

NTE7128
Integrated Circuit
Positive Voltage Regulator
with ON/OFF Feature, 12V, 1A

Description:

The NTE7128 is a 1A low power-loss voltage regulator in a 4-Lead TO220 type package designed for use in constant voltage power applications in electronic equipment such as VCRs and musical instruments.

Features:

- Low Power Loss
- Includes ON/OFF Control Terminal
- Precision Output Voltage: $\pm 2.5\%$

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Input Voltage (Note 1), V_{IN}	35V
ON/OFF Control Terminal Voltage, V_C	35V
Output Current, I_O	1A
Power Dissipation, P_D	
No Heat Sink	1.5W
With Infinite Heat Sink	15W
Junction Temperature (Note 2), T_J	+150°C
Operating Temperature Range, T_{opr}	-20° to +80°C
Storage Temperature Range, T_{stg}	-40° to +150°C
Lead Temperature (During Soldering, 10sec), T_L	+260°C

Note 1. All are open except GND and applicable terminals.

Note 2. Overheat protection operates at $T_J \leq +125^\circ\text{C}$.

Electrical Characteristics: ($V_{IN} = 18V$, $I_O = 0.5A$, $T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O		11.7	12.0	12.3	V
Load Regulation	R_{egL}	$I_O = 5mA$ to 1A	–	0.1	2.0	%
Line Regulation	R_{egI}	$V_{IN} = 13V$ to 29V	–	0.5	2.5	%
Temperature Coefficient of Output Voltage	$T_C V_O$	$T_J = 0$ to $+125^\circ C$	–	± 0.02	–	%/ $^\circ C$
Ripple Rejection	RR		45	55	–	dB
Dropout Voltage	V_{I-O}	Note 3	–	–	0.5	V
ON-State Voltage for Control	$V_C(on)$	Note 4	2.0	–	–	V
On-State Current for Control	$I_C(on)$	$V_C = 2.7V$	–	–	20	μA
OFF-State Voltage for Control	$V_C(off)$		–	–	0.8	V
OFF-State Current for Control	$I_C(off)$	$V_C = 0.4V$	–	–	–0.4	mA
Quiescent Current	I_Q	$I_O = 0$	–	–	10	mA

Note 3. Input voltage shall be the value when output voltage is 95% in comparison with the initial value.

Note 4. In case of opening control terminal, output voltage turns on.

