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## NTE15044 Integrated Circuit CMOS, LSI for Supply Voltage Detection

**Description:**

The NTE15044 is an integrated circuit in a 3-Lead DIP type package which generates a reset signal for initializing microcomputers and LSI systems at their power-on time, and a reset signal for preventing an abnormal system run at power fluctuation time.

**Features:**

- Generates a Reset Signal at Power-On Time Until Reaching a Constant Voltage
- Generates a Reset Signal Below a Constant Voltage at Power-Off Time
- Generates a Reset Signal when the Supply Voltage Falls, and Cancels it when the Supply Voltage is Restored
- Capable of Detecting a Battery Service Life
- 3-Pin Adjustment-Free Device
- High-Accuracy Voltage Detection
- Low Power Consumption: 10µA Typ @  $V_{DD} = 5V$

**Absolute Maximum Ratings:** ( $V_{SS} = 0$ ,  $T_A = +25^\circ C$  unless otherwise specified)

Supply Voltage, $V_{DD}$ .....	7V
Output Voltage, $V_O$ .....	-0.3 to $V_{DD} + 0.3V$
Operating Ambient Temperature, $T_{opr}$ .....	-20° to +70°C
Storage Temperature Range, $T_{stg}$ .....	-55° to +125°C

**Recommended Operating Conditions:** ( $V_{SS} = 0$ ,  $T_A = +25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	$V_{DD}$		2	-	6	V

**DC Electrical Characteristics:** ( $V_{SS} = 0$ ,  $T_A = -20^\circ$  to +70°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{DD}$	$V_{DD} = 5V$ at no-load output	-	10	30	µA
Detected Voltage Hysteresis Width	$V_{DL}$	$T_A = +25^\circ C$	4.0	-	4.3	V
Detected Voltage at Supply Voltage Fall	$\Delta V_D$	$T_A = +25^\circ C$	100	200	300	mV
Output Voltage High Level	$V_{OH}$	$I_{OH} = -40\mu A$	$0.8 V_{DD}$	-	$V_{DD}$	V
Output Voltage Low Level	$V_{OL}$	$I_{OL} = 0.7mA$ , $V_{DD} = 3V$	$V_{SS}$	-	0.4	V

**AC Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reset Cancel Time	$t_{OH}$		-	5	-	$\mu s$
Reset Time	$t_{OL}$		-	5	-	$\mu s$

