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TX62FP Series

350mA Low Power LDO

Features

- Low voltage drop: 0.17V@100mA
- High input voltage: 12V
- Low temperature coefficient
- Large Output Current: >0.35A
- Low Quiescent Current: 1.5uA
- Output voltage accuracy: tolerance $\pm 2\%$
- Built-in current limiter
- SOT89 package

Applications

- Battery-powered equipment
- Hand-Hold Equipment
- GRS Receivers
- Wireless LAN

General Description

The TX62FPXX series is a group of positive voltage output, three-pin regulators, that provide a high current even when the input/output voltage differential is small. Low power consumption and high accuracy is achieved through CMOS and laser trimming technologies.

The TX62FPXX consists of a high-precision voltage reference, an error amplification circuit, and a current limited output driver. Transient response to load variations have improved in comparison to the existing series. SOT89 packages are available.

Selection Table

Part No.	Output Voltage	Package	Marking
TX62FP3002P	3.0V	SOT89	3A0X
TX62FP3302P	3.3V		3D0X
TX62FP4002P	4.0V		4A0X
TX62FP5002P	5.0V		5A0X

Order Information

TX62FP①②③④⑤

Designator	Symbol	Description
① ②	Integer	Output Voltage(2.1~5.0V)
③	Stand	0
④	Stand	2
⑤	Stand	P

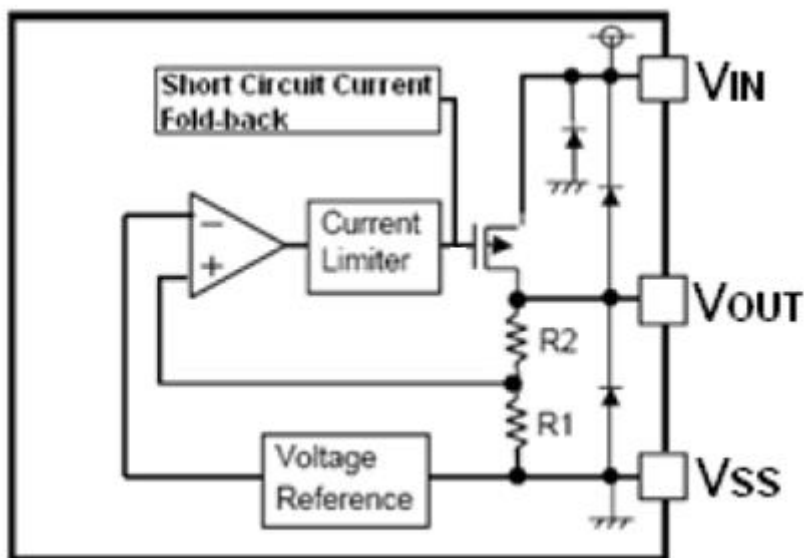
Note: "①②" stands for output voltages. Other voltages can be specially customized



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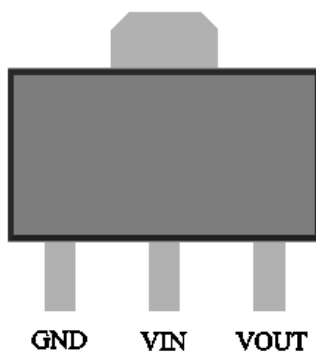
TX62FP Series 350mA Low Power LDO

Block Diagram



Pin Assignment

SOT89 (Top view)



Absolute Maximum Ratings

Supply Voltage-0.3V to 13V Storage Temperature-40°C to 125°C
Operating Temperature-40°C to 85°C

Note: These are stress ratings only. Stresses exceeding the range specified under “Absolute Maximum Ratings” may cause substantial damage to the device. Functional operation of this device at other conditions beyond those listed in the specification is not implied and prolonged exposure to extreme conditions may affect device reliability.



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Electrical Characteristics

TX62FPXX for any output voltage

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vout	Vin=Vout+1V 1.0mA≤Iout≤30mA	Vout×0.98	--	Vout×1.02	V
Output Current*1	Iout	Vin-Vout=1V	--	350	--	mA
Low dropout*2	Vdrop	Refer to the next table				
Line Regulation	$\frac{\Delta V_{OUT}}{\Delta V_{IN} \times V_{OUT}}$	1.6V≤Vin≤8V Iout=100mA	--	0.05	0.2	%/V
Load Regulation	ΔVout	Vin= Vout+1V 1.0mA≤Iout≤100mA	--	12	30	mV
Output voltage Temperature Coefficient	$\frac{\Delta V_{OUT}}{\Delta Ta}$	Iout=30mA 0°C≤Ta≤70°C	--	±100	--	Ppm/°C
PSRR	PSRR	F=1KHz Vin=Vout+1V	--	40	--	dB
Supply Current	Iss1	--	--	1.5	2.5	uA
Input Voltage	Vin	--	--	--	12	V

