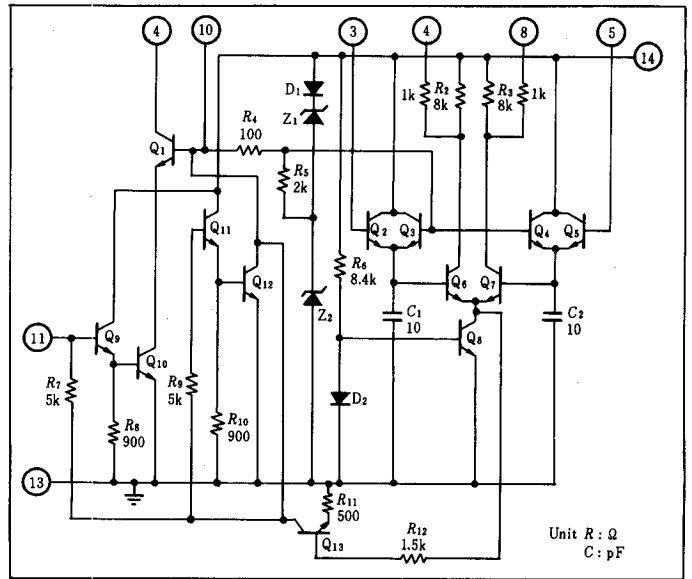
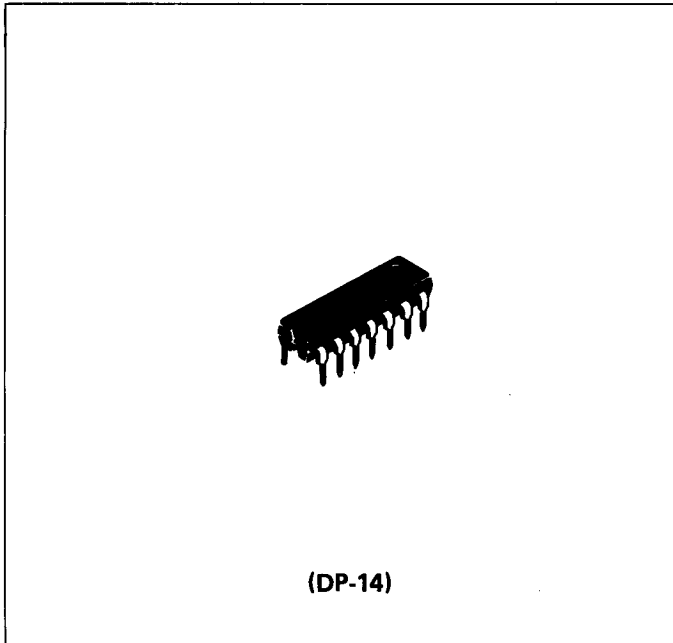


HA1126

AUTOMATIC FINE TUNING CIRCUIT

CIRCUIT SCHEMATIC



■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$) (1)

Item	Symbol	HA1126	Unit
Power Dissipation	P_r^*	325	mW
Operating Temperature	T_{opr}	-20 to +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

* Value at $T_a=85^\circ\text{C}$

■ ABSOLUTE MAXIMUM RATINGS (2)

The following chart gives the range of voltages which can be applied to the terminals listed vertically with respect to the terminals listed horizontally.

For example, the voltage range of the vertical terminal 4 with respect to terminal 10 is +20 to 0 volts.

