

CYT6219C28 Low noise and low dropout linear voltage regulator



General Description

CYT6219C28 is a low dropout linear regulator with high precision, low noise and ultra-fast response, which is manufactured by CMOS technology. This series of voltage regulators have built-in fixed reference voltage source, error correction circuit, current limiting circuit, phase compensation circuit and low internal resistance MOSFET, achieving high ripple suppression, low output noise and ultra-fast response to low dropout. CYT6219C28 is compatible with ceramic capacitors with smaller volume than tantalum capacitors, and does not need to use 0.1 μ F By-pass capacitors, which can save space. Its excellent high-speed response characteristics can cope with the fluctuation of load current, so it is especially suitable for handheld and RF products. The output can be turned off by controlling the CE pin on the chip, and the power consumption after turning off is only below 0.1 μ A.

Electric Characteristics

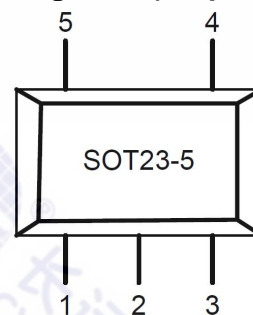
Unless otherwise stated, $T_A=25^{\circ}\text{C}$, $V_{IN}=V_{OUT}+1\text{V}$, $C_{IN}=C_{OUT}=1\mu\text{F}$.

Symbol	Description	Conditions	Min.	Typ.	Max.	Unit
$V_{OUT(E)}$	Output voltage	$I_{OUT}=40\text{mA}$, $V_{IN}=V_{OUT}+1\text{V}$	2.744	2.8	2.856	V
V_{IN}	Input voltage	-	-	-	8.0	V
I_{OUTMAX}	Maximum current output	$V_{IN}=V_{OUT}+1\text{V}$	200	-	-	mA
ΔV_{OUT}	Load-characteristic	$V_{IN}=V_{OUT}+1\text{V}$, $1\text{mA} \leq I_{OUT} \leq 100\text{mA}$	-	30	-	mV
V_{DIF1}	Differential pressure	$I_{OUT}=100\text{mA}$	-	200	-	mV
V_{DIF2}		$I_{OUT}=200\text{mA}$	-	400	-	mV
I_Q	Quiescent current	$V_{IN}=V_{OUT}+1\text{V}$	-	65	-	μA
I_{CEL}	Shutdown current	$V_{CE}=0\text{V}$	-	0.1	-	μA
$\frac{\Delta V_{OUT}}{\Delta V_{IN} \times V_{OUT}}$	Line voltage regulation	$I_{OUT}=40\text{mA}$, $V_{OUT}+1\text{V} \leq V_{IN} \leq 8\text{V}$	-	0.05	-	%/V
Noise	Output noise	$I_{OUT}=40\text{mA}$, 300Hz ~ 50kHz	-	50	-	μVrms
PSRR	Power supply rejection ratio	$V_{IN} = [V_{OUT} + 1] \text{ V} + 1\text{Vp-pAC}$ $I_{OUT}=40\text{mA}$, $f = 1\text{kHz}$	-	70	-	dB

Absolute Maximum Ratings

Symbol	Description	Range	Unit
V_{IN}	Input voltage	9	V
I_{OUT}	Output current	500	mA
V_{OUT}	Output voltage	GND-0.3 ~ $V_{OUT}+0.3$	V
P_D	Packaging power consumption	300	mW
T_{OPR}	Operating temperature	-25 ~ +85	$^{\circ}\text{C}$
T_{STG}	Storage temperature	-40 ~ +125	$^{\circ}\text{C}$
T_{SOLDER}	Welding temperature and time	260, 10	$^{\circ}\text{C}$, s

Pin Diagram (Top View)



Typical Application

