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## NTE1650 Integrated Circuit Color TV Luminance–Chroma System <sup>w</sup>/Auto Flesh

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

Supply Voltage, $V_{CC}$ .....	15V
Power Dissipation ( $T_A = +65^\circ\text{C}$ ), $P_d$ .....	850mW
Operating Temperature Range, $T_{opr}$ .....	$-20^\circ$ to $+65^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+125^\circ\text{C}$

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum Chroma Output	$E_{Cmax}$	Chroma Input B/C = $1/1$ , $100\text{mV}_{P-P} = 0\text{dB}$	0.50	0.65	0.80	$V_{P-P}$
ACC Range	$E_a$	Input = $-20\text{dB}$	0.40	0.53	0.76	$V_{P-P}$
Killer Sensitivity	$E_k$		$-55$	$-40$	$-30$	dB
Color Recovery Conversion Benefit	$G_{R-Y}$		6.2	7.8	–	times
	$E_{B-Y}/E_{R-Y}$		0.70	0.80	0.95	times
	$E_{G-Y}/E_{R-Y}$		0.22	0.30	0.38	times
Relative Demodulation Angle	$\angle(R-Y) - \angle(B-Y)$		100	115	130	deg.
	$\angle(G-Y) - \angle(B-Y)$		240	255	270	deg.
Color Recovery Output Voltage	$E_{O(DC)}$		6.4	7.0	7.6	V
	$\Delta E_{O(DC)}$		$-0.3$	–	$+0.3$	V
Video Amplifier Benefit	$G_V$		9.2	11.0	12.8	times
	$G_{VIR}$		3.5	4.5	5.2	times
Video Amplifier Frequency Response	$f_C$		5	–	–	MHz
Direct Current Reproduction Rate			–	75	–	%
Blanking Output Voltage			10.1	11.1	–	V

### Pin Connection Diagram

ACC Detector	<b>1</b>	<b>28</b>	Peaking Capacitor
Color Control	<b>2</b>	<b>27</b>	Video Input
Killer Detector	<b>3</b>	<b>26</b>	Contrast/Color Adjust
1 <sup>st</sup> BPA	<b>4</b>	<b>25</b>	Pedestal Clamp
2 <sup>nd</sup> BPA	<b>5</b>	<b>24</b>	VIR Output
GND	<b>6</b>	<b>23</b>	Brightness Control
Sync Pulse Input	<b>7</b>	<b>22</b>	Blanking Input
VCO Filter	<b>8</b>	<b>21</b>	Video Output
OSC Input	<b>9</b>	<b>20</b>	V <sub>CC</sub>
OSC Output	<b>10</b>	<b>19</b>	Color Control Output
APC Control	<b>11</b>	<b>18</b>	B-Y Demod Input
DC Tint	<b>12</b>	<b>17</b>	B-Y Output
Tint Adjust	<b>13</b>	<b>16</b>	R-Y Output
Auto Flesh ON/OFF Switch	<b>14</b>	<b>15</b>	G-Y Output

