

# AN2515S

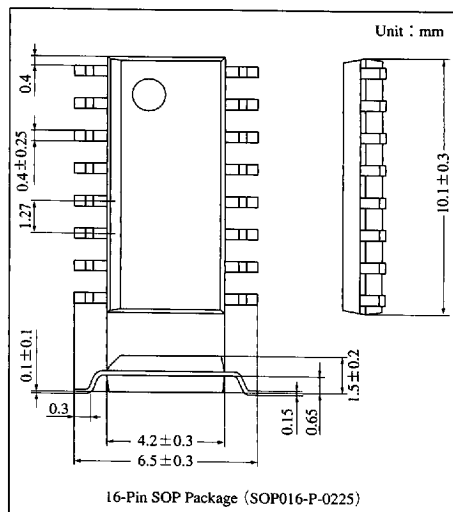
## Electronic View-Finder Driving IC with Synchronous Signal

### Overview

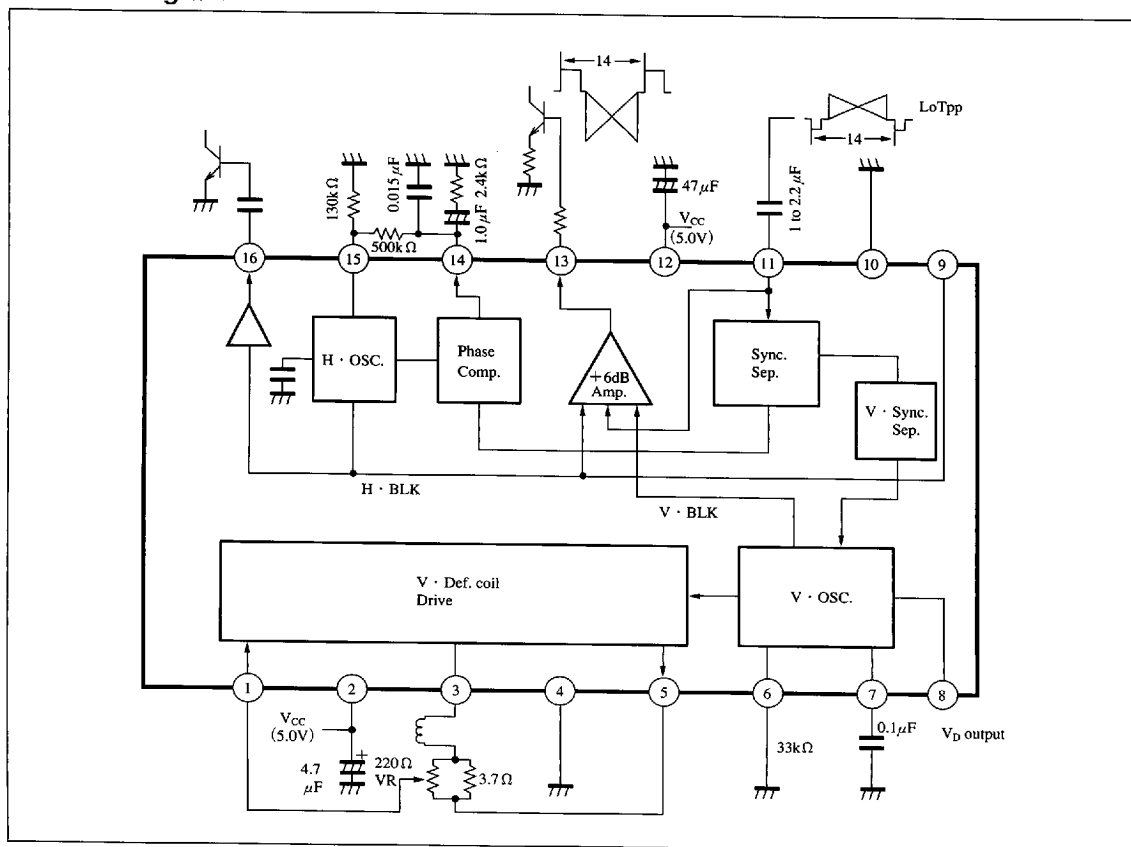
The AN2515S is a drive IC for an electronic monochrome view-finder of a video camera. It is an advanced version of the AN2514S with additional HD output and enhanced vertical-drive capability. It is easy to make up a 0.5-inch electronic view-finder with minimal external components.

