HA11221

B/W TV Picture IF Amplifier

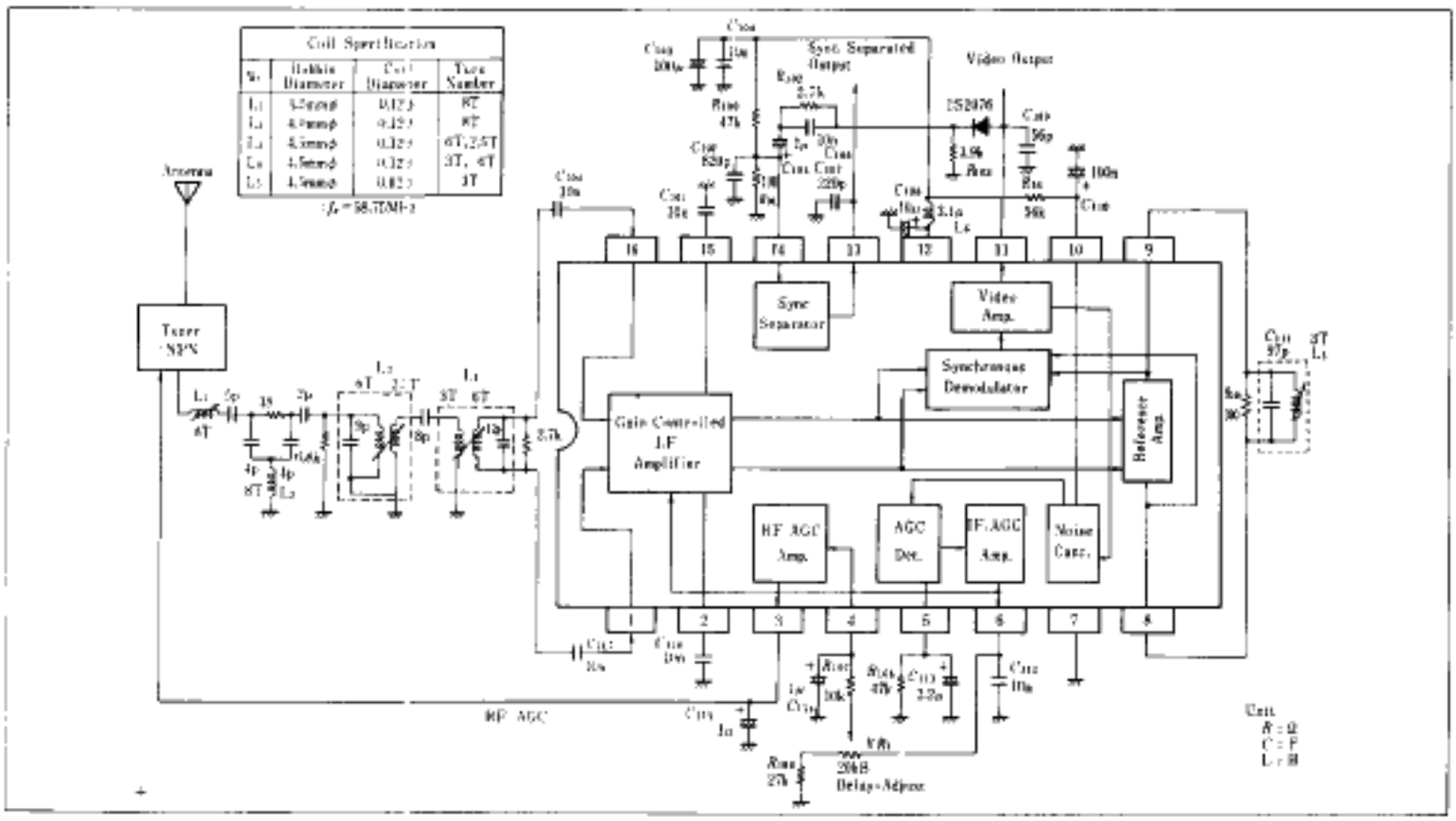
- **FUNCTIONS**
- Picture IF Amplifier
- Video Detector
- AGC Detector
- Noise Canceller
- Forward AGC
- Sync. Separator

- **FEATURES**
- Particularly useful in B/W TV's with bipolar tuner.
- Low external parts count.
- Designed to operate at Vcc down to 6.5V.
- Video output level stabilized, independent of supply voltage and ambient temperature.



