HA11417

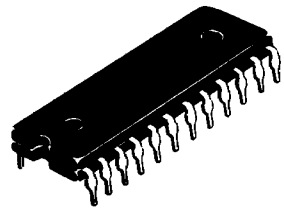
Color TV Chroma Processor/Demodulator

■ FUNCTIONS

- Chroma Amp.
- Subcarrier Regenerator
- Color Demodulator
- Flesh Correction

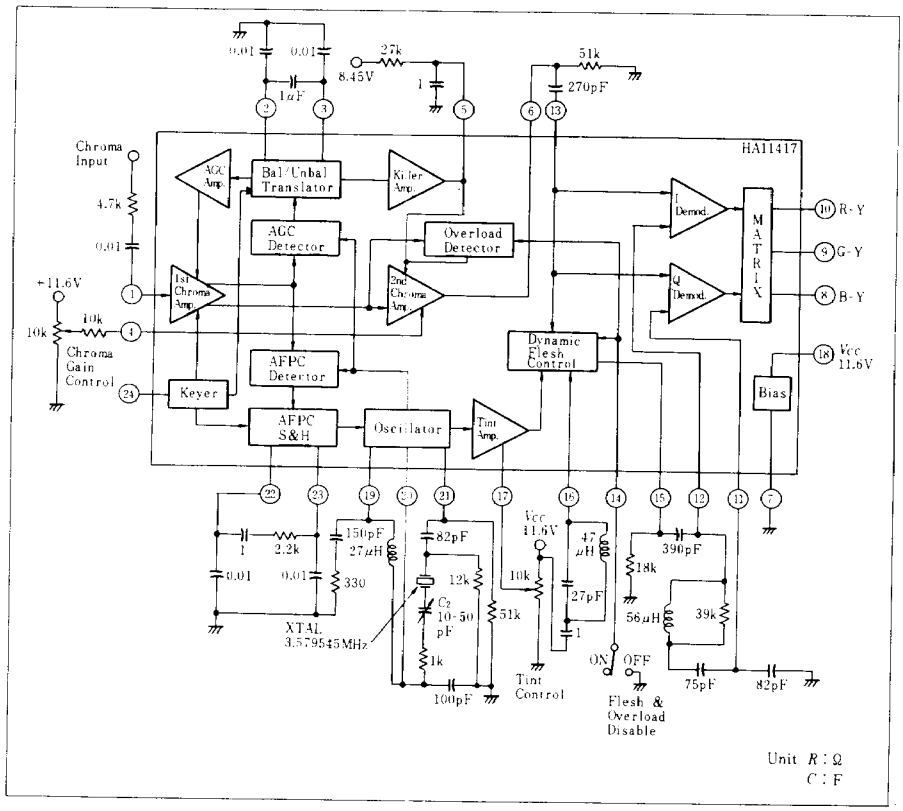
■ FEATURES

- Color difference matrix
- DC tint control
- Three low-output-impedance drivers for direct coupling
- DC chroma gain control
- Dynamic "Flesh Correction"
- Supplementary ACC with an overload detector to prevent over-saturation of picture tube.

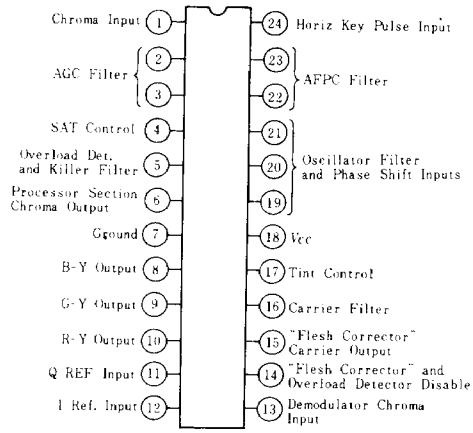


(DP-24)

■ BLOCK DIAGRAM



■ PIN ARRANGEMENT



(Top View)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless otherwise specified)

Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	13.1	V
Power Dissipation	P_T	825*	mW
Operating Temperature	T_{opr}	0 to +85	°C
Storage Temperature	T_{stg}	−25 to +150	°C

