

SI-3000N Series

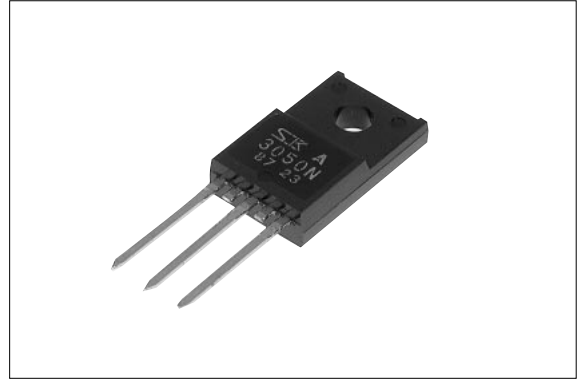
3-Terminal, Full-Mold, Low Dropout Voltage Dropper Type

■Features

- Compact full-mold package (equivalent to TO220)
- Output current: 1.0A
- Low dropout voltage: $V_{DIF} \leq 1V$ (at $I_o = 1.0A$)
- Built-in foldback overcurrent, overvoltage, thermal protection circuits

■Applications

- For stabilization of the secondary stage of switching power supplies
- Electronic equipment

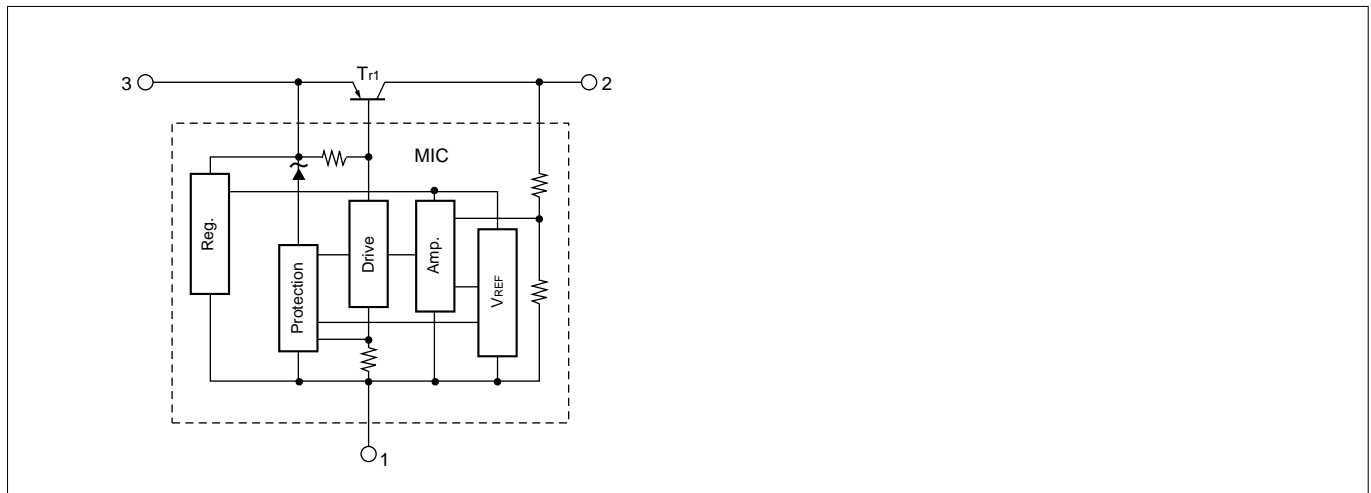


■Absolute Maximum Ratings

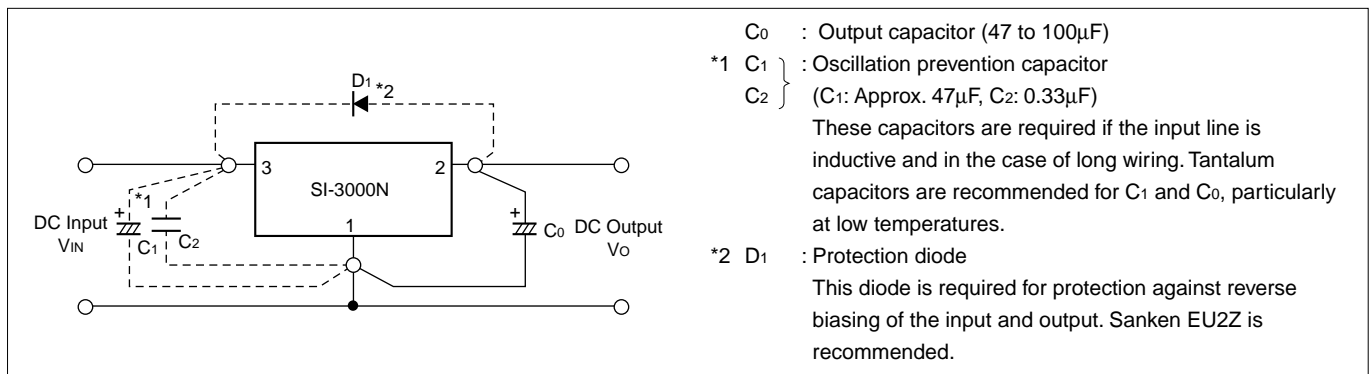
($T_a = 25^\circ C$)

