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## NTE754 Integrated Circuit Single Toggle Flip-Flop

**Features:**

- Wide Operating Voltage Range -6V to 16 V
- Regulated Supply Not Required
- Economical 4-Lead Plastic Package

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

Power Supply Voltage, $V_{CC}$ .....	19V
Output Sinking Current .....	10mA
Negative Input Voltage, $V_{IN}$ .....	0.5V
Power Dissipation (Package Limitation), $P_D$ .....	1.0W
Derate above $T_A = +25^\circ\text{C}$ .....	10mW/ $^\circ\text{C}$
Operating Temperature Range, $T_J$ .....	-10 to $+75^\circ\text{C}$

**Electrical Characteristics:** ( $V_{CC} = 12\text{V}$ ,  $V_{in} = 4V_{(p-p)}$  Square Pulse,  $f = 10\text{kHz}$ , 50% Duty Cycle,  $t_{PHL} = 1\text{V}/\mu\text{s}$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Operating Power Supply Voltage		6	-	16	V
Toggle Frequency		-	3	-	MHz
Output Voltage, High	$V_{CC} = 6\text{V}$	5.5	-	-	V
	$V_{CC} = 16\text{V}$	15.5	-	-	V
Output Voltage, Low	$V_{CC} = 6\text{V}$	-	-	0.3	V
	$V_{CC} = 16\text{V}$	-	-	0.5	V
Operating Drain Current	$V_{CC} = 16\text{V}$	-	-	32	mA
Output Sinking Current	$V_O \leq 1.0\text{V}$	-	2	-	mA
Rise Time		-	250	-	ns
Storage Time		-	350	-	ns
Fall Time		-	60	-	ns
Input Resistance		10	-	-	k $\Omega$
Output Resistance, Output High		-	-	2.8	k $\Omega$
<b>Input Pulse Requirements</b>					
Pulse Magnitude		+4.0	-	-	V
Zero Level		-	-	+1.0	V
Leading Edge		No Requirement			
Trailing Edge, $dv/dt$		-1.0	-	-	V/ms

### Pin Connection Diagram

