



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SI-8000E Series Full-Mold, Separate Excitation Step-down Switching Mode

## ■Features

- Compact full-mold package (equivalent to TO220)
- High efficiency: 80%
- Requires only 4 discrete components
- Internally-adjusted phase correction and output voltage
- Built-in reference oscillator (60kHz)
- Built-in overcurrent and thermal protection circuits

## ■Applications

- Power supplies for telecommunication equipment
- Onboard local power supplies

## ■Lineup

Part Number	SI-8050E
Vo(V)	5.0
Io(A)	0.6

## ■Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
DC Input Voltage	V <sub>IN</sub>	43	V
Power Dissipation	P <sub>D1</sub>	14(With infinite heatsink)	W
	P <sub>D2</sub>	1.5(Without heatsink, stand-alone operation)	W
Junction Temperature	T <sub>J</sub>	+125	°C
Storage Temperature	T <sub>Stg</sub>	-40 to +125	°C
Thermal Resistance(junction to case)	θ <sub>J-c</sub>	7.0	°C/W
Thermal Resistance(junction to ambient air)	θ <sub>J-a</sub>	66.7	°C/W

## ■Recommended Operating Conditions

Parameter	Symbol	Ratings		Unit
		SI-8050E		
DC Input Voltage Range	V <sub>IN</sub>	7 to 40		V
Output Current Range	I <sub>O</sub>	0 to 0.6		A
Operating Junction Temperature Range	T <sub>JOP</sub>	-30 to +125		°C
Operating Temperature Range	T <sub>OP</sub>	-30 to +125		°C

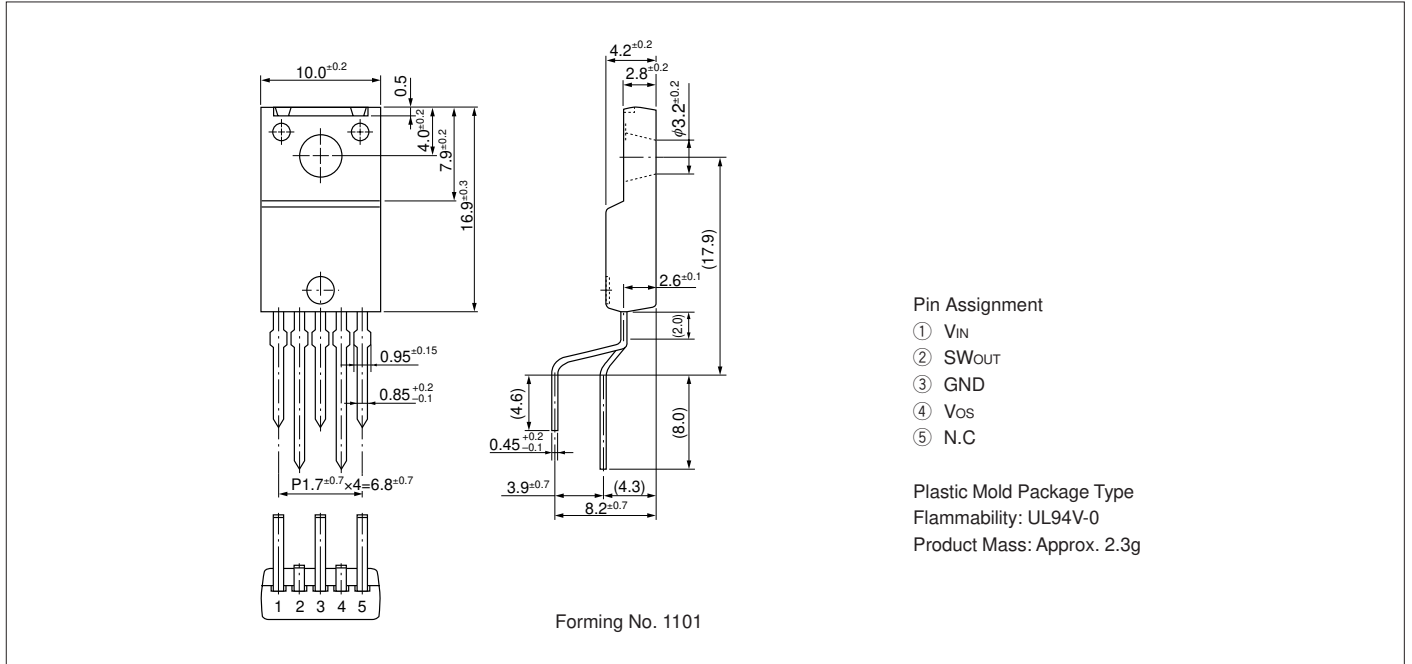
## ■Electrical Characteristics

(T<sub>a</sub>=25°C)

