

AN6541

3-pin Positive Voltage Regulator

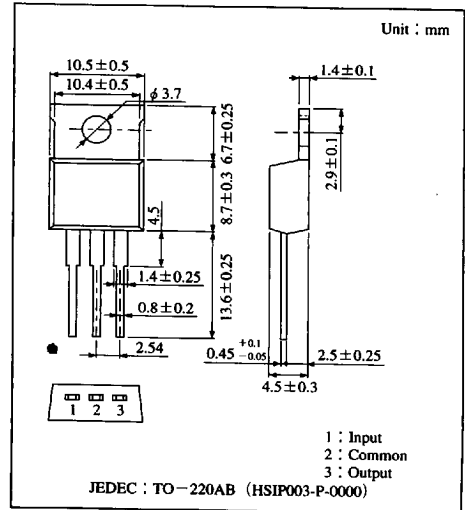
Overview

The AN6541 is a 3-pin 9V voltage regulator which performs stable operations up to the minimum input/output voltage difference 0.3V (typ.). Stabilized fixed output voltage is obtained from unstable DC input voltage.

The AN6541 can be used in power circuits with current capacitance up to 300mA.

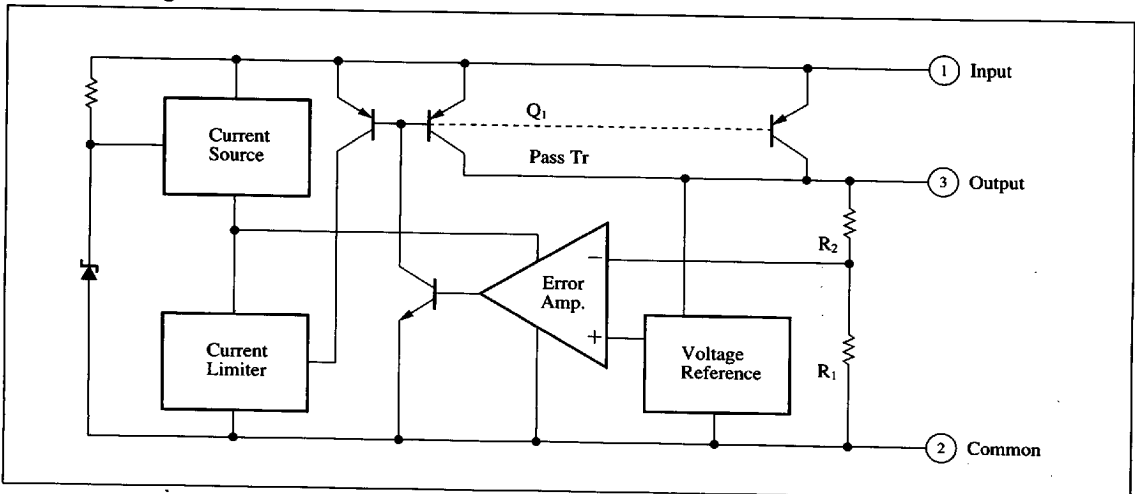
Features

- Low drop-out voltage : 0.3V (typ.)
- Internal short-circuit current protection
- Low temperature coefficient of output voltage