Terminal No.	14	3	4	5	7	8	10	11	13	I_{IN} (mA)	I_{OUT} (mA)
14		+12 0	+10 -10	+12 0	+12 0	+12 0	+10 0	+20 0	**	50	50
3			*	+10 -10	*	*	+5 -5	*	+5 -6	1	0.1
4				*	*	*	+20 0	*	+20 0	20	20
5					*	*	+5 -6	*	+5 -6	1	0.1
7						*	*	*	+12 0	5	5
8							*	*	+12 0	5	5
10								+5 -2	+2 0	5	5
11									+2 -10	1	1
13									REF. SUBSTRATE & CASE	50	50

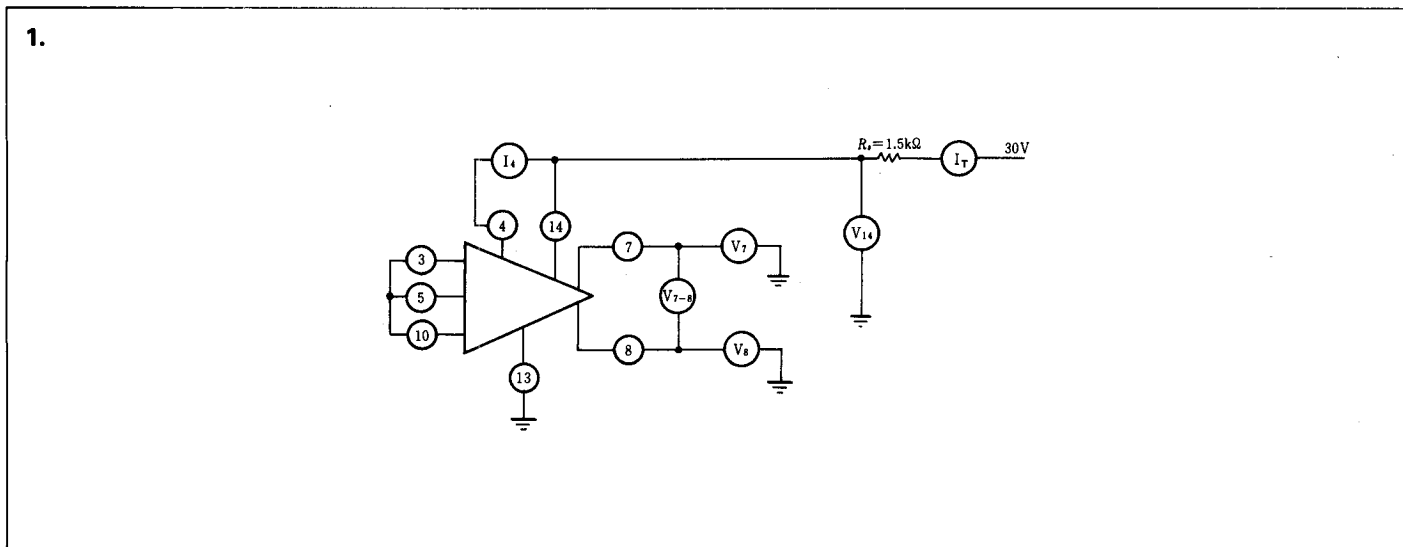
- Notes: 1. Terminal 1, 2, 6, 9 and 12 are not used internal connection.
 2. * Voltages are not normally applied between these terminals.
 3. ** Terminal 13 may be connected to any positive voltage through a suitable resistor provided that the current and dissipation ratings of the HA1126 are not exceeded.

■ ELECTRICAL CHARACTERISTICS (T_a=25°C)

