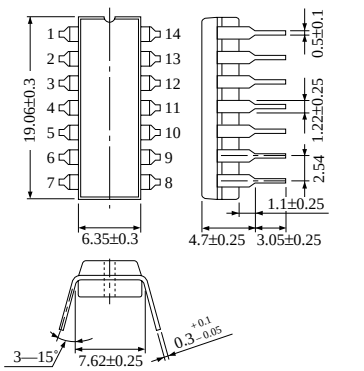
AN1339 (AN6912N), AN1339S

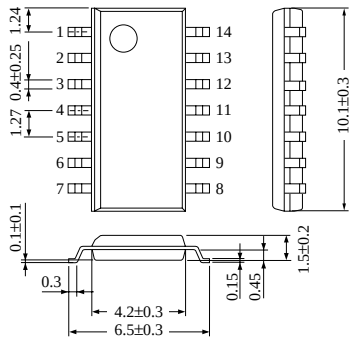
Quadruple Comparators

AN1339 (AN6912N) Unit:mm



14-pin DIL Plastic Package (DIP014-P-0300D)

AN1339S Unit:mm



14-pin PANAFLAT Plastic Package (SOP014-P-0225A)

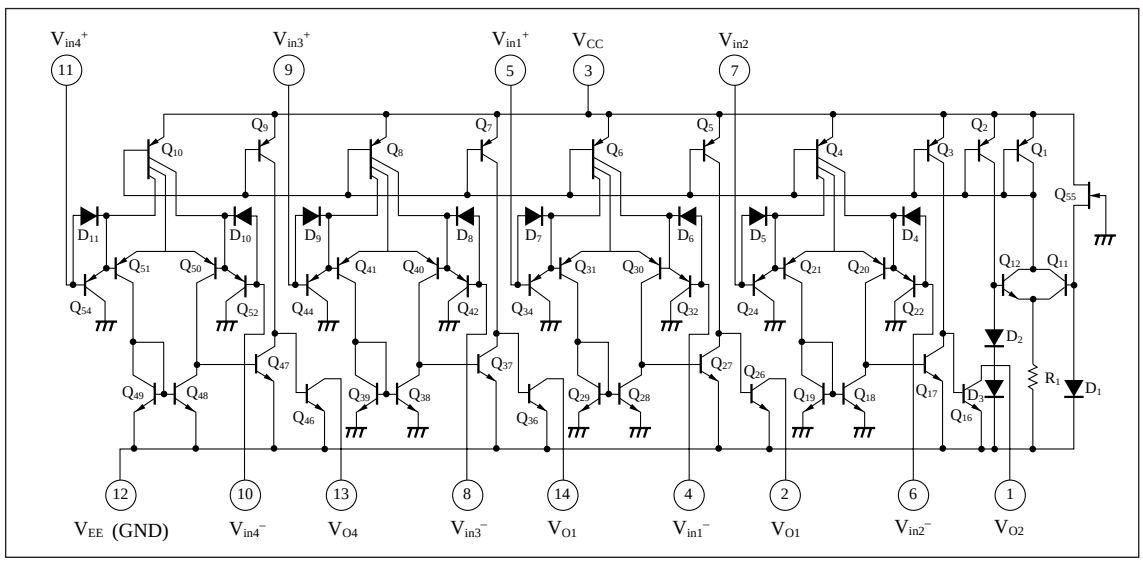
■ Overview

The AN1339 (AN6912N) and the AN1339S are quadruple (voltage) comparators with wide range of operating supply voltages.

■ Features

- Wide range of supply voltage
  Single supply:2 to 36V
  Dual supply:±1 to ±18V
- Low circuit current:0.8mA typ.
- Wide range of common-mode input voltages
  :0V to V_{CC}–1.5V (single supply)
- Open collector output

■ Block Diagram



■ Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Ch.2 output	8	Ch.3 inverting input
2	Ch.1 output	9	Ch.3 non inverting input
3	V_{CC}	10	Ch.4 inverting input
4	Ch.1 inverting input	11	Ch.4 non inverting input
5	Ch.1 non inverting input	12	V_{EE} (GND)
6	Ch.2 inverting input	13	Ch.4 output
7	Ch.2 non inverting input	14	Ch.3 output

■ Absolute Maximum Ratings (Ta=25˚C)

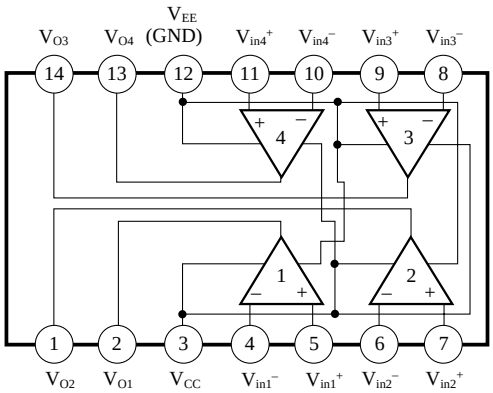
Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V_{CC}	36	V
	Common-mode input voltage	V_{ICM} *1	–0.3 to +36	V
	Differential input voltage	V_{ID} *2	36	V
Power dissipation	AN1339 (AN6912N)	P_D	570	mW
	AN1339S		380	
Operating ambient temperature		T_{opr}	–30 to +85	˚C
Storage temperature	AN1339 (AN6912N)	T_{stg}	–55 to +150	˚C
	AN1339S		–55 to +125	

*1 The common mode input voltage is a voltage applied to the non-inverting input pin and inverting input pin simultaneously.
*2 Differential input is equivalent to the potential difference between the non-inverting input pin and inverting input pin.