### Features

- Built-in video amplifier, synchronization separation, horizontal/vertical oscillator, AFC, and vertical driver circuits.
- Direct driving of a vertical deflection coil available.
- Built-in capacitor for vertical synchronous signal separation



### Block Diagram



ICs for Video Camera

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## Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Vertical size control input	9	H <sub>D</sub> output
2	Power supply input	10	GND
3	Vertical deflection coil driver output (1)	11	Video input
4	GND	12	Power supply pin
5	Vertical deflection coil driver output (2)	13	Video amplifier output
6	Vertical oscillation resistor pin	14	Phase comparator output
7	Vertical oscillation capacitor pin	15	Horizontal oscillation resistor pin
8	V <sub>D</sub> output	16	Horizontal AFC output

## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	5.5	V
Supply current	I <sub>CC</sub>	47	mA
Power dissipation <sup>Note 2)</sup>	P <sub>D</sub>	190	mW
Operating ambient temperature <sup>Note 1)</sup>	T <sub>opr</sub>	-20 to +75	°C
Storage temperature <sup>Note 1)</sup>	T <sub>stg</sub>	-55 to +125	°C

Note 1) T<sub>a</sub>=25°C except operating ambient temperature and storage temperatures unless otherwise specified.

Note 2) Power dissipation is that of a package at T<sub>a</sub>=75°C.

## Recommended Operating Range (T<sub>a</sub>=25°C)

Parameter	Symbol	Range
Operating supply voltage range	V <sub>CC</sub>	4.5V to 5.3V

## Electrical Characteristics (T<sub>a</sub>=25±2°C)

Parameter	Symbol	Condition	min	typ	max	Unit	Note
Supply current (1)	I <sub>2</sub>		2.35	7.5	13.0	mA	at no-load
Supply current (2)	I <sub>12</sub>		5.5	10.0	14.0	mA	at no-load
Video amp. gain	G <sub>v</sub>		5.0	6.0	7.0	dB	
Video amp. dynamic range	DR <sub>v</sub>		2.0	3.0	4.0	dB	
Synchronous separating capability (1)	HSEP1		0.2	—	—	V	
Synchronous separating capability (2)	HSEP2		—	—	1.3	V	
Video signal H <sub>D</sub> width	τ <sub>Hout</sub>		7.0	8.0	9.0	μs	
H <sub>D</sub> width	τ <sub>HD</sub>		8.5	9.5	10.5	μs	
AFC output H <sub>D</sub> width	τ <sub>AFCHD</sub>		9.5	10.5	11.5	μs	
Horizontal free oscillation freq.	f <sub>Hfree</sub>		14.25	15.75	17.25	kHz	
AFC lock range	f <sub>AFC</sub>		15.25	15.75	16.25	kHz	
AFC control sensitivity	β		840	960	1080	Hz/μA	
Vertical separation time	T <sub>VSEP</sub>		8	16	24	μs	
V <sub>D</sub> width	τ <sub>VD</sub>		800	900	1000	μs	
Video signal V <sub>D</sub> width	τ <sub>Vout</sub>		1.1	1.3	1.5	ms	
Vertical free-oscillation frequency	f <sub>Vfree</sub>		45	49	53	Hz	
Vertical deflection output amplitude (1)	v <sub>VDEF1</sub>		1.3	1.6	1.9	V	
Vertical deflection output amplitude (2)	v <sub>VDEF2</sub>		1.3	1.6	1.9	V	
Vertical deflection output dynamic range (1)	DR <sub>VDEF1</sub>		2.0	2.4	2.8	V	
Vertical deflection output dynamic range (2)	DR <sub>VDEF2</sub>		2.0	2.4	2.8	V	

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