(DP-16)

■ BLOCK DIAGRAM



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

Item		Symbol	Ratings	Unit
Supply Voltage		V_{CC}	15*	V
Max. Input Voltage		$V_{in\ max}$	3	Vp-p
Video Output Current		I_{11}	3	mA
Max. Applicable Voltage	3, 4 pin	V_3, V_4	V_{CC}	V
	6 pin	V_6	6.3	V
Power Dissipation		P_T	850**	mW
Operating Temperature		T_{opr}	−20 to +65	℃
Storage Temperature		T_{stg}	−55 to +150	℃

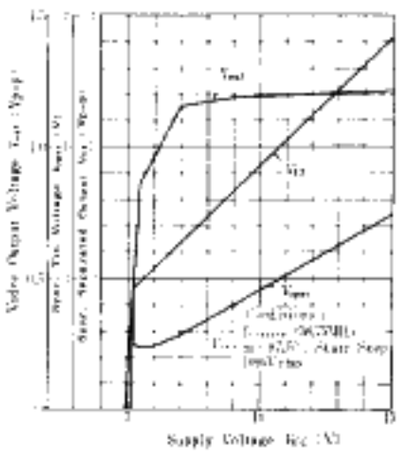
* Value at $t \leq 60$sec min.

** Value at $Ta=60$℃

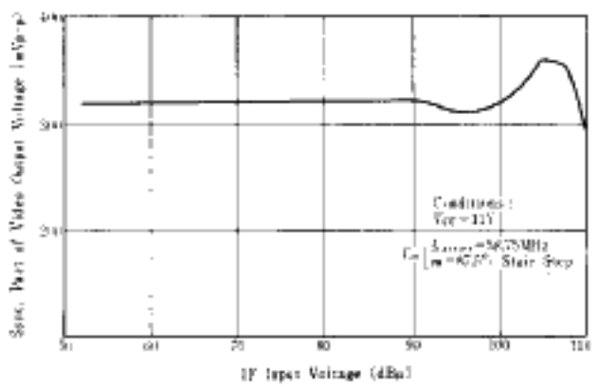
■ ELECTRICAL CHARACTERISTICS (V_{CC}=11V, f_s=58.75MHz, Ta=25°C)

Item	Symbol	Test Conditions	min.	typ.	max.	Unit
Input Sensitivity	$V_{i(sens)}$	m=87.5%	37	42	47	dBμ
Video Output Voltage	V_{out}	V_{in}=10mVrms, m=87.5%	0.95	1.21	1.47	Vp-p
Min. RF AGC Voltage	$V_{3\ min}$	V_{in}=0	1.6	1.8	2.0	V
Max. RF AGC Voltage	$V_{3\ max}$	4 pin → GND	6.0	7.0	8.0	V
Sync. Separated Output	V_{13}	Vertical Sync. Pulse	9.0	10.3	—	V
Video Band Width	G_W	$V_{out}(f=6MHz)/V_{out}(f=100kHz)$	−13	−6	−1	dB
Sync. Tip Voltage	V_{sync}	V_{in}=10mVrms	4.64	5.14	5.64	V
Supply Current	I_{CC}	V_{in}=0	33	41	53	mA

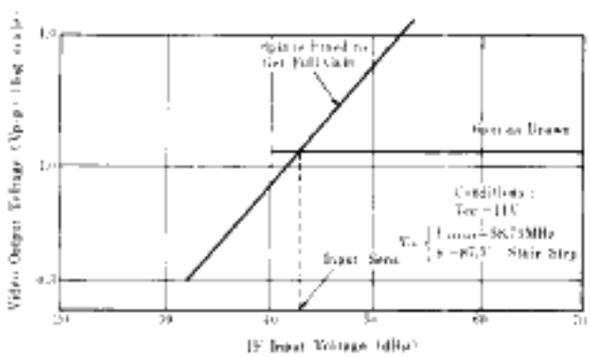
VIDEO OUTPUT VOLTAGE, SYNC. TIP VOLTAGE AND SYNC. SEPARATED OUTPUT VS. SUPPLY VOLTAGE



