My Supply voltage minimum value is **.9V (Typ)** and maximum value is **1.2V (Typ).**The variation is 5%.

First I calculated the minimum variation in output voltage that is plus or minus 5% of .**9V.** Please see the table below.

V_o-Min	
V_{outmin}(Min)	0.855
V_{outmin}(Typ)	0.9
V_{outmin}(Max)	0.945

Then calculated variation of maximum voltage that is plus or minus 5% of 1.2V. Please see the table below.

V_o-Max	
V_{outmax}(Min)	1.14
V_{outmax}(Typ)	1.2
V_{outmax}(Max)	1.26

In the next step decided the minimum current to be measure, maximum current to be measured, current step and chosen an arbitrary value of sense resistor and calculated the voltage across it. Please see the table below.

Minimum Current to be measured(mA)	Maximum current to be measured(mA)	Current Step(mA)	R_{sense}	Vsense(Min) (mV)	Vsense(Max) (mV)	Vsense(step) (mV)
0.2	100	0.025	1.6	0.32	160	0.04

In the next voltage going to DSP is calculated for minimum drop across sense resistor and maximum drop across sense resistor assuming Vo is Minimum .Please see the below image.

Voltage after V_{sense}(Min) drop	
V_{supply}(Min)	0.85468
V_{supply}(Typ)	0.89968
V_{supply}(Max)	**0.94468**
Voltage after V_{sense}(Max) drop	
V_{supply}(Min)	**0.695**
V_{supply}(Typ)	**0.74**
V_{supply}(Max)	0.785

The same thing is done assuming Vo is maximum

Voltage after V_{sense}(Min) drop		
V_{supply}(Min)	**1.13968**	**0%**
V_{supply}(Typ)	1.19968	0%
V_{supply}(Max)	1.25968	0%
Voltage after V_{sense}(Max) drop		
V_{supply}(Min)	0.98	14%
V_{supply}(Typ)	1.04	13%
V_{supply}(Max)	**1.1**	13%