

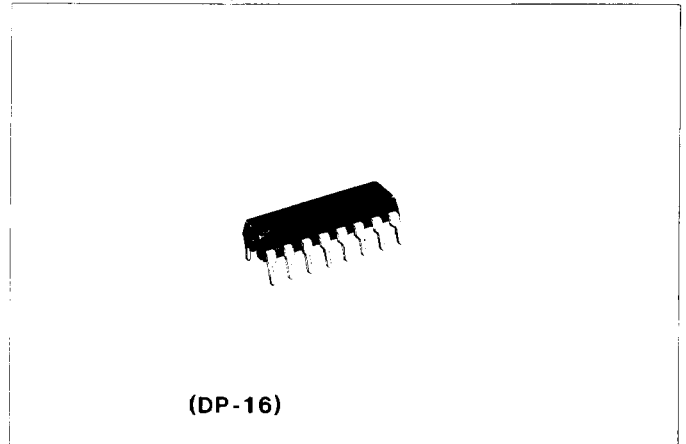
HA11409

Color TV VIR Processing

The Hitachi HA11409 is designed for automatic adjustment of the color saturation and tint of color television receiver.

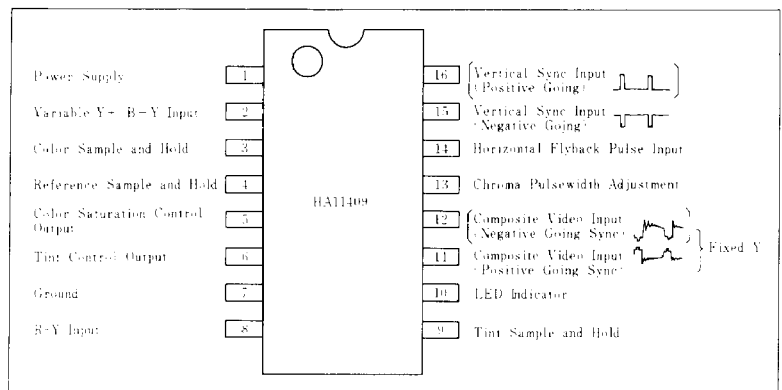
FUNCTIONS

- Identification of line 19 and the detection of the presence of a VIR signal.
- The development of dc color-controlling voltage by processing the VIR portion of the receiver's simulated blue drive signal.
- The development of dc tint controlling voltage by processing the VIR portion of the receiver's demodulated R-Y signal.