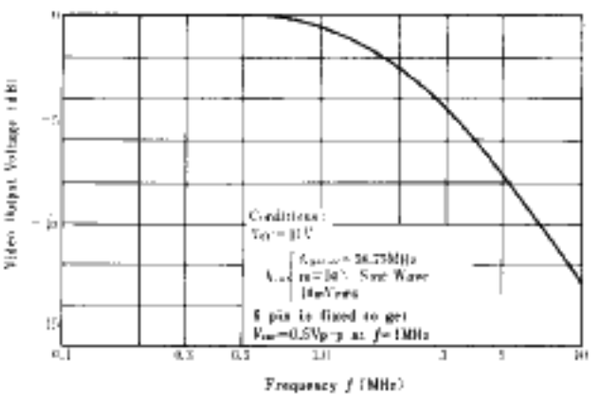
MAXIMUM INPUT CHARACTERISTICS



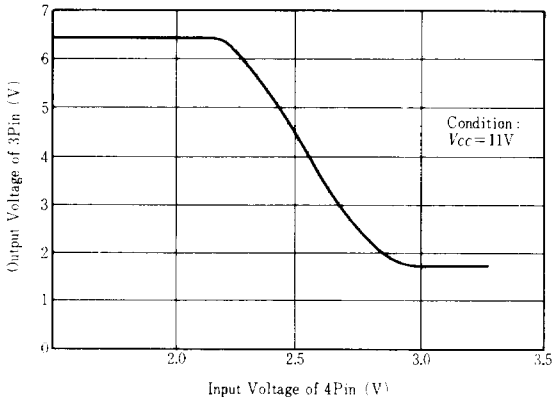
INPUT SENSITIVITY CHARACTERISTICS



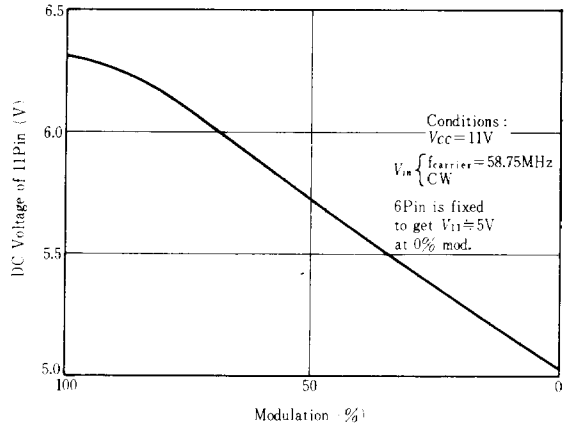
VIDEO OUTPUT VOLTAGE VS. FREQUENCY



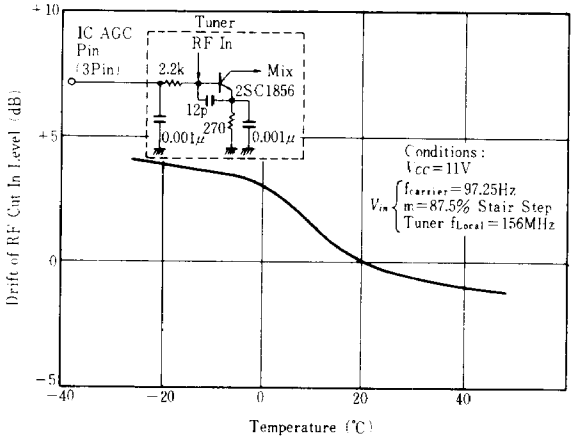
INPUT-OUTPUT CHARACTERISTICS OF RF AGC CIRCUIT