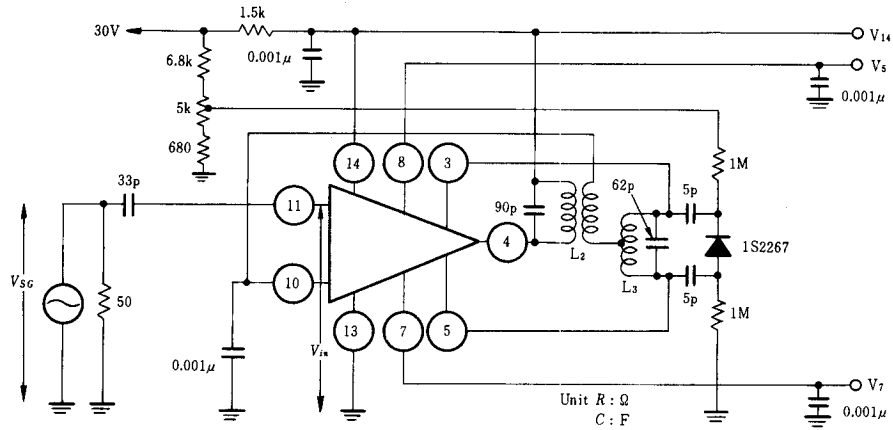
Item		Symbol	Test Circuit	Test Conditions	min	typ	max	Unit
Static Characteristics	Device Dissipation	P _r	1	V _{cc} =30V, T _a =25°C	130	140	150	mW
				R _s =1.5kΩ, T _a =85°C	—	145	150	mW
	Current Drain	I _r		V _{i4} =10.5V	4.0	6.5	9.5	V
	Zener Regulated Voltage	V _{i4}		V _{cc} =30V, R _s =1.5kΩ	11.2	11.9	12.6	mA
	Quiescent Operating Current into Terminal 4	I ₄			1	2	4	V
	Quiescent Operating Voltage at Terminal 7	V ₇			6.2	6.9	7.6	V
	Quiescent Operating Voltage Terminal 8	V ₈			6.2	6.9	7.6	V
Output Offset Voltage between Terminals 7 and 8	V ₇₋₈	-1.0	0	1.0	V			
*Output vs. Frequency Deviation-AFC	Correction-Control Voltage at Terminal 7	V _{corr(7)} *	2	f ₀ =58.750MHz-0.075MHz	80	—	—	% of V _{i4}
				f ₀ =58.750MHz+0.075MHz	—	—	38	
				f ₀ =58.750MHz-0.900MHz	75	—	—	
				f ₀ =58.750MHz+0.900MHz	—	—	43	
				f ₀ =58.750MHz-1.500MHz	—	—	85	
				f ₀ =58.750MHz+1.500MHz	33	—	—	
	Correction-Control Voltage at Terminal 8	V _{corr(8)} *		f ₀ =58.750MHz-0.075MHz	—	—	38	% of V _{i4}
				f ₀ =58.750MHz+0.075MHz	80	—	—	
				f ₀ =58.750MHz-0.900MHz	—	—	43	
				f ₀ =58.750MHz+0.900MHz	75	—	—	
				f ₀ =58.750MHz-1.500MHz	33	—	—	
				f ₀ =58.750MHz+1.500MHz	—	—	85	

Note: *V_{cc}=30V, R_s=1.5kΩ, V_{i4}=18mVrms

■ TEST CIRCUIT

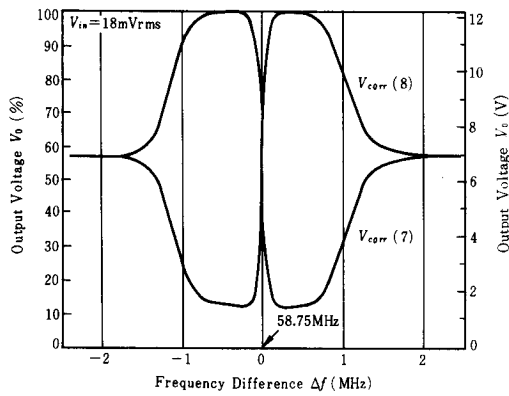


2.



$V_{in} = 18\text{mVrms}$
 $V_{SG} = 53\text{mVrms}$ (Carrier Wave Output at opened)
 L_2 : 0.7mmφ Polyuretan Wire, P: 2.5T, S: 2.5T.
 L_3 : 0.7mmφ Polyuretan Wire, 3.5T Center Tap 1.75T.

WIDE BAND CONTROL VOLTAGE CHARACTERISTICS



NARROW BAND CONTROL VOLTAGE CHARACTERISTICS

