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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: ±2.5%

Absolute Maximum Ratings: (T_A = +25°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 $T_J \leq +125°C$.

Electrical Characteristics: (V_{IN} = 18V, I_O = 0.5A, T_A = +25°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	$R_{eg}L$	I_O = 5mA to 1A	–	0.1	2.0	%
Line Regulation	$R_{eg}I$	V_{IN} = 13V to 29V	–	0.5	2.5	%
Temperature Coefficient of Output Voltage	T_CV_O	T_J = 0 to +125°C	–	±0.02	–	%/°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.