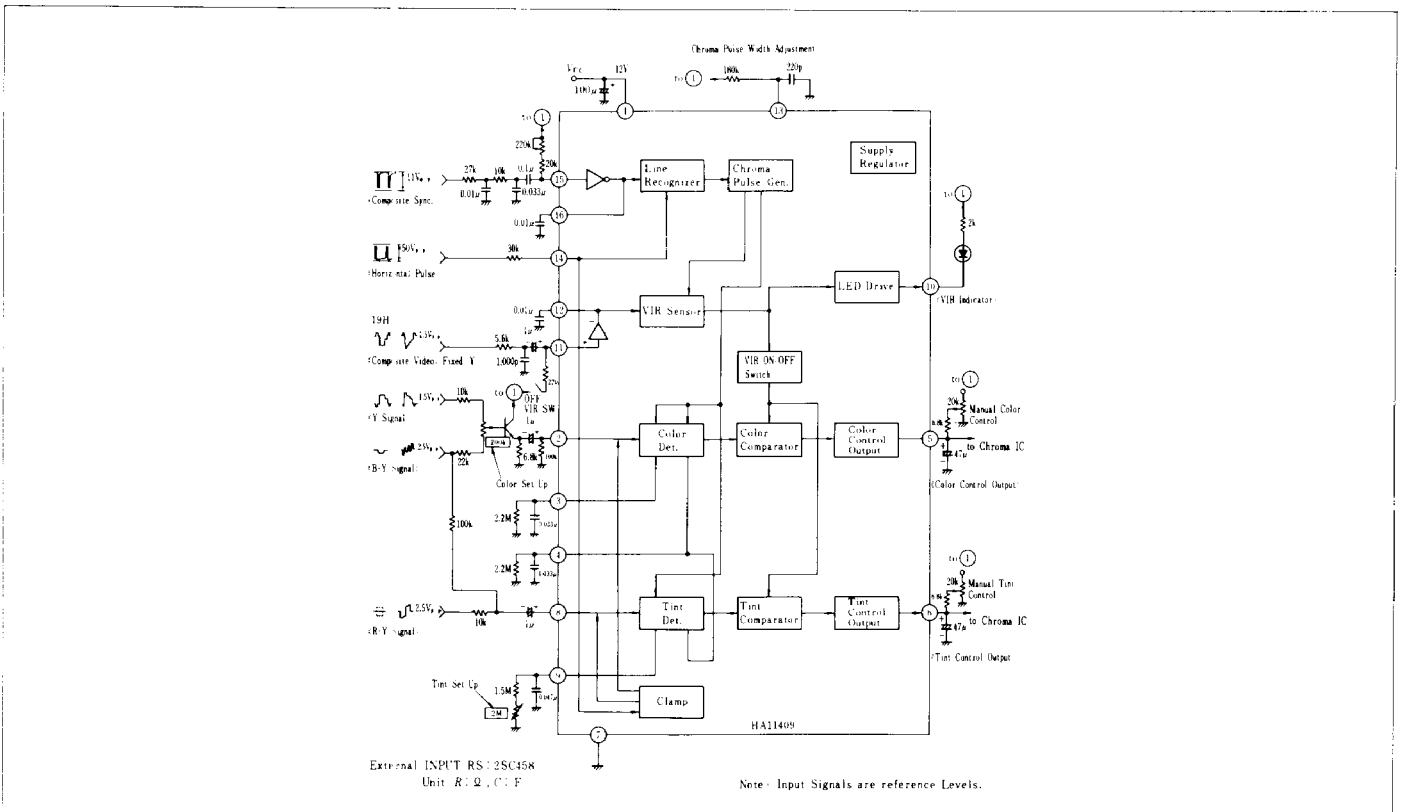
(DP-16)

PIN ARRANGEMENT



BLOCK DIAGRAM

(Top View)



■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	14.4	V
LED Drive Current	I_{LED}	20	mA
Power Dissipation	P_T	600*	mW
Operating Temperature	T_{opr}	-10 to +65	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^{\circ}\text{C}$

* Value at $T_a=65^{\circ}\text{C}$

■ ELECTRICAL CHARACTERISTICS ($V_{CC} = 12\text{V}$, $T_a = 25^{\circ}\text{C}$)

Item	Symbol	Test Conditions	min.	typ.	max.	Unit	
Current Drain	I_{CC}	LED : OFF	—	21	35	mA	
Output Voltage of Color Control Stage	V_{5H}	VIR : ON	High Level	10	11.2	—	V
	V_{5L}		Low Level	—	0.5	1.0	
	V_{5H}	VIR : OFF, Manual	High Level	—	10.7	—	
	V_{5L}		Low Level	—	0	—	
Output Voltage of Tint Control Stage	V_{6H}	VIR : ON	High Level	10	11.4	—	V
	V_{6L}		Low Level	—	0.3	1.0	
	V_{6H}	VIR : OFF, Manual	High Level	—	10.7	—	
	V_{6L}		Low Level	—	0	—	
Differential Voltage Gain of Color Control Stage	G_{VD1}	VIR : ON, Input : Pin3 to Pin4 Output : Pin5	—	40	—	dB	
Differential Voltage Gain of Tint Control Stage	G_{VD2}	$R_L=10\text{k}\Omega$, Input : Pin4 to Pin9 Output : Pin6	—	3.4	—	dB	

■ TYPICAL OPERATION ($V_{CC} = 12\text{V}$, Chroma IC : HA11247, $T_a = 25^{\circ}\text{C}$)

- The Phase Error of Tint for ± 30 degree Deviation of Burst Phase ± 5 degree
- The Error of Color Saturation for $\pm 6\text{dB}$ Deviation of Burst Amplitude $\pm 1\text{dB}$
- VIR Pull-in Time 1sec

■ FUNCTIONAL BLOCK DIAGRAM