Parameter	Symbol	Ratings			Unit
		SI-3050N	SI-3090N/3120N	SI-3150N	
DC Input Voltage	V_{IN}	25	30	35	V
DC Output Current	I_o	1.0 ²			A
Power Dissipation	P_{D1}	14(With infinite heatsink)			W
	P_{D2}	1.5(Without heatsink, stand-alone operation)			W
Junction Temperature	T_j	-40 to +125			$^\circ C$
Ambient Operating Temperature	T_{op}	-30 to +100			$^\circ C$
Storage Temperature	T_{stg}	-40 to +125			$^\circ C$
Thermal Resistance (junction to case)	$R_{th(j-c)}$	7.0			$^\circ C/W$
Thermal Resistance (junction to ambient air)	$R_{th(j-a)}$	66.7(Without heatsink, stand-alone operation)			$^\circ C/W$

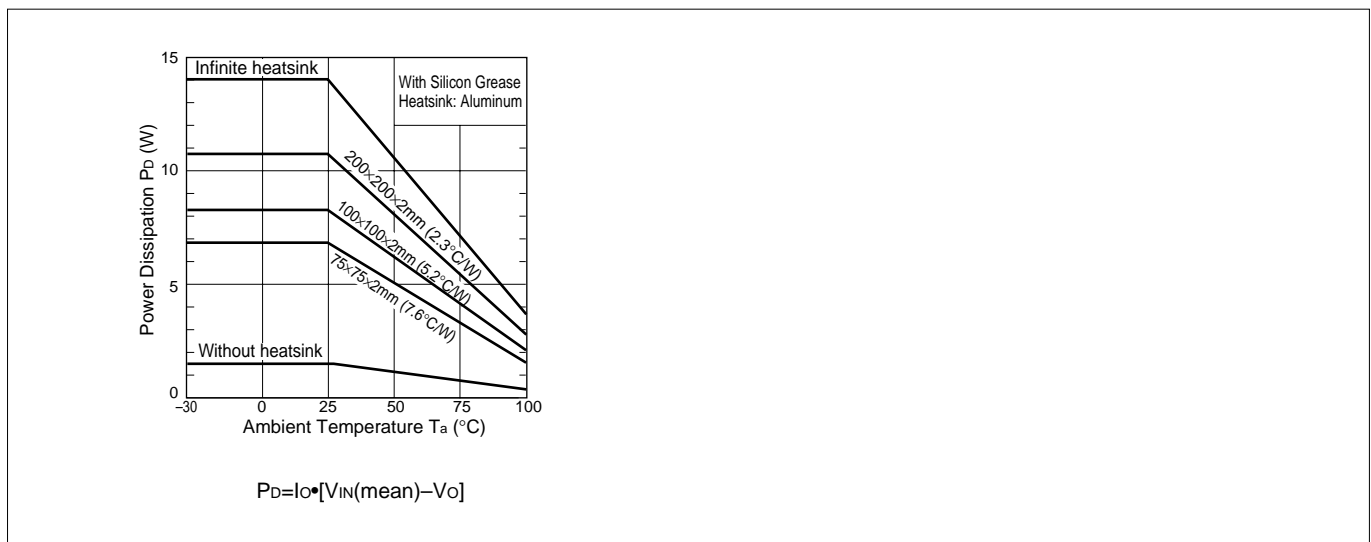
■Block Diagram



■Standard External Circuit



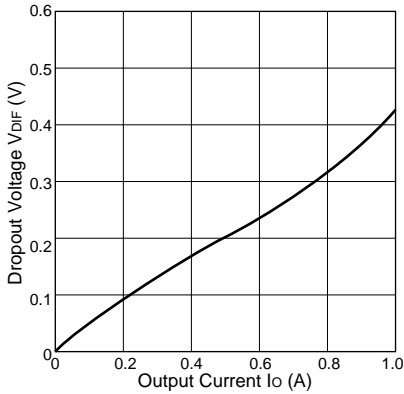
■ T_a - P_D Characteristics



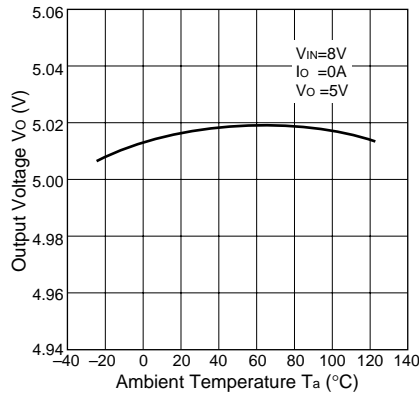
