

AN614

Video amplifier, modulator/demodulator IC

■ Overview

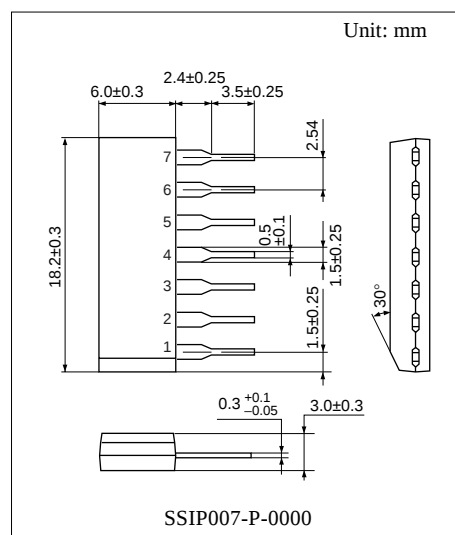
The AN614 is an IC designed as video amplifier, modulator/demodulator for video camera.

■ Features

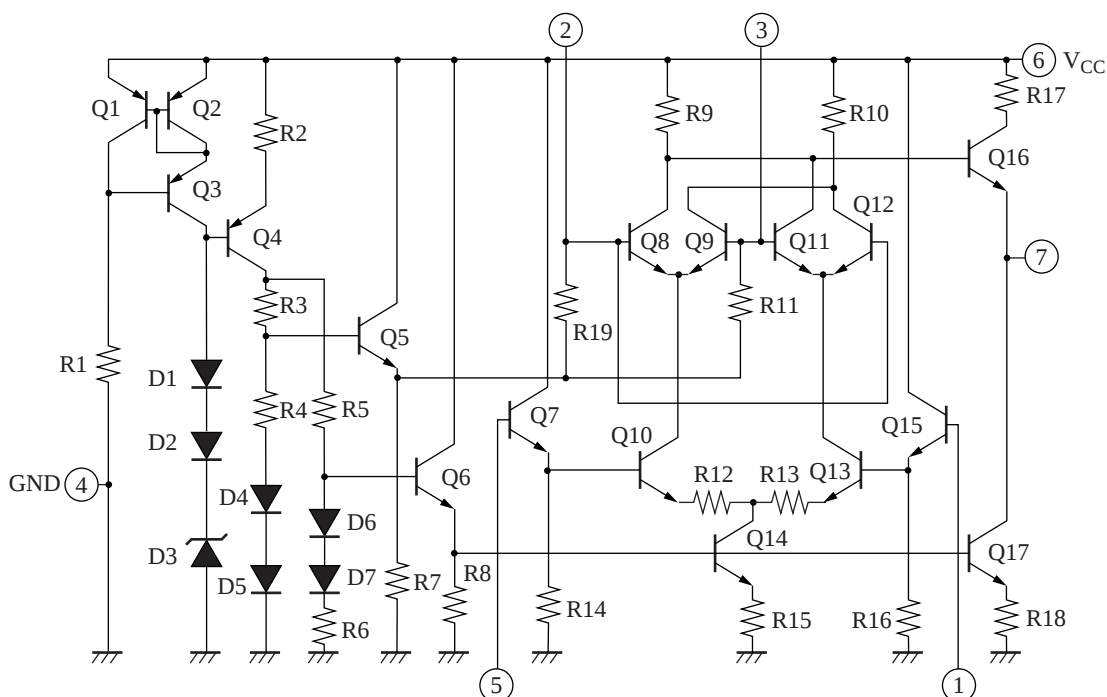
- Differential input of modulation signal is possible.
- Internally biased except for modulation signal input pin

■ Applications

- Video cameras



■ Equivalent Circuit



■ Pin Descriptions

Pin No.	Description
1	Signal input 1
2	Carrier input 1
3	Carrier input 2
4	GND
5	Signal input 2
6	Supply voltage
7	Output

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V_{6-4}	14.4	V
Total consumption current	I_6	15	mA
Total power consumption	P_{TOT}	216	mW
Operating ambient temperature	T_{opr}	-20 to +70	°C
Storage temperature	T_{stg}	-40 to +150	°C

■ Recommended Operating Range

Parameter	Symbol	Range	Unit
Supply voltage	$V_{CC} (V_{6-4})$	8.6 to 13.0	V

■ Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Pin voltage pin 2	V_{2-4}	$V_{CC} = 9\text{ V}$	3.6	—	4.4	V
Pin voltage pin 3	V_{3-4}	$V_{CC} = 9\text{ V}$	3.6	—	4.4	V
Pin voltage pin 7	V_{7-4}	$V_{CC} = 9\text{ V}$	4.33	—	6.53	V
Total current	I_6	$V_{CC} = 9\text{ V}$	5.3	—	12.2	mA
Output voltage 1	V_{O-SIG}	$V_{CC} = 9\text{ V}$	790	—	1 030	mV[rms]
Output voltage 2	V_{O-CW}	$V_{CC} = 9\text{ V}$	530	—	800	mV[rms]
Carrier leak	V_{O-L}	$V_{CC} = 9\text{ V}$	—	—	1.0	mV[rms]
Common mode rejection ratio	V_{O-CM}	$V_{CC} = 9\text{ V}$	—	—	1.5	mV[rms]

Application Circuit Example

