



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE7178 thru NTE7181 Integrated Circuit Module-3 Channel Convergence Correction Circuit for Video Projection Televisions

Description:

The NTE7178 thru NTE7181 are convergence correction circuits designed for use in video projectors. These devices incorporate three output amplifiers in a single package, making possible the construction of CRT horizontal and vertical convergence correction output circuits for each of the RGB colors using just two hybrid ICs.

The NTE7178 is available in an 18-Lead SIP package while the NTE7179 thru NTE7181 is packaged in a 22-Lead SIP.

Features:

- 3 Output Amplifier Circuits in a Single Package
- High Maximum Supply Voltage
- Low Thermal Resistance
- High Temperature Stability (T_C max = +125°C)
- Seperate Predriver and Output Stage Supplies
- Output Stage Supply Switching for High-Performance Designs
- Low Inrush Current when Power is Applied

Applications:

- Video Projectors (Both Standard and High Definition)

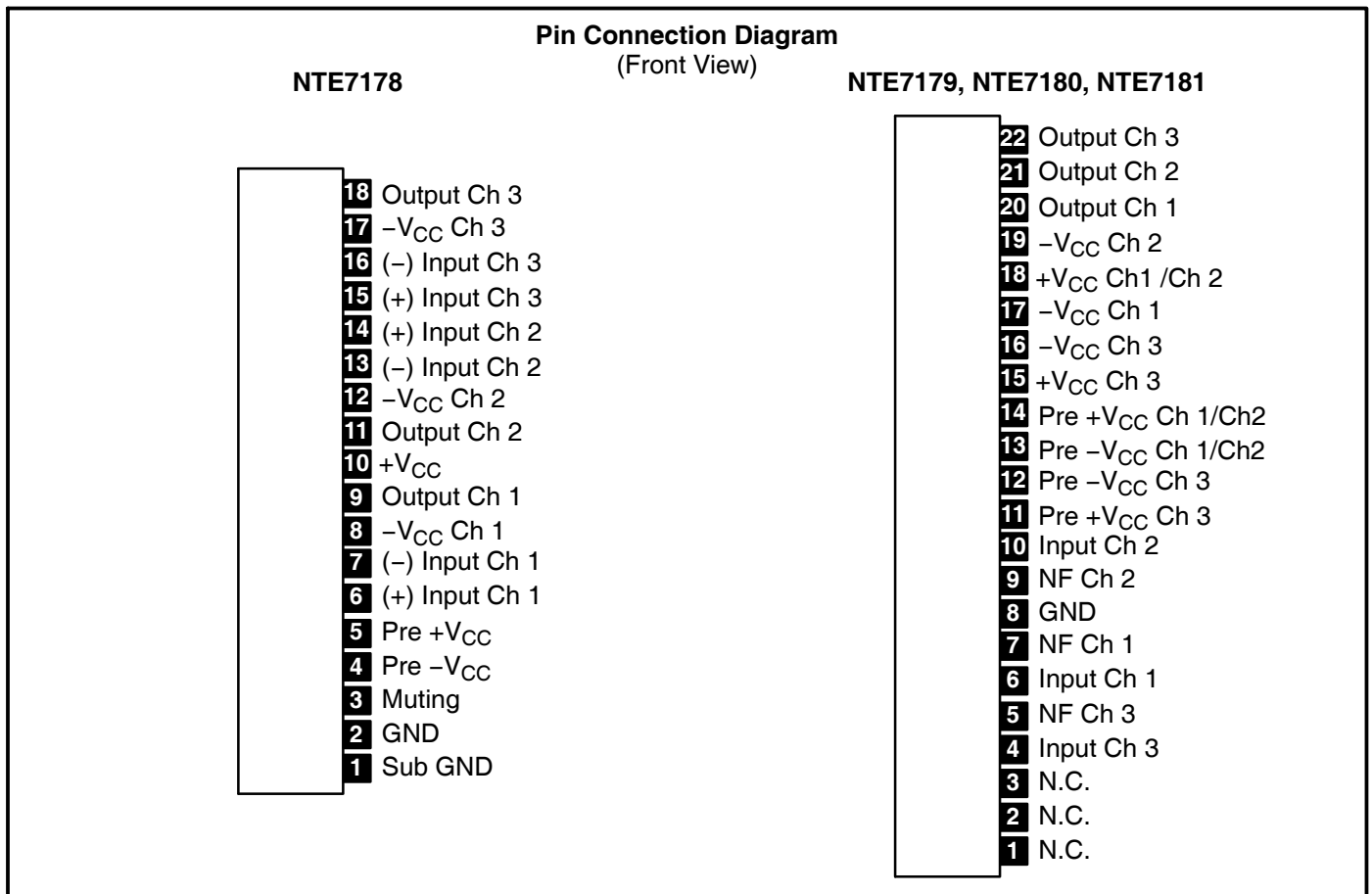
Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Operating Supply Voltage, V_{CC}	
NTE7178, NTE7179	±38V
NTE7180	±44V
NTE7181	±50V
Collector Current, I_C	
NTE7178	3A
NTE7179	5A
NTE7180	6A
NTE7181	7A
Thermal Resistance, Junction-to-Case, R_{thJC}	
NTE7178	+3.0°C/W
NTE7179	+2.6°C/W
NTE7180	+2.1°C/W
NTE7181	+1.8°C/W
Maximum Horizontal Frequency, f_H	
NTE7178, NTE7179	15KHz
NTE7180	35kHz
NTE7181	100kHz
Junction Temperature, T_j	+150°C
Operating Temperature, T_C	+125°C
Storage Temperature Range, T_{stg}	-30° to +125°C