Voltage
Regu-
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Block Diagram



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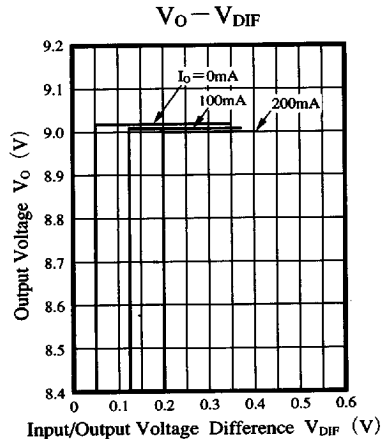
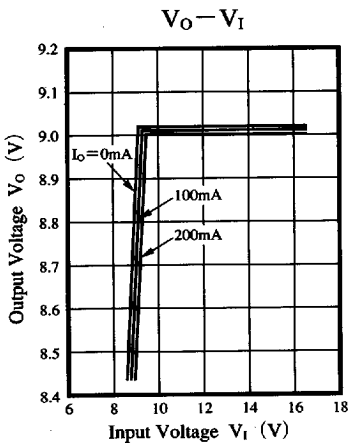
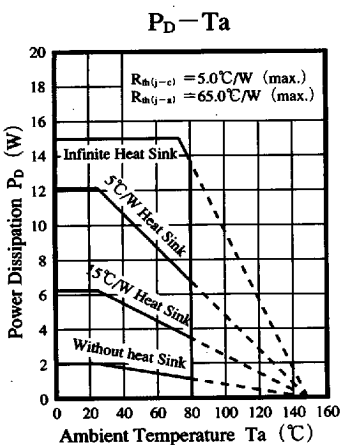
■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	20	V
Power dissipation	P _D	15	W
Operating ambient temperature	T _{opr}	-30 to +80	°C
Storage temperature	T _{stg}	-40 to +150	°C

■ Electrical Characteristics (Ta=25°C)

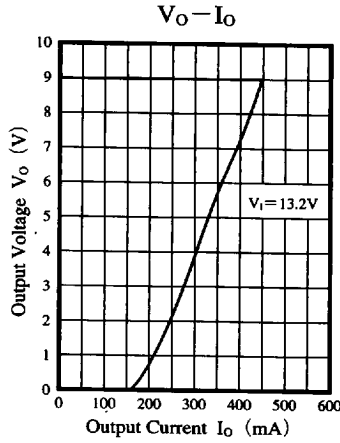
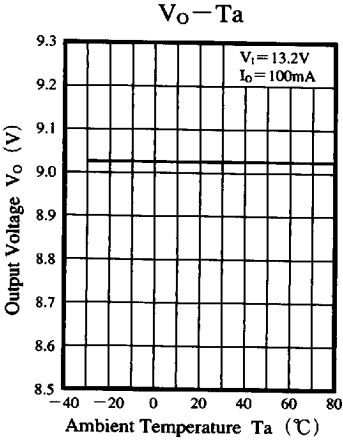
Parameter	Symbol	Condition	min	typ	max	Unit
Output voltage	V _O	V _I =13.2V, I _O =200mA	8.6	9.0	9.4	V
Bias current	I _{bias}	V _I =13.2V, I _O =200mA	—	25	50	mA
Load regulation	REG _L	V _I =13.2V, I _O =0 to 200mA	—	—	±50	mV
Line regulation	REG _{IN}	V _I =10 to 16V, I _O =100mA	—	—	±50	mV
Output voltage temperature coefficient	ΔV _O /Ta	V _I =13.2V, I _O =100mA, T _{opr} =-30 to +80°C	—	±0.01	—	%/°C
Minimum input output voltage difference	V _{DIF(min)}	V _I =8.5V, I _O =100mA	—	0.4	0.6	V
Ripple rejection ratio	Regin	V _I =13.2V, I _O =100mA, f=100Hz, e _{in} =1V _{P-P}	45	—	—	dB
Maximum output current	I _{O(max)}	V _I =13.2V	300	—	600	mA
Output short current	I _{OS}	V _I =13.2V	50	—	250	mA

■ Characteristics Curve

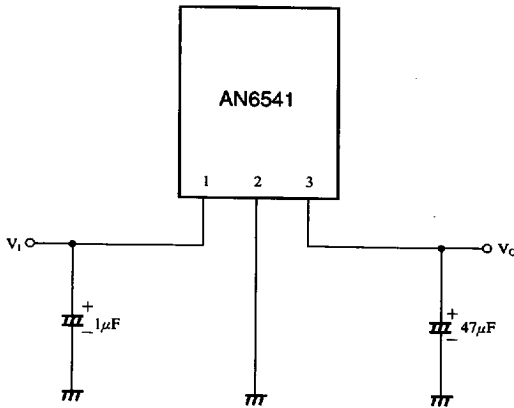


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■ Block Diagram



Note) Choose the oscillation control capacitor $47\mu F$ which has a small capacitance reduction even at a low temperature. For example, use a tantalum capacitor.

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