

AN6546SP

Fixed/Adjustable Dual Output Voltage Regulator

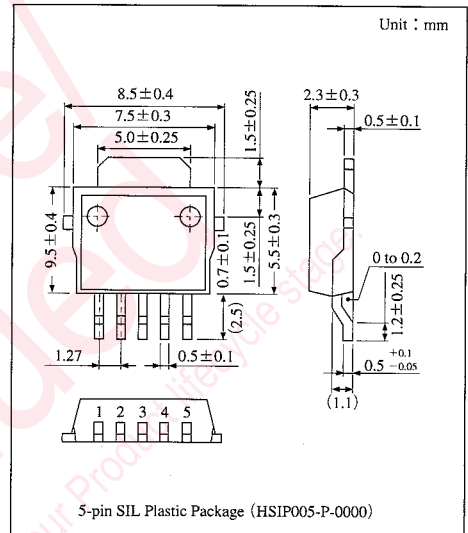
Overview

The AN6546SP is a voltage regulator with strobe pin which can turn on/off an output.

It has two output pins ; one for 5V fixed output, and the other for adjustable output which can be set optionally with an external resistor.

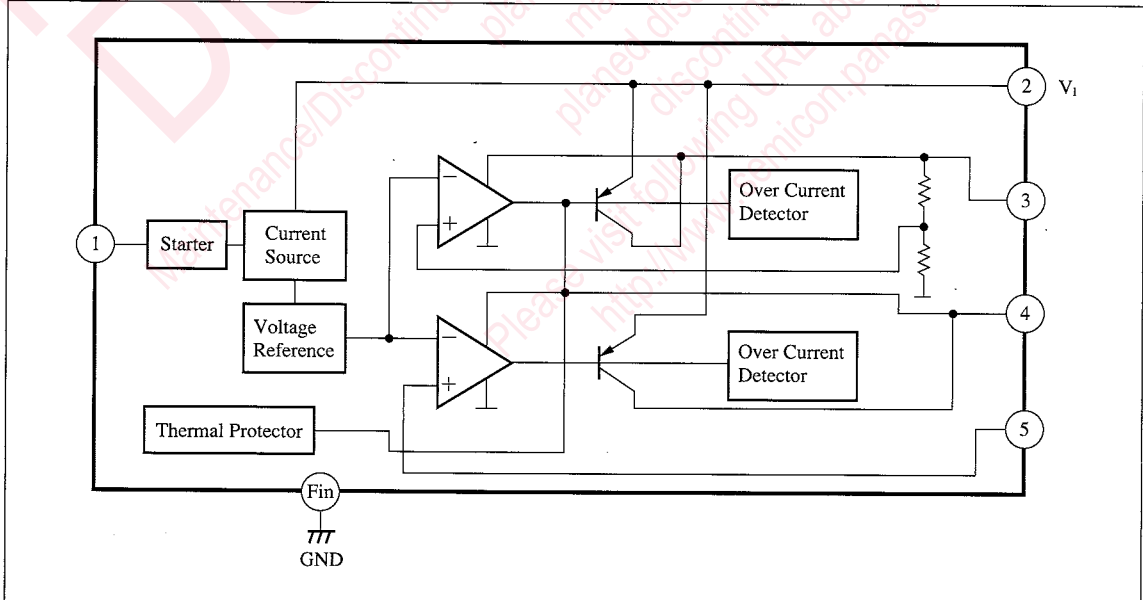
Features

- Built-in two outputs ; 50mA rated load current and 5V output voltage, 75mA rated load current and adjustable output 2V to $V_{IN} - 1V$
- Capable of turning off two outputs by setting the strobe pin to the "L" level
- Minimum input/output voltage difference ; max. 0.6V
- Built-in overcurrent protective circuit and thermal protective circuit
- Surface-mount type 5-lead SIL plastic package



Voltage
Regu-
lators

Block Diagram



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _I	20	V
Power dissipation	P _D	500	mW
Operating ambient temperature	T _{opr}	-20 to +75	°C
Storage temperature	T _{stg}	-55 to +125	°C

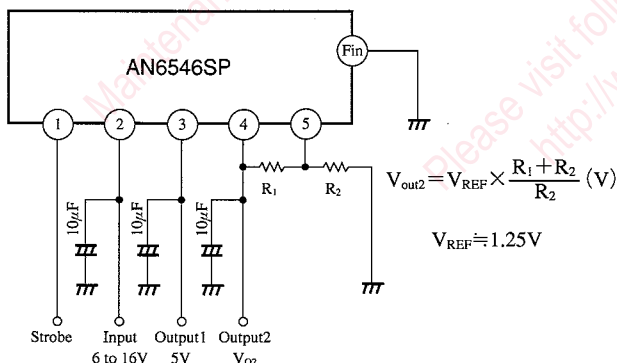
Recommended Operating Range (Ta=25°C)