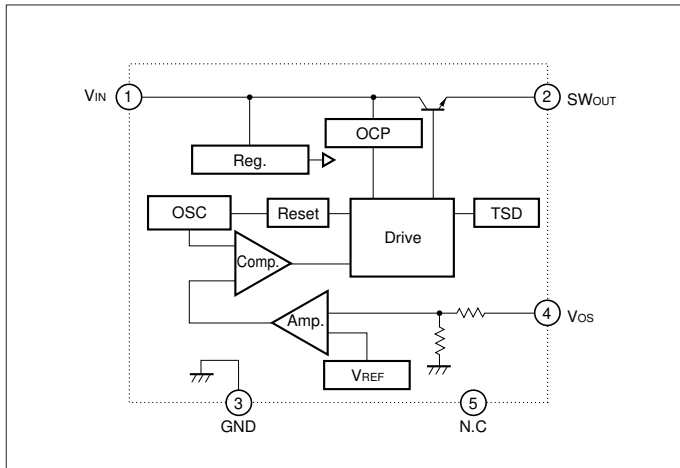
Parameter	Symbol	Ratings			Unit
		SI-8050E			
		min.	typ.	max.	
Output Voltage	V <sub>O</sub>	4.80	5.00	5.20	V
	Conditions	V <sub>IN</sub> =20V, I <sub>O</sub> =0.3A			
Efficiency	η		80		%
	Conditions	V <sub>IN</sub> =20V, I <sub>O</sub> =0.3A			
Oscillation Frequency	f		60		kHz
	Conditions	V <sub>IN</sub> =20V, I <sub>O</sub> =0.3A			
Line Regulation	ΔV <sub>O(LINE)</sub>		80	100	mV
	Conditions	V <sub>IN</sub> =10 to 30V, I <sub>O</sub> =0.3A			
Load Regulation	ΔV <sub>O(LOAD)</sub>		30	40	mV
	Conditions	V <sub>IN</sub> =20V, I <sub>O</sub> =0.1 to 0.4A			
Temperature Coefficient of Output Voltage	ΔV <sub>O</sub> /ΔT <sub>a</sub>		±0.5		mV/°C
Overcurrent Protection Starting Current	I <sub>SI</sub>	0.61			A
	Conditions	V <sub>IN</sub> =10V			

External Dimensions (TO220F-5)

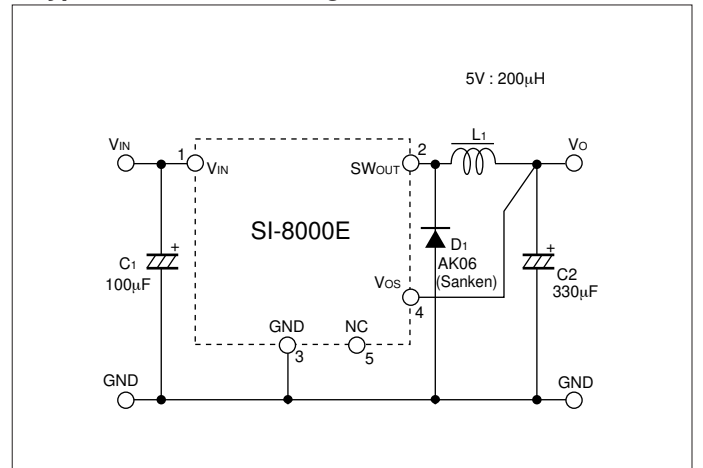
(Unit : mm)



Block Diagram



Typical Connection Diagram



Ta-Pd Characteristics

