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## NTE1296 Integrated Circuit TV Chroma Processor/Demodulator

**Features:**

- No AGC or Killer Adjustment Necessary
- Transformerless VCO

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

Supply Voltage,  $V_{CC}$  ..... 15V  
 Power Dissipation ( $T_A = +65^\circ\text{C}$ ),  $P_D$  ..... 600mW  
 Operating Temperature Range,  $T_{opg}$  .....  $-15^\circ$  to  $+65^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^\circ$  to  $+125^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{CC}$		23.7	29.0	37.2	mA
Max. Chroma Output	$E_C$	Burst:Chroma = 1:1, Burst = $90\text{mV}_{p-p}$	0.57	0.67	0.77	$V_{p-p}$
ACC Range	$E_A$	Burst:Chroma = 1:1, Burst = $10\text{mV}_{p-p}$	0.38	0.55	0.74	$V_{p-p}$
Killer Threshold	$E_K$	Burst $90\text{mV}_{p-p} = 0\text{dB}$	-	-35	-	dB
Phase Detector Sensitivity	$\mu$	Gate Pulse Width = $5\mu\text{s}$	-	8	-	mV/deg
VCO Control Sensitivity	$\beta$		-	4	-	Hz/mV
APC Pull-In Range	$f_P$		$\pm 300$	-	-	Hz
Free-Running Frequency	$f_o$	Gate Off	-100	0	100	Hz
VCO Output	$V_4$		0.6	0.9	1.2	$V_{p-p}$
Max. Burst Output Voltage	$E_{b(max)}$	B-Y Output, $f_{(beat)} = 10\text{kHz}$	4.5	6.2	-	$V_{p-p}$
Demod Conversion Gain	$G_{r-y}$	R-Y Output	6.2	7.8	9.4	
Demod Conversion Ratio	$E_{b-y}/E_{r-y}$	B-Y Output, R-Y Output	1.19	1.33	1.47	
	$E_{g-y}/E_{r-y}$	(R-y) - (B-Y) = 100deg. G-Y/R-Y Output	0.32	0.37	0.42	
Demod Carrier Leakage	$e_{car1}$	No Signal Input measured with 3.58MHz BPF	-	-	0.2	$V_{p-p}$
	$e_{car2}$	$1.2V_{p-p}$ CW input measured with BPF	-	-	3.5	$V_{p-p}$
Color Killer Leakage	$e_{K1}$	Bursy:Chroma = 1:1	-	-	1	mV <sub>rms</sub>
Color Control Leakage	$e_{c1}$	Rainbow Color Bar	-	-	1	mV <sub>rms</sub>
Demod. DC Output Voltage	$E_{O(dc)}$	No signal input, VCO free-running	6.4	7.0	7.6	V
Differential Demod Output Voltage	$\Delta E_{O(dc)}$	No signal input, VCO free-running (B-Y) - (R-Y), (R-Y) - (G-Y), (G-Y) - (B-Y)	-0.2	0	0.2	V

### Pin Connection Diagram