Parameter	Symbol	Range
Operating supply voltage range	V _{CC}	6 to 16V

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit		
Bias current	I _{bias}	V _I =12V, I _{O1} =I _{O2} =0mA	2.9	5	7.6	mA		
Load bias current change	ΔI _{biasL}	V _I =12V, I _{O1} =I _{O2} =0 to 50mA	—	—	20	mA		
Off-state input bias current	I _{bias(OFF)}	V _I =12V, V _S =0V	—	—	10	μA		
Output 1	Output voltage	V _{O1}	V _I =12V, T _J =25°C, I _{O1} =0 to 20mA	4.8	5	5.2	V	
	Load regulation	REG _{L1}	V _I =12V, T _J =25°C, I _{O1} =0 to 50mA	—	—	100	mV	
	Line regulation	REG _{IN1}	V _I =6 to 16V, T _J =25°C, I _{O1} =20mA	—	—	100	mV	
	Minimum input/output voltage difference	V _{DEF(min)1}	V _I =4.5V, I _{O1} =50mA	—	0.3	0.6	V	
	Output short-circuit current	I _{O(short)1}	V _I =12V, T _J =25°C, V _{O1} =0V	55	—	120	mA	
Output 2	Output voltage	min	V _I =12V, T _J =25°C, I _{O2} =20mA	V _{O2(min)}	1.8	2	2.2	V
		max		V _{O2(max)}	9	10	11	V
	Load regulation	REG _{L2}	V _I =12V, T _J =25°C I _{O2} =0 to 75mA, at V _{O2} =5V	—	—	100	mV	
	Input regulation	REG _{IN2}	V _I =6 to 16V, T _J =25°C I _{O2} =20mA, at V _{O2} =5V	—	—	100	mV	
	Minimum input/output voltage difference	V _{DEF(min)2}	V _I =4.5V, T _J =25°C I _{O2} =75mA, at V _{O2} =5V	—	—	0.6	V	
Output short-circuit current	I _{O(short)2}	V _I =12V, T _J =25°C, V _{O2} =0V	80	—	140	mA		
Strobe pin threshold voltage	V _{S(TH)}	V _I =12V	0.6	2	2.5	V		
Strobe pin input current	I _S	V _I =12V, V _S =2V	—	—	100	μA		

Application Circuit

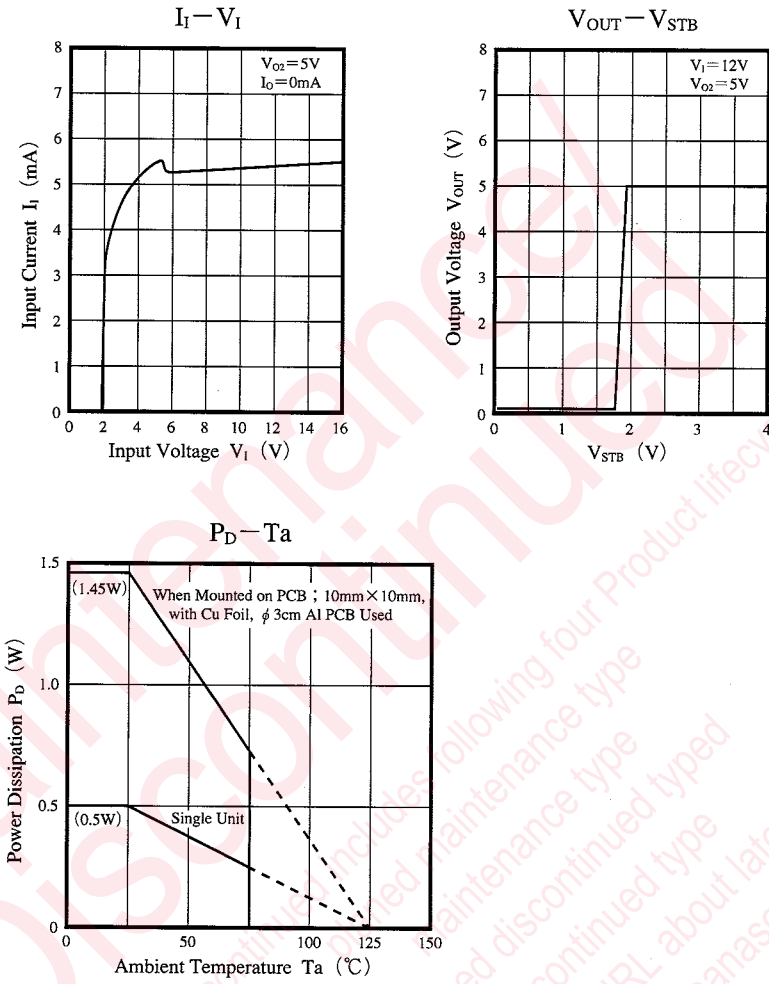


Strobe Pin	Output
"L"	OFF
"H"	ON

Threshold voltage : typ. 2V

Note) When using at a low temperature, it is recommended to use capacitors with low internal impedance (for example, tantalum capacitors) for output capacitors.

■ Characteristics Curve



Voltage Regulators

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