



**ELECTRONICS, INC.**  
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## NTE783 Integrated Circuit Automatic Fine-Tuning Detector

**Description:**

Specifically intended for use in the automatic fine tuning (AFT) system of color television receivers, the NTE783 AFT Detector provides all of the required circuitry except the tuning component. The device embodies a high-gain input amplifier and automatic gain control (AGC) circuitry to provide excellent sensitivity in TV AFT systems employing low level IF amplifiers.

**Features:**

- Cascade-Cascode Amplifier
- Internal Voltage Regulator
- Internal AGC
- ±25kHz Frequency Deviation
- 14-Pin Dual In-Line Plastic Package

**Thermal Characteristics:**

Operating Temperature Range,  $T_A$  ..... -40° to +85°C  
 Storage Temperature Range,  $T_S$  ..... -65° to +150°C

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = +30\text{V}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Total Device Dissipation	$P_D$		130	140	150	mW
Supply Current	$I_{CC}$	$V_1 = +10.5\text{V}$	4.0	6.5	9.5	mA
Amplifier Current	$I_3$		1.0	2.0	4.0	mA
Regulator Voltage	$V_{REG}$		10.9	11.8	12.8	V
AFT Output Voltage	$V_{5,8}$		5.0	6.6	8.0	V
Output Offset Voltage	$V_{5-8}$		-	0	±1.0	V
<b>Dynamic Characteristics</b>						
Input Admittance	$\gamma_{11}$		-	$0.4 + j1$	-	mmho
Reverse Transfer Admittance	$\gamma_{12}$		-	$0 + j 3.4$	-	mmho
Forward Transfer Admittance	$\gamma_{21}$		-	$110 + j140$	-	mmho
Output Admittance	$\gamma_{22}$	Pin3	-	$0.02 + j1$	-	mmho

### Pin Connection Diagram

