



**ELECTRONICS, INC.**  
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## NTE1629 Integrated Circuit TV Sync Separator Detector

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

Supply Voltage, $V_{CC}$ .....	13.2V
Supply Current, $I_{CC}$ .....	50mA
Power Dissipation, $P_D$ .....	660mW
Operating Ambient Temperature Range, $T_{opr}$ .....	$-20^\circ$ to $+70^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+150^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	$I_{tot}$	$V_{CC} = 11V$	25	32	39	mA
Sync. Sep. Pulse Width	$t_{(sync)}$	Video Input Signal 4.5 $\mu\text{s}$ , APL = 50%, 1.5V $_{P-P}$	4.1	4.7	5.3	$\mu\text{s}$
Sync. Sep. Amplification	$V_{(sync)}$		9.0	–	–	V
Horiz OSC Starting Voltage	$V_{OSC-(H)}$	$f_{HO} = 11\text{kHz}$ to $19\text{kHz}$	3.0	–	–	V
Horiz Pulse Width (Duty)	$t_{HO}$	$V_{CC} = 11V$	28.5	33.0	38.0	%
Horiz OSC Frequency	$f_{HO}$	$V_{CC} = 11V$	15.0	15.75	16.5	kHz
$f_{HO}$ Change with Supply Voltage	$\Delta f_{HO}/V_{CC}$	$f_{HO}  8.8V - f_{HO}  11V$	–	–	130	Hz
$f_{HO}$ Change with Ambient Temperature	$\Delta f_{HO}/T_A$	$f_{HO}  -20^\circ - f_{HO}  60^\circ\text{C}$	–	–	260	Hz
Frequency Change with Ambient Temperature	$\beta$	$\Delta I_O = \pm 25\mu\text{A}$	14.6	15.6	16.6	Hz/ $\mu\text{A}$
OSC Output Saturation Voltage	$V_{7-5}$	$V_{CC} = 11V, I_1 = 3\mu\text{A}$	–	1.2	2.0	V
OSC Output Driving Current	$I_7$	$V_{CC} = 11V, V_{8-9} = 9V$	300	–	–	mA
DC Loop Gain	$f_{DC}$	$\mu \times \beta$	–	620	–	Hz/ $\mu\text{s}$

**Pin Connection Diagram**  
(Front View)

