



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089

## NTE1781 Integrated Circuit Electronic Switch for VCR

**Features:**

- Wide Input Dynamic Range
- Low Distortion
- Good Frequency Characteristics

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

Maximum Supply Voltage,  $V_{CCmax}$  ..... 15V  
 Allowable Power Dissipation ( $T_A \leq +65^\circ\text{C}$ ),  $P_{dmax}$  ..... 300mW  
 Operating Temperature Range,  $T_{opr}$  .....  $-20^\circ$  to  $+65^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-40^\circ$  to  $+125^\circ\text{C}$

**Operation Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 12\text{V}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	$I_D$		–	–	12.5	mA
Total Harmonic Distortion	THD	$R_g = 600\Omega$ , $4.5V_{P-P}$ , $f = 1\text{kHz}$ , $R_L = \infty$ , Note 1	–	0.007	0.1	%
Noise	en	$R_g = 600\Omega$ , $f = 20\text{Hz}$ to $20\text{kHz}$ , $R_L = \infty$ , Note 1	–	–93	–80	dBs
Crosstalk	$I_{s1}$	Input A: $R_g = 50\Omega$ , $f = 3.58\text{MHz}$ , $2V_{P-P}$ , Input B: $R_g = 1\text{k}\Omega$ , Note 1	50	68	–	dB
Pedestal	$\Delta V_{ped}$	$V_3 = 2.2\text{V}$ to $3.0\text{V}$	–100	–	+100	mV
Second Harmonic		$R_g = 50\Omega$ , $f = 1\text{MHz}$ , $4V_{P-P}$ , $R_L = \infty$	46	55	–	dB
Third Harmonic		$R_g = 50\Omega$ , $f = 1\text{MHz}$ , $4V_{P-P}$ , $R_L = \infty$	46	52	–	dB
Control, Threshold Voltage	$V_{3s}$		2.2	2.6	3.0	V
Pin Voltage (Pin4)	$V_4$		–	6.9	6.9	V
Pin Voltage (Pin7)	$V_7$	$V_3 = 2.2\text{V}$	–	7.6	–	V
		$V_3 = 3.0\text{V}$	–	7.6	–	V
Pin Voltage (Pin2)	$V_2$	$V_3 = 2.2\text{V}$	–	7.6	–	V
		$V_3 = 3.0\text{V}$	–	7.6	–	V

Note 1. Test for Input 1 and Input 2:

Input 1 Test:  $V_{cont}$  (Pin3 voltage) is 2.0V

Input 2 Test:  $V_{cont}$  is 3.0V

**Pin Connection Diagram**  
(Front View)