■Typical Characteristics

($T_a=25^\circ\text{C}$)

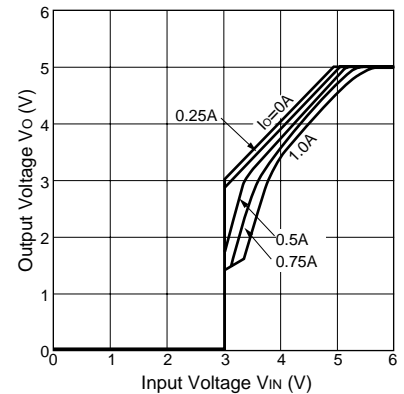
I_o vs. V_{DIF} Characteristics



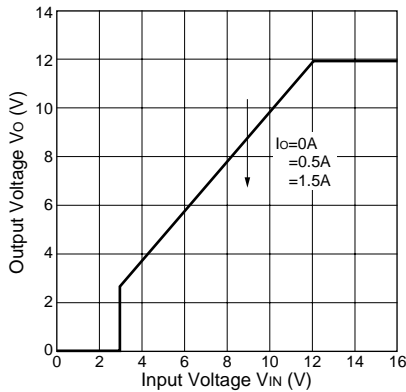
Temperature Coefficient of Output Voltage(SI-3050N)



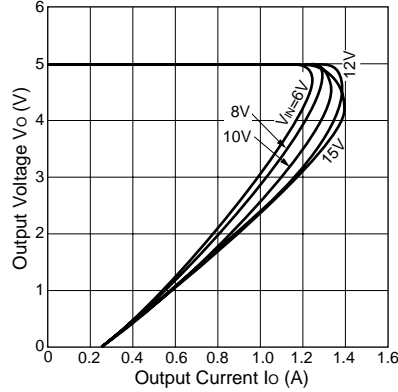
Rise Characteristics(SI-3050N)



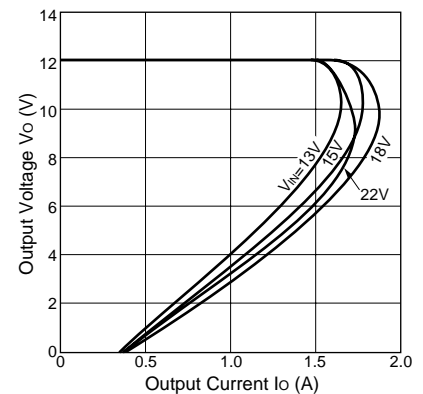
Rise Characteristics(SI-3120N)



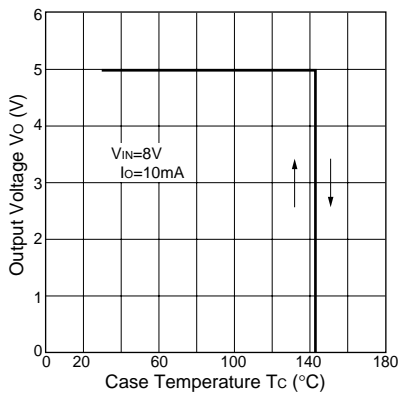
Overcurrent Protection Characteristics(SI-3050N)



Overcurrent Protection Characteristics(SI-3120N)



Thermal Protection Characteristics(SI-3050N)



Note on Thermal Protection:

The thermal protection circuit is intended for protection against heat during instantaneous short-circuiting. Its operation is not guaranteed for short-circuiting over extended periods of time.