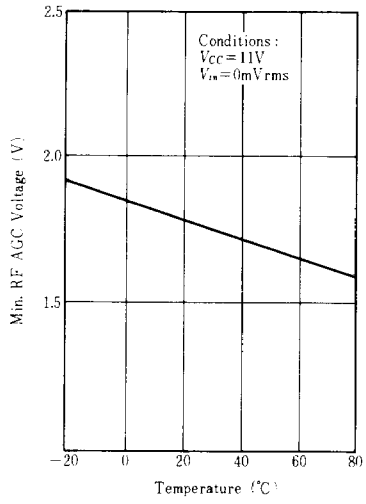
LINEARITY



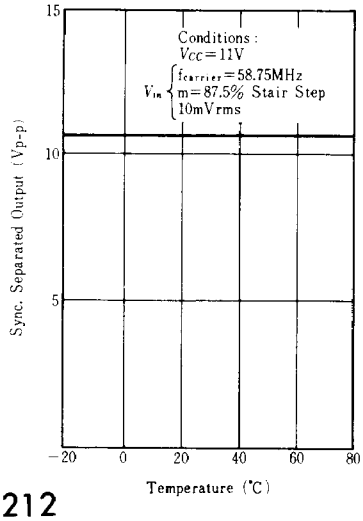
AGC CUT IN LEVEL VS. TEMPERATURE



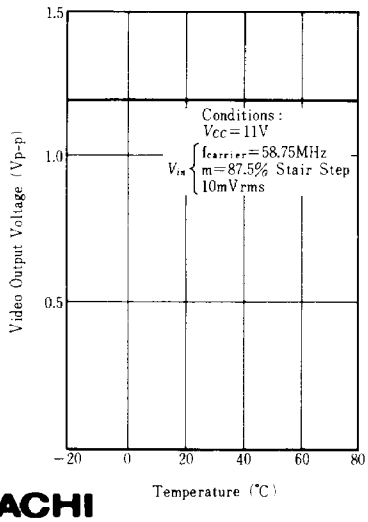
MIN. RF AGC VOLTAGE VS. TEMPERATURE



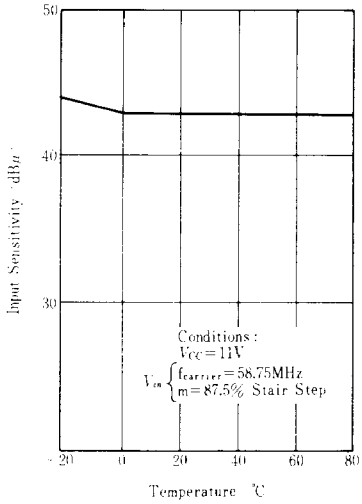
SYNC. SEPARATED OUTPUT VS. TEMPERATURE



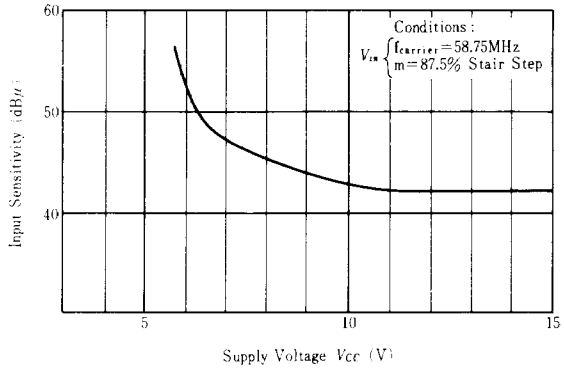
VIDEO OUTPUT VOLTAGE VS. TEMPERATURE



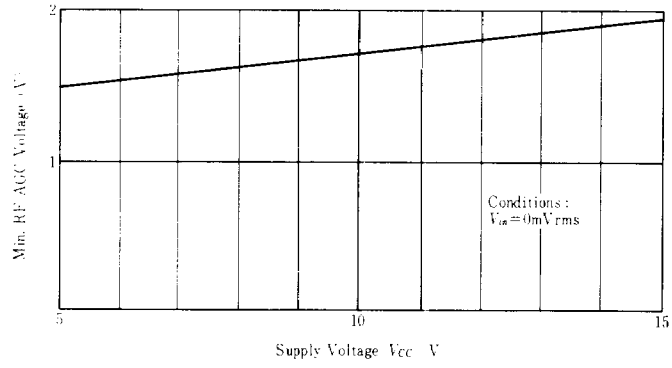
INPUT SENSITIVITY VS. TEMPERATURE



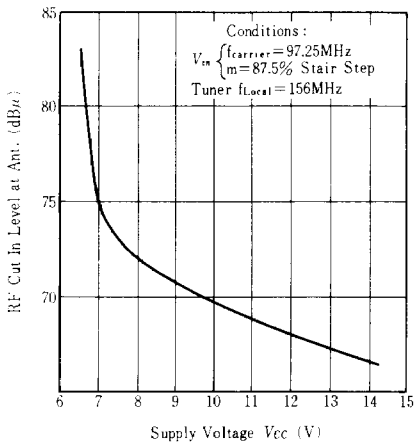
INPUT SENSITIVITY VS. SUPPLY VOLTAGE



MIN. RF AGC VOLTAGE VS. SUPPLY VOLTAGE



AGC CUT IN LEVEL VS. SUPPLY VOLTAGE



VIDEO OUTPUT VOLTAGE VS. LOCAL OSC. FREQUENCY