■ Electrical Characteristics (V_{CC}=5V, Ta=25±2˚C)

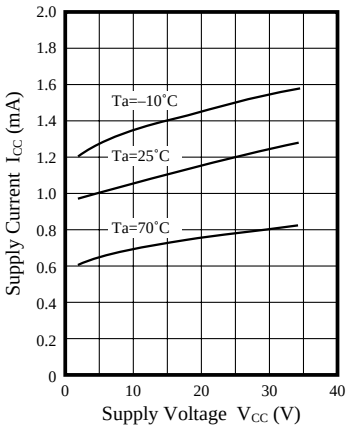
Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I\ (offset)}$		—	2	5	mV
Input offset current	I_{IO}		—	—	50	nA
Input bias current	I_{Bias}		—	—	250	nA
Voltage gain	G_V	R_L=15kΩ	—	200	—	V/mV
Common-mode input voltage range	V_{CM}		0	—	V_{CC}–1.5	V
Supply current	I_{CC}	R_L= ∞	—	1.1	2	mA
Response time	t_r	R_L=5.1kΩ, V_{RL}=5V	—	1.3	—	μs
Output sink current	I_{SINK}	V_{REF}=0V, V_{IN}=1V, V_O ≦1.5V	10	—	—	mA
Low-level output voltage	V_{OL}	V_{REF}=0V, V_{IN}=1V, I_{SINK}=3mA	—	0.2	0.4	V
Output terminal leakage current	$I_{O\ (Leak)}$	V_{IN}=0V, V_{REF}=1V, V_O=5V	—	0.1	—	nA

■ Block Diagram

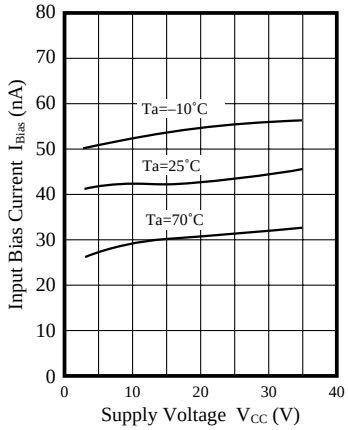


■ Characteristics Curve

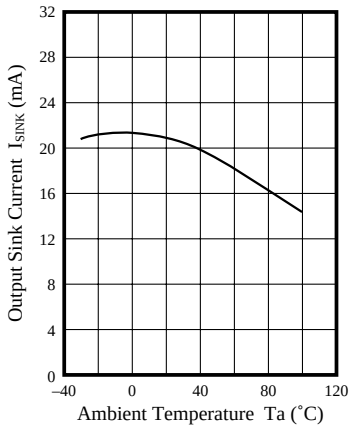
I_{CC}–V_{CC}



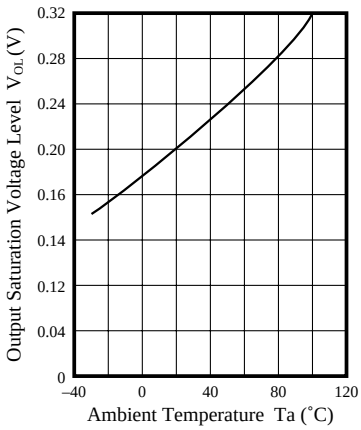
I_{Bias}–V_{CC}



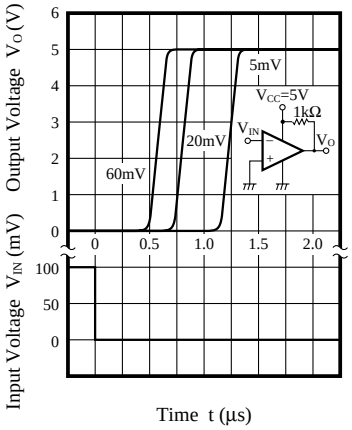
I_{SINK}–Ta



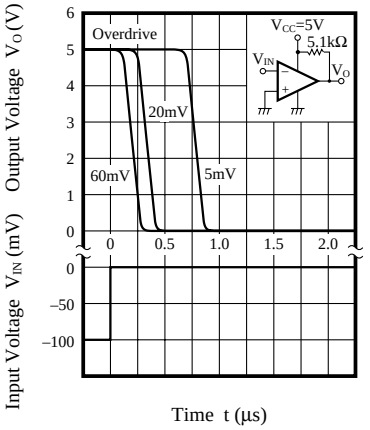
V_{OH}–Ta



Transfer Characteristics (1)



Transfer Characteristics (2)



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