QUAD DIFFERENTIAL COMPARATOR—YD339

DESCRIPTION AND FEATURES

The YD339 consists of four independent voltage comparators designed specifically to operate from a single power supply over a wide voltage range;

*Single or dual supply operation;

*Wide operating supply range (V_{CC}=2V~36V or ±1～±18V);

*Input common-mode voltage includes groud;

*Low supply current drain: I_{CC}=0.8mA (Typical);

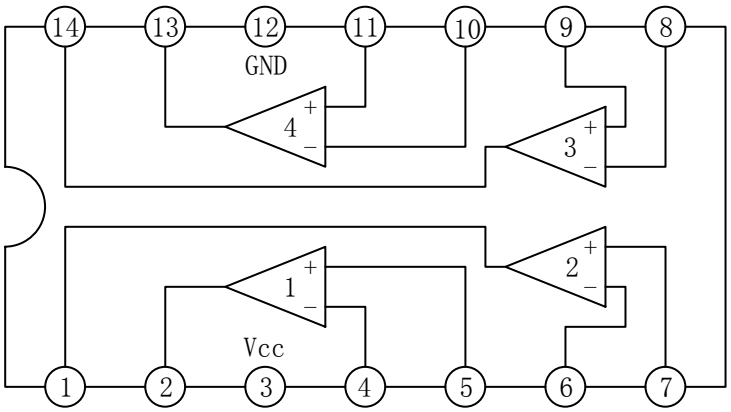
*Open collector output for wired and connection;

*Low input bias current Ibias=25nA(Typical);

*Low output saturation voltage;

*Output compatable with TTL, DTL, and CMOS logic system。

BLOCK DIAGRAM



WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China

Tel: 86-510-85205117 86-510-85205106 Fax: 86-510-85205110 Website: www.e-youda.com

SHENZHEN OFFICE Tel: 86-755-83740369 Fax: 86-755-83741418

ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_{CC}	±18 or 36	V
Differential Input Voltage	VID	±36	V
Input Voltage	VI	-0.3～36V	V
Power Dissipation(DIP14)	P_{D1}	625	mW
Power Dissipation(SOP14)	P_{D2}	300	mW
Operating Temperature	Topr	-40 ～ +85	℃
Storage Temperature	Tstg	-55 ～+125	℃

ELECTRICAL CHARACTERISTICS