Electrical Characteristics by Output Voltage:

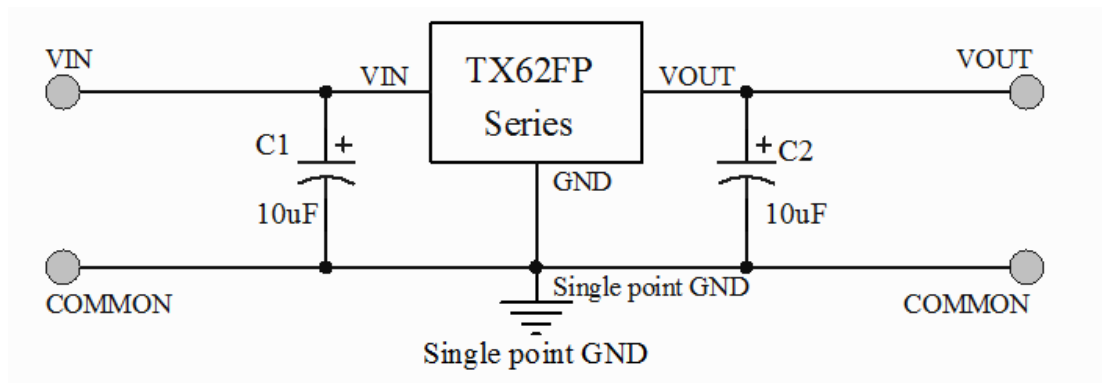
Output Voltage Vout(V)	Dropout Voltage Vdif (V)		
	Conditions	Typ.	Max.
3.0 < Vout ≤ 4.0	Iout=100 mA	0.20	0.24
4.0 < Vout ≤ 5.0		0.16	0.18
3.0 < Vout ≤ 4.0	Iout=200 mA	0.42	0.44
4.0 < Vout ≤ 6.0		0.30	0.32
3.0 < Vout ≤ 4.0	Iout=350 mA	0.73	0.76
4.0 < Vout ≤ 6.0		0.51	0.54



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Typical Application



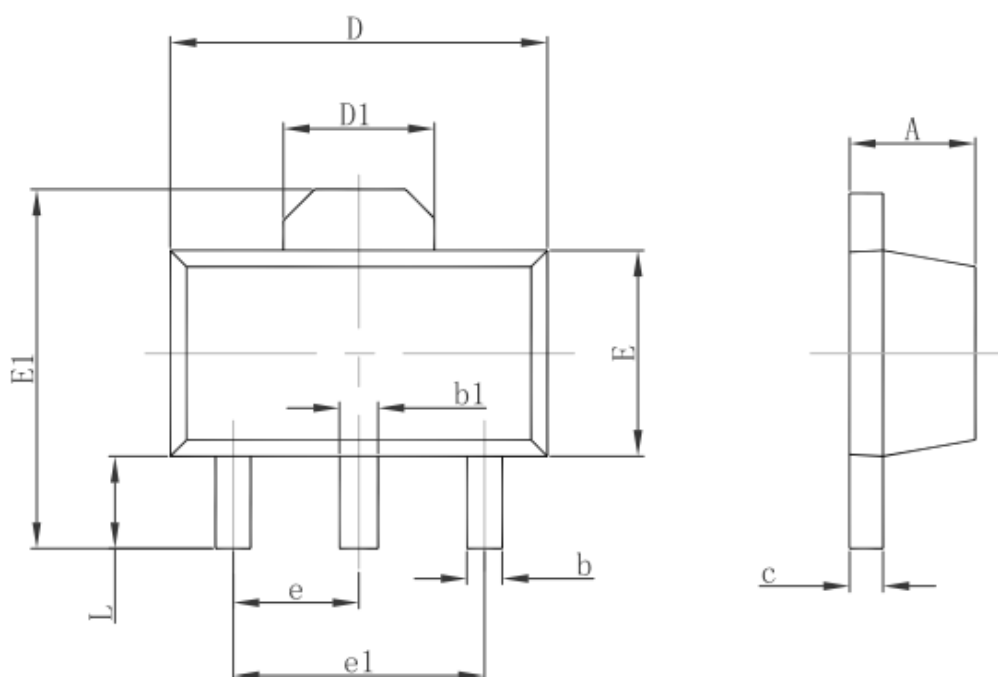


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Package Information

3-pin SOT89 Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047



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