AN6545, AN6545SP

Low Power Loss Voltage Regulators

■ Overview

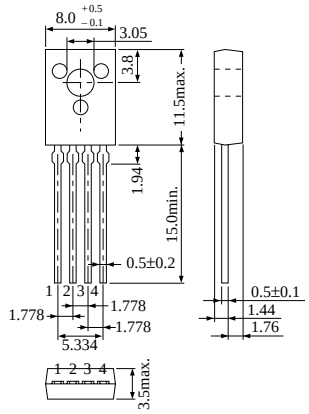
The AN6545 and AN6545SP are the voltage regulators with strobe pin which can turn on/off an output.

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

■ Features

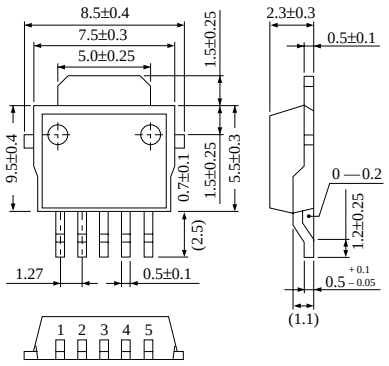
- 150mA rated load current and 5V fixed output voltage
- Capable of turning off an output by setting the strobe pin to the “L” level
- Minimum input/output voltage difference:typ. 0.25V
- Built-in overcurrent protective circuit
- TO-126 (4-lead) package for the AN6545, and surface-mount type 5-pin SIL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

AN6545 Unit:mm



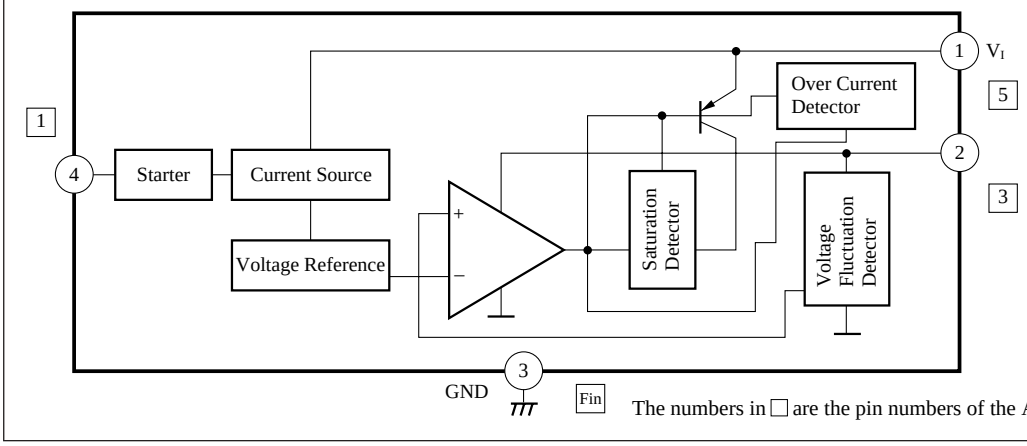
4-pin SIL Plastic Package (SSIP004-P-0000B)

AN6545SP Unit:mm



5-pin SIL Plastic Package (HSIP005-P-0000)

■ Block Diagram



The numbers in □ are the pin numbers of the AN6545SP

■ Absolute Maximum Ratings (Ta=25˚C)

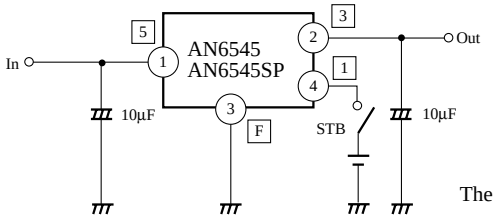
Parameter		Symbol	Rating	Unit
Supply voltage		V_I	14.4	V
Power dissipation	AN6545	P_D	1300 *	mW
	AN6545SP		500	mW
Operating ambient temperature		T_{opr}	–20 to+75	˚C
Storage temperature	AN6545	T_{stg}	–55 to+150	˚C
	AN6545SP		–55 to+125	˚C

* 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_t	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

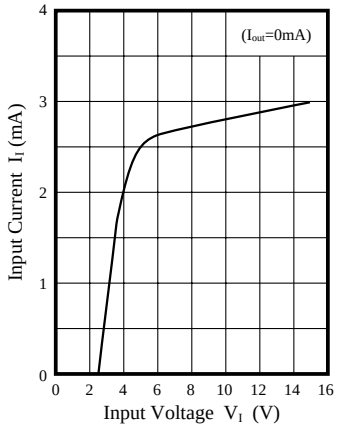


The number in □ are the pin numbers of the AN6545SP

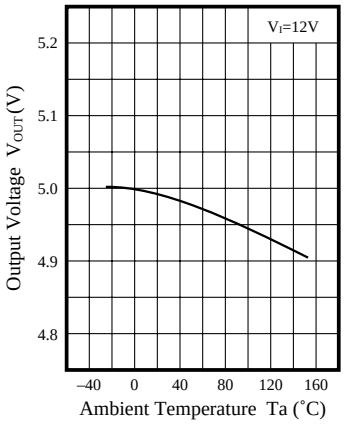
- When using at a low temperature, it is recommended to use capacitors with low internal impedance (for example, tantalum capacitors) for output capacitors.

■ Characteristics Curve

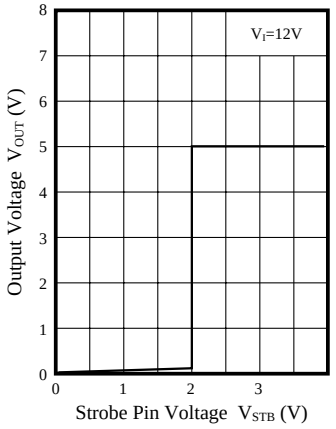
$I_I - V_I$



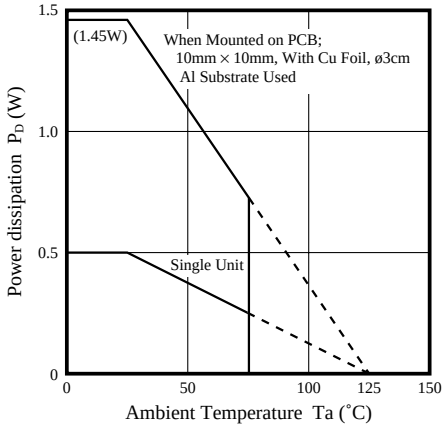
$V_{OUT} - Ta$



$V_{OUT} - V_{STB}$



$P_D - Ta$



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