

AN6545, AN6545SP

Low Power Loss Voltage Regulators

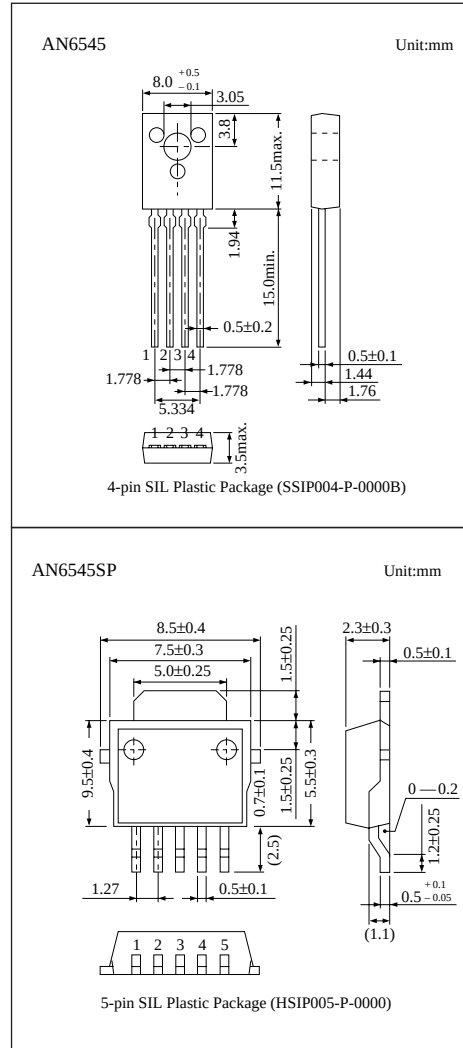
Overview

The AN6545 and AN6545SP are the voltage regulators with strobe pin which can turn on/off an output.

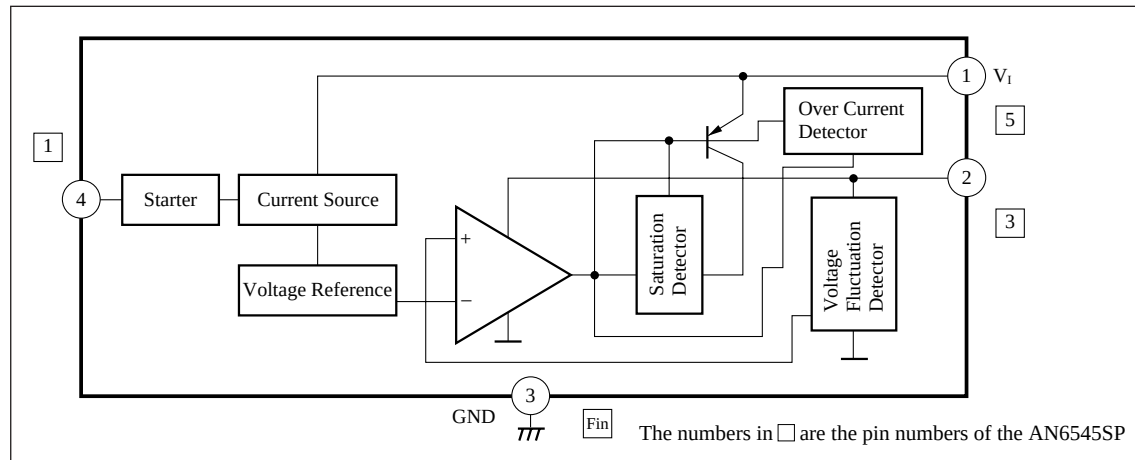
A rated load current is 150mA and an output voltage is fixed at 5V.

Features

- 150mA rated load current and 5V fixed output voltage
- Capable of turning off an output by setting the strobe pin to the “L” level
- Minimum input/output voltage difference: typ. 0.25V
- Built-in overcurrent protective circuit
- TO-126 (4-lead) package for the AN6545, and surface-mount type 5-pin SIL plastic package for the AN6545SP



Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

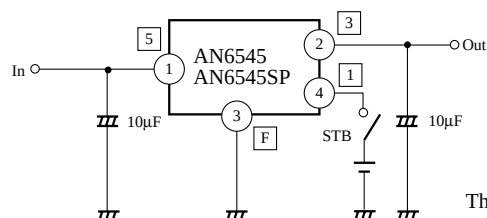
Parameter		Symbol	Rating	Unit
Supply voltage		V_i	14.4	V
Power dissipation	AN6545	P_D	1300 *	mW
	AN6545SP		500	mW
Operating ambient temperature		T_{opr}	-20 to +75	°C
Storage temperature	AN6545	T_{stg}	-55 to +150	°C
	AN6545SP		-55 to +125	°C

* Mounted onto the PCB

■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V_O	$V_i=12V, I_O=150mA$	4.8	5	5.2	V
Output voltage range	V_L	$V_i=6$ to 14.4V, $I_O=0$ to 150mA	4.7	5	5.3	V
Bias current	I_{bias}	$V_i=12V, I_O=0mA$	—	2.9	4	mA
Load regulation	REG_L	$V_i=12V, I_O=0$ to 150mA	—	—	100	mV
Line regulation	REG_{IN}	$V_i=6$ to 14V, $I_O=150mA$	—	—	100	mV
Minimum input/output voltage difference	$V_{DIF(min)}$	$V_i=4.5V, I_O=150mA$	—	—	5	V
Rush current	I_{rush}	$V_i=4.5V, I_O=0mA$	—	2.5	—	mA
Output short-circuit current	$I_{O(short)}$	$V_i=12V$	350	—	550	mA
Load bias current change	ΔI_{biasl}	$V_i=12V, I_O=0$ to 150mA	—	—	10	mA
Off-state cathode current	I_{OFF}	$V_i=12V, V_S=0V$	—	—	2	μA
Strobe pin input current	I_S	$V_i=12V, V_S=2.5V$	—	—	200	μA
Strobe pin threshold voltage	$V_{S(TH)}$	$V_i=12V$	0.8	2	2.4	V
Ripple rejection ratio	RR	$V_i=10$ to 14V, $I_O=150mA$, $f=120kHz$	—	55	—	dB

■ Application Circuit



The number in □ are the pin numbers of the AN6545SP

- 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