* Value at Ta=65°C

HITACHI

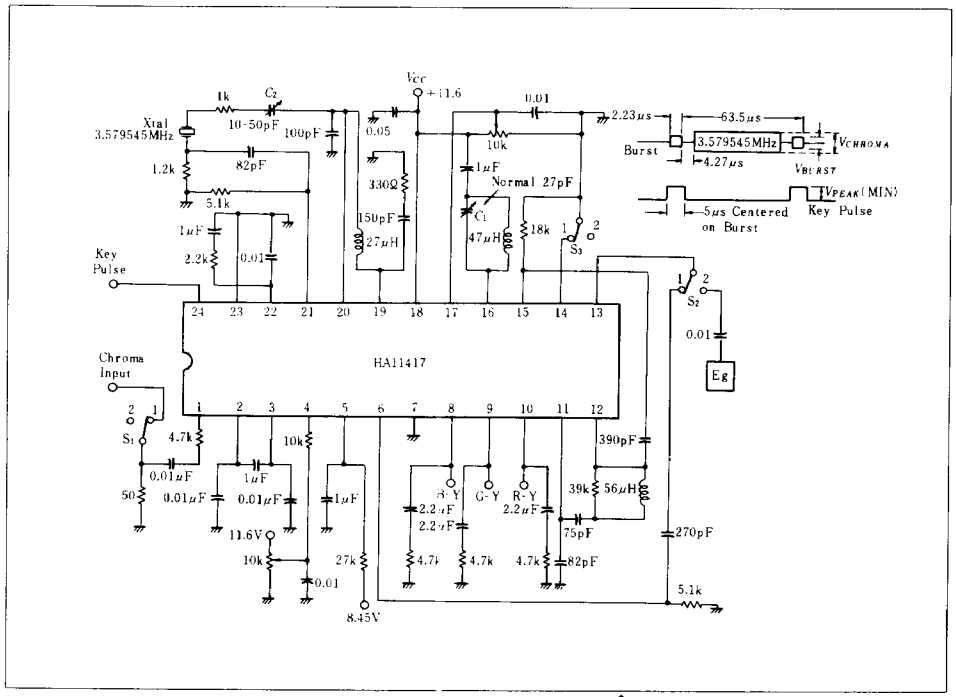
■ ELECTRICAL CHARACTERISTICS (V_{CC}=11.6V, Ta=25°C)

Item	Symbol	Test Condition								min.	typ.	max.	Unit
		S_1	S_2	S_3	Chroma	Burst	V_4	V_{17}	Test Pin				
Supply Current	I_T								18	—	42	—	mA
R-Y, G-Y, B-Y, Outputs	V_8, V_9, V_{10}								8, 9, 10	—	5.3	—	V_{DC}
Oscillator Reference Inputs	V_{11}, V_{12}								11, 12	—	3.7	—	
Chroma Demodulator Input	V_{13}								13	—	2.9	—	
Chroma Processor Input	V_1								1	—	2.2	—	
Pull-In Range*	V_{in}	2	1	1	273mVp-p		1.5V	7V	1	—	±300	—	Hz
Oscillator Level	V_{OSC}	2	1	1					12	—	0.6	—	Vp-p
100 Percent ACC	ACC(100%)	1	1	1					13	—	1	—	Vp-p
Minimum Gain Control	$V_{O\ min}$	1	1	1			11.6V		13	—	20	—	mVp-p
50% Gain Control	V_O(50%)	1	1	1			6V		13	—	50	—	% of
200 Percent ACC	ACC(200%)	1	1	1	546mVp-p		1.5V		13	—	100	—	100% ACC
20 Percent ACC	ACC(20%)	1	1	1					13	—	100	—	Value
Maximum Kill Output	K(1)	1	1	1	54.6mVp-p	4mVp-p			13	—	20	—	mVp-p
Minimum Unkill Output	K(2)	1	1	1		30mVp-p			13	—	400	—	
Overload Detector (OLD)	O_V	1	1	2	546mVp-p				13	—	1	—	Vp-p
R-Y Sensitivity (Eg=282mVp-p)	V_{R-Y}	1	2	1	0	273mVp-p			10	—	0.8	—	Vp-p
B-Y/R-Y**	B-Y/R-Y	1	2	1					8	—	120	—	%
G-Y/R-Y**	G-Y/R-Y	1	2	1					9	—	33	—	%
Max. R-Y Output	R-Y_{max}	1	2	1					10	—	3	—	Vp-p
Minimum Tint Control Range	θ_{TINT}	1	1	1				0V→11.6V	13	—	80	—	deg

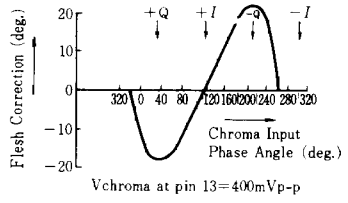
* : Tune C_2 to 3,579,845Hz with S_1 in position 2. Put S_1 in position 1, and check for pull in. Repeat for frequency tuned to 3,579,245Hz. For other tests, frequency tuned to 3,579,545 ±10Hz.

** : All input levels up to 2Vp-p.

■ TEST CIRCUIT



"FLESH" CORRECTION OF OSCILLATOR PHASE ANGLE AS A FUNCTION OF CHROMA INPUT PHASE ANGLE



Vchroma at pin 13=400mVp-p

Note : Tint control adjusted so that with a+I signal into pin 1, the oscillator at pin 12 and the chroma at pin 13 are in phase.