

HA11235

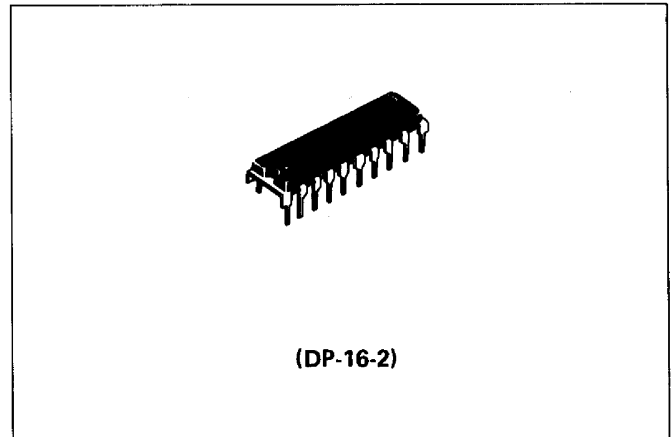
SYNCHRONOUS SIGNAL PROCESSING SYSTEM

FUNCTIONS

- Sync Separator
- Horizontal AFC
- Horizontal Oscillator
- X-ray Protector
- Vertical Oscillator
- Vertical Driver

FEATURES

- Less number of external components
- Sync Separator Output: 10 Vp-p
- Voltage Regulator is provided for Horizontal Block
- DC Loop Gain of Horizontal AFC: 7.5kHz/rad.
- Nonstable multivibrator is employed for vertical oscillator to eliminate a positive feedback from output stage
- Wave shape of vertical oscillator is used for to drive vertical output so that only one high stable (Tantalum) capacitor is required for the vertical stage
- Vertical output stage is stabilized by DC feedback to pin 3
- Adjustment of vertical linearity can be eliminated



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

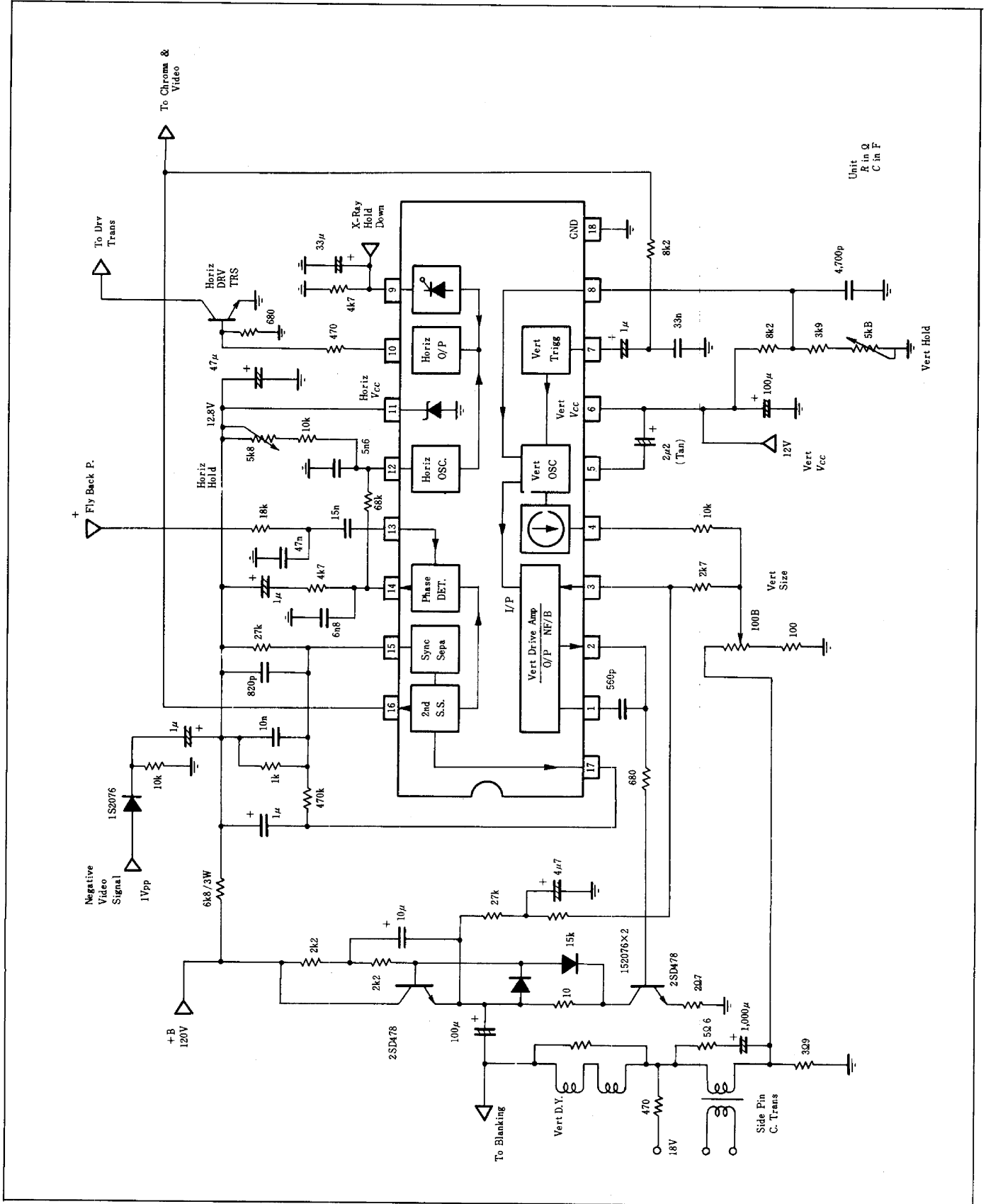
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	16	V
Operating Temperature Range	T_{opr}	-20 to +75	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^\circ\text{C}$
Power Dissipation*	P_T	500	mW
Output Current (pin 2, 10 & 16)	I_o	20	mA

