TECH PUBLIC
台舟电子

TP1722A-33PXA
300mA Low Dropout Linear Regulator

WWW.SOT23.COM.TW

FEATURE

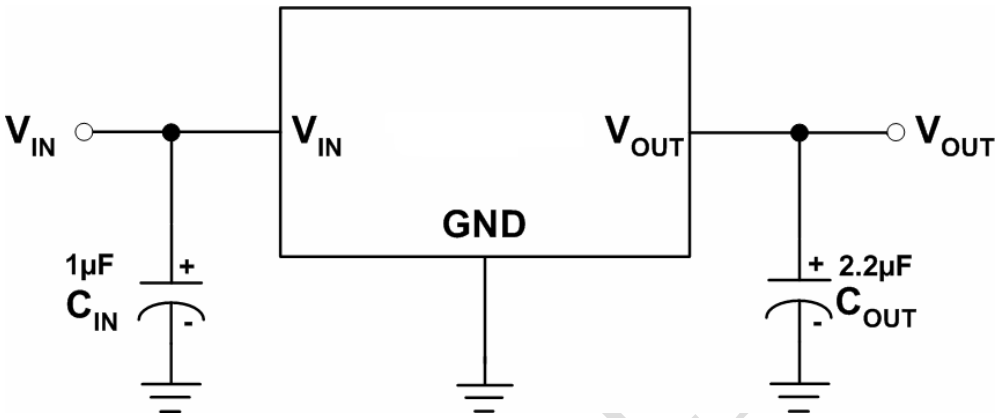
- Very Low Dropout Voltage of 170mV at Output Current 300mA
- Guaranteed 300mA Output Current
- Low Ground Current at 90μA
- Stable with low ESR Ceramic Capacitors
- Fast Transient Response
- Current-limiting and Thermal Protection
- SOT89 Package
- RoHS Compliant and 100% Lead (Pb)-Free
- Output Voltage：3.3V

APPLICATIONS

- Voltage Regulator for LAN Card, CD-ROM, and DVD
- Wireless Communication Systems
- Battery Powered Systems

Block Diagram

Typical Application Circuit



Pin Assignment

SOT89 Package

Absolute Maximum Ratings

- Input Voltage ---------- -0.3V to 6V
- Operating Junction Temperature Range ---------- -40°C to 125°C
- Storage Temperature Range ---------- -65°C to 150°C
- Power Dissipation ,P_D @ T_A=25°C

  SOT-89 ---------- 0.5W
- Package Thermal Resistance

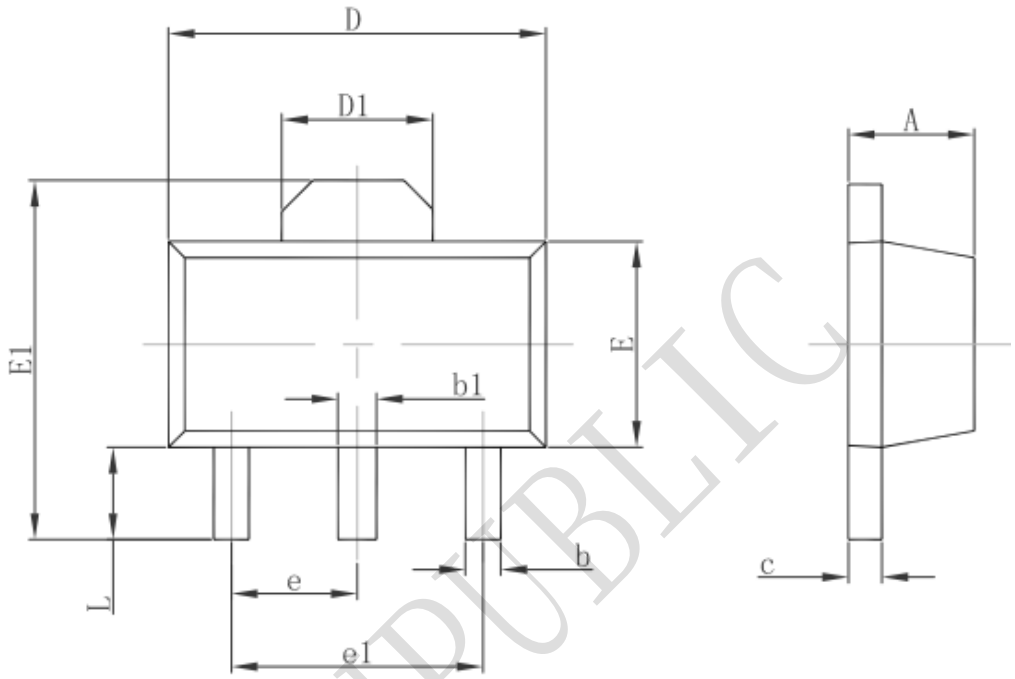
  SOT-89, θ_{JA} ---------- 300°C/W

Electrical Characteristics

Unless otherwise specified, all limits guaranteed for V_{IN}= V_O +0.5V, C_{IN}=C_{OUT}=2.2μF, T_J =25°C.

Symbol	Parameter	Conditions				Unit
			Min	Typ	Max.	
V_{IN}	Input Voltage		2.5		5.5	V
ΔV_O	Output Voltage Tolerance	100μA≤ I_{OUT} ≤ 300mA V_{IN}=V_O+0.5V,	-3		+3	% of $V_{OUT(NOM)}$
I_O	Maximum Output Current	Continuous	300			mA
I_{LIMIT}	Output Current Limit		350			mA
I_Q	Supply Current	I_{OUT}=0mA		90	200	μA
V_{DO}	Dropout Voltage	I_{OUT} =300mA		170		mV
ΔV_O	Line Regulation	I_{OUT} = 1mA, (V_O +0.5V)≤ V_I ≤ 5.5V		0.05	0.2	%/V
	Load Regulation	1mA ≤ I_{OUT} ≤ 300mA		15	35	mV
T_{SD}	Thermal Shutdown Temperature			160		°C
	Thermal Shutdown Hysteresis			20		

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