5T-ND	+5V - 35V	1	1000 mA	1000	mA
	FAN8100N (H-Bridge)	2156-FAN8100N-FS	9.0V - 1.8V	1	65mA	65	mA

+12V Power Rail	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	Brushed DC Motor Gearr	2183-3253-ND	+12V - 0V	1	50 MA	50	mA
					Subtotal	50	mA
					Safety Margin	25%	
					Total Current Required on +12V Rail	62.5	mA
Regulator	+12V regulator	LM7812	+12V - 35V	1	1000	1000	mA
					Total Remaining Current Available on +12V Rail	937.5	mA

+5V Power Rail	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	PIC 18F57Q43	150-DM164150-ND	+5V - 0V	1	200mA	200	mA
	Brushed DC Motor Gearr	2183-3253-ND	+12V - 0V	1	50 mA	50	mA
	5V regulator	5536-LM78-5T-ND	+5V - 35V	1	500mA	500	mA
					Subtotal	750	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	937.5	mA
Regulator	+5V Regulator	LM7805	(range)	1	1000	1000	mA
					Total Remaining Current Available on +5V Rail	62.5	mA

External Power Source 1	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	B09ZTKTLGW	110VAC	+24V	3000	3000	mA
Power Rails Connected to	+12V regulator	LM7812	+12V - 35V	1	1000	1000	mA
External Power Source 1	+5V Regulator	LM7805	(range)	1	1000	1000	mA
					Total Remaining Current Available on External Power Source 1	1000	mA