*Value at $T_a=75^\circ\text{C}$

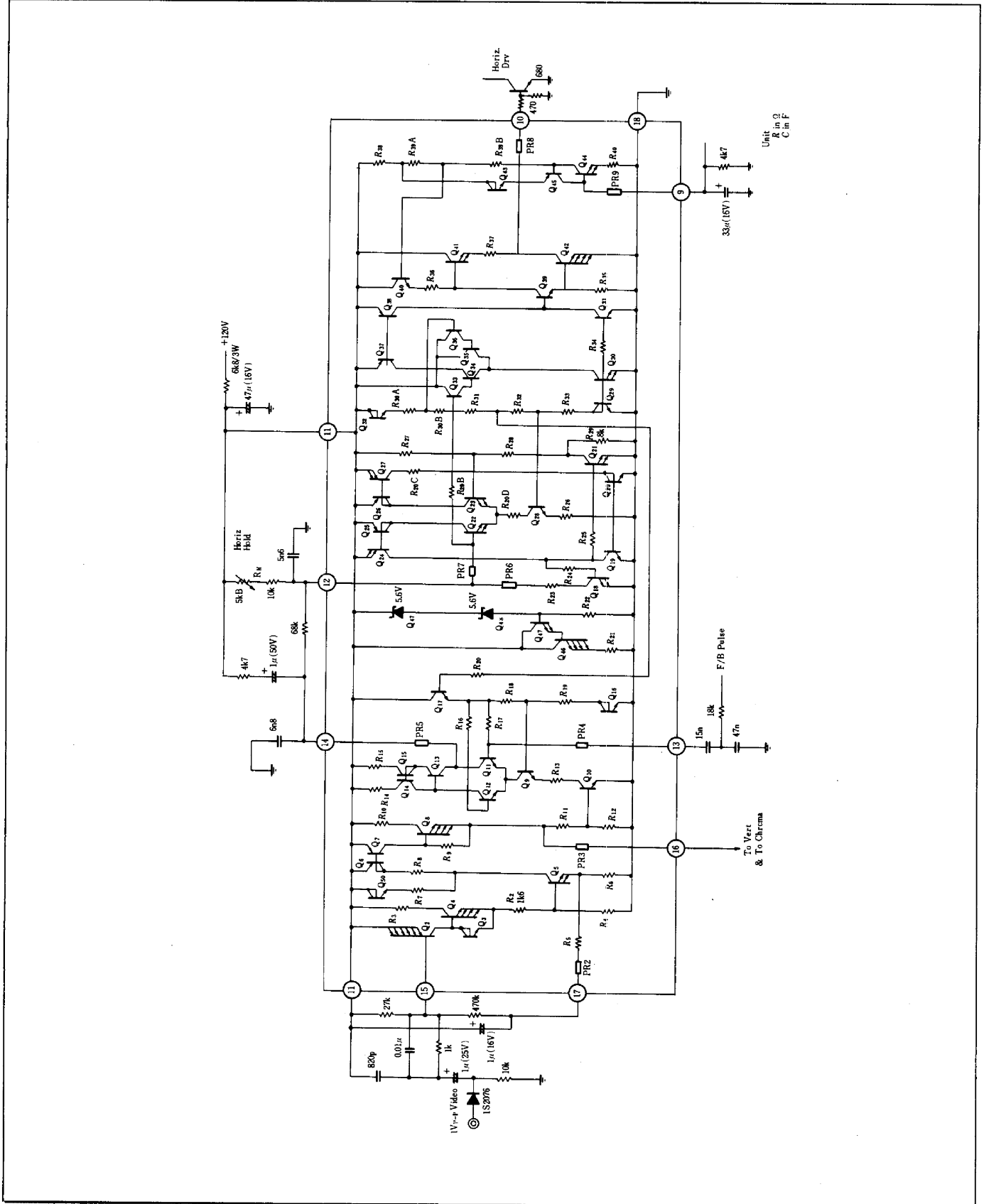
ELECTRICAL CHARACTERISTICS

Item	Symbol	Test Condition	min	typ	max	Unit		
Line Circuitry	Regulated Voltage	V_{11}	$I_{CC}=15\text{mA}$		—	12.8	V	
	Supply Current	I_{CC}			—	15	mA	
	Free-Running Frequency	f_{oh}	$R_h=12\text{k}\Omega, C_h=5\text{nF}$		14734	15734	16734	Hz
	Pull-in Range	Δf_{ph}			± 450	± 650	—	Hz
	Loopgain of APC	f_c			577.5	750	1070	Hz/ μs
	Temperature Coefficient	Δf_{oh}			-6.0	-3.0	0	Hz/ $^\circ\text{C}$
	Output Pulse Width	t_{wv}	pin 10		22.5	25.0	27.5	μs
Frame Circuitry	Free-Running Frequency	f_{ov}	$R_v=5\text{k}\Omega$		55	60	65	Hz
	Pull-in Range	Δf_{pv}			—	-10	-7.5	Hz
	Temperature Coefficient	Δf_{ov}			-0.03	0	+0.03	Hz/ $^\circ\text{C}$
Sync Separator	Input Voltage Peak-Peak Value	V_{1s}	Negative Going Sync		0.2	—	—	V
	Output Voltage	V_{sv}	Peak-Peak Value		8.0	10.0	—	V
	Output Pulse Width	t_{sv}	pin 16		4.5	5.0	5.5	μs

■ BLOCK DIAGRAM



■ CIRCUIT SCHEMATIC (SYNC. SEPARATOR & HORIZONTAL APC)



APPLICATION INFORMATION

