

## NTE815 Integrated Circuit TV Horizontal Processor

**Description:**

The NTE815 is an integrated circuit in an 8-Lead DIP type package containing low-level horizontal sections including phase detector, oscillator and pre-driver—a device designed for use in all types of television receivers.

**Features:**

- Internal Shunt Regulator
- Preset Hold Control Capability
- ±300Hz Typical Pull-In
- Linear Balanced Phase Detector
- Variable Output Duty Cycle for Driving Tube or Transistor
- Low Thermal Frequency Drift
- Small Static Phase Error
- Adjustable dc Loop Gain

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

Supply Current .....	40mA
Output Voltage, $V_O$ .....	40V
Output Current, $I_O$ .....	30mA
Sync Input Voltage (Pin 3) .....	5V <sub>(p-p)</sub>
Flyback Input Voltage (Pin 4) .....	5V <sub>(p-p)</sub>
Power Dissipation (Package limitation), $P_D$ .....	625mW
Derate above 25° .....	5.0mW/°C
Operating Ambient Temperature Range, $T_A$ .....	0° to +75°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +150°C

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

Parameter	Test Conditions	Min	Typ	Max	Unit
Regulated Voltage (Pin6)		8.0	8.4	8.8	V
Supply Current (Pin6)		–	20	–	mA
Collector–Emitter Saturation Voltage (Output Transistor)	$I_C = 20\text{mA}$ , Pin1	–	0.30	0.35	V
Voltage (Pin4)		–	2.0	–	V
Oscillator Pull–In Range		–	$\pm 300$	–	Hz
Oscillator Hold–In Range		–	$\pm 900$	–	Hz
Static Phase Error	$\Delta f = 300\text{Hz}$	–	0.5	–	$\mu\text{s}$
Free–Running Frequency Supply Dependence		–	$\pm 3.0$	–	Hz/V
Phase Detector Leakage (Pin5)		–	–	$\pm 1.0$	$\mu\text{A}$
Sync Input Voltage (Pin3)		2.0	–	5.0	$V_{P-P}$
Sawtooth Input Voltage (Pin4)		1.0	–	3.0	$V_{P-P}$

**Pin Connection Diagram**

