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## NTE1271 Integrated Circuit Control Voltage Generator

**Description:**

The NTE1271 control voltage generator with three outputs is fabricated with bipolar linear technology. Two alternately exchangeable outputs are provided for two stabilized output levels controlled by an external signal. The NTE1271 is packaged in a 8-Lead SIP package with a heat radiation fin to allow for large power dissipation.

**Features:**

- No Need for External Components
- Three Outputs @ 8.2V typ
- Noise Protection Circuitry
- Overload Current Protection and Thermal Protection Circuitry
- Good Mountability
- High Output Current: 200mA typical for V<sub>O2</sub> output  
 100mA typical for V<sub>O0</sub>, V<sub>O1</sub> outputs

**Absolute Maximum Ratings:** (T<sub>A</sub> = +25°C unless otherwise specified)

Input Voltage, V <sub>IN</sub> .....	18V
Power Dissipation, P <sub>D</sub>	
(T <sub>A</sub> ≤ +70°C, No Heat Sink) .....	1W
(T <sub>A</sub> ≤ +70°C, Infinite Heat Sink) .....	4W
Operating Temperature Range, T <sub>opr</sub> .....	-25° to +75°C
Storage Temperature Range, T <sub>stg</sub> .....	-55° to +125°C

Note 1. Permanent device damage may occur if the above Absolute Maximum Ratings are exceeded. Functional operation should be restricted to the conditions as detailed in the operational sections of the data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

**Electrical Characteristics:** ( $T_C = +25^\circ\text{C}$ ,  $V_{IN} = 14\text{V}$ ,  $R_{L0} = R_{L1} = 200\Omega$ ,  $R_{L2} = 100\Omega$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{IN}$		10.6	–	18	V
Output Voltage	$V_O$		7.8	8.2	8.6	V
Input Regulation		$11\text{V} \leq V_{IN} \leq 18\text{V}$	–	20	100	mV
Load Regulation		$(V_{CC}, V_{O1}) 1\text{mA} \leq I_L \leq 100\text{mA}$	–	16	50	mV
		$(V_{O2}) 1\text{mA} \leq I_L \leq 200\text{mA}$	–	20	100	mV
		$(V_{CC}, V_{O1}) 1\text{mA} \leq I_L \leq 100\text{mA}, V_{IN} = 11.6\text{V}$	–	20	100	mV
		$(V_{O2}) 1\text{mA} \leq I_L \leq 200\text{mA}, V_{IN} = 11.6\text{V}$	–	30	150	mV
Bias Current	$I_b$	$V_{IN} = 18\text{V}$	–	5	18	mA
Ripple Rejection Ratio		$f = 100\text{Hz}$	–	60	–	dB
Output Noise Voltage		$10\text{Hz} \leq f \leq 100\text{kHz}, C_R = 10\mu\text{F}$	–	40	–	$\mu\text{V}$
Input to Output Voltage Differential	$V_{IN}-V_O$		–	1.7	–	V
Temperature Coefficient of Output Voltage	$\text{TCV}_C$		–	-0.4	–	$\text{mV}/\text{C}^\circ$
Output Voltage Deviation	$\Delta V_O$		–	10	50	mV
Short Circuit Output Current	$I_{OS}$ (Peak)	$(V_{CC}, V_{O1})$	–	200	–	mA
		$(V_{O2})$	–	350	–	mA
Output Voltage	$V_{O1L}$	$V_{\text{CONT}} = 0.8\text{V}$	0	–	0.2	V
	$V_{O2L}$	$V_{\text{CONT}} = 0.8\text{V}$	7.8	8.2	8.6	V
	$V_{O1H}$	$V_{\text{CONT}} = 2.0\text{V}$	7.8	8.2	8.6	V
	$V_{O2H}$	$V_{\text{CONT}} = 2.0\text{V}$	0	–	0.2	V
Control Input Current	$I_{IL}$	$V_{\text{CONT}} = 0\text{V}$	–	-0.2	-1.0	mA
	$I_{IH}$	$V_{\text{CONT}} = 15\text{V}, V_{IN} = 18\text{V}$	–	–	10	$\mu\text{A}$

**Pin Connection Diagram**  
(Front View)