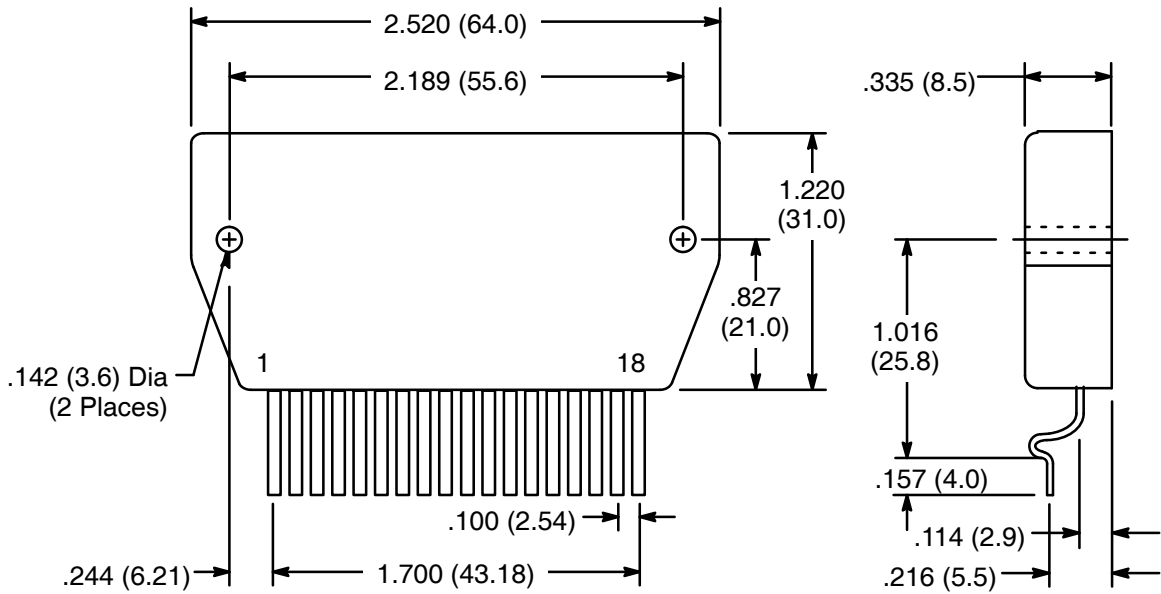
Note 1. **NTE7179** and **NTE7181** are **discontinued** devices and **no longer available**.

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $R_g = 50\Omega$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Noise Voltage NTE7178, NTE7179	V_{NO}	$V_{CC} = \pm 30\text{V}$	-	-	0.2	mVrms	
		$V_{CC} = \pm 35\text{V}$	-	-	0.2	mVrms	
		$V_{CC} = \square\pm 40\text{V}$	-	-	0.2	mVrms	
Quiescent Current NTE7178	I_{CCO}	$V_{CC} = \square\pm 30\text{V}$	15	22	30	mA	
		$V_{CC} = \pm 30\text{V}$	30	90	150	mA	
		$V_{CC} = \pm 35\text{V}$	30	90	150	mA	
		$V_{CC} = \square\pm 40\text{V}$	30	90	150	mA	
Neutral Voltage NTE7178, NTE7179	V_N	$V_{CC} = \pm 30\text{V}$	-50	0	+50	mV	
		$V_{CC} = \square\pm 35\text{V}$	-50	0	+50	mV	
		$V_{CC} = \square\square\pm 40\text{V}$	-50	0	+50	mV	
Output Delay Time NTE7178, NTE7179	t_D	Triangle Wave Input, $V_{OUT} = 1.5V_{P-P}$	$V_{CC} = \pm 30\text{V}$, $f = 15.75\text{kHz}$	-	-	1	μs
			$V_{CC} = \pm 35\text{V}$, $f = 15.75\text{kHz}$	-	-	1	μs
			$V_{CC} = \pm 40\text{V}$, $f = 64\text{kHz}$	-	-	0.2	μs
Frequency Response NTE7179	f_H	0dB at 1kHz, sine wave input, $V_{in} = 50mV_{P-P}$	$V_{CC} = \pm 30\text{V}$, -3dB	-	1.8	-	MHz
			$V_{CC} = \pm 35\text{V}$, -3dB	-	3.8	-	MHz



NTE7178



NTE7179, NTE7180, NTE7181

