

Configuring a Non-Isolated Switching Regulator for Negative Output Voltage

Non-isolated switching regulators can be configured to have a negative output voltage with the addition of two capacitors. Figure 1 shows the configuration.

However, the maximum power they can regulate at their outputs is less than their rated power when used to have positive voltage.

Table 1 shows the input and output parameters for the models in Aimtec's AMSR-78Z, AMSR1-78Z series.

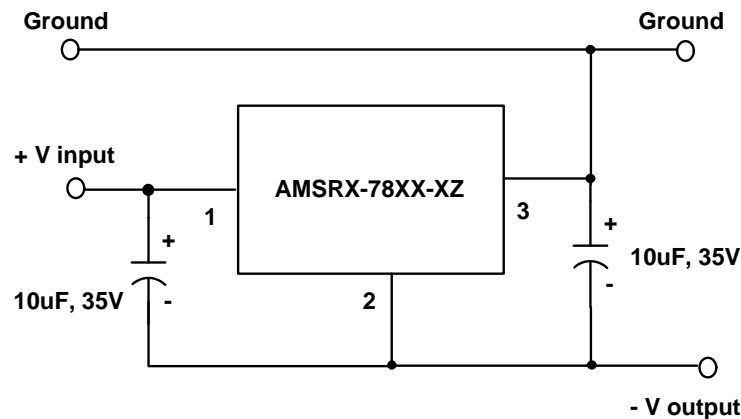


Table 1 AMSR-78Z Series

Model Number	Input Voltage Range (VDC)	Output Voltage (VDC)	Maximum Output Current(mA)	Efficiency Vin (Min) @ Full Load(%)
AMSR-781.5Z	4.75-28	-1.5	400	67
AMSR-781.8Z	4.75-28	-1.8	400	70
AMSR-782.5Z	4.75-28	-2.5	400	74
AMSR-783.3Z	4.75-28	-3.3	400	76
AMSR-7805Z	6.0-28	-5.0	400	80
AMSR-786.5Z	6.0-26	-6.5	300	82
AMSR-787.2Z	7.0-26	-7.2	300	84
AMSR-7809Z	7.0-24	-9.0	200	86
AMSR-7812Z	7.0-21	-12.0	200	85
AMSR-7815Z	7.0-17	-15.0	200	84

Table 2 AMSR1-78Z Series

Model Number	Input Voltage Range (VDC)	Output Voltage (VDC)	Maximum Output Current(mA)	Efficiency Vin (Min) @ Full Load(%)
AMSR1-781.5Z	5.0-18	-1.5	700	69
AMSR1-781.8Z	5.0-18	-1.8	700	72
AMSR1-782.5Z	5.0-18	-2.5	700	65
AMSR1-783.3Z	5.0-18	-3.3	700	78
AMSR1-7805Z	7.0-18	-5.0	700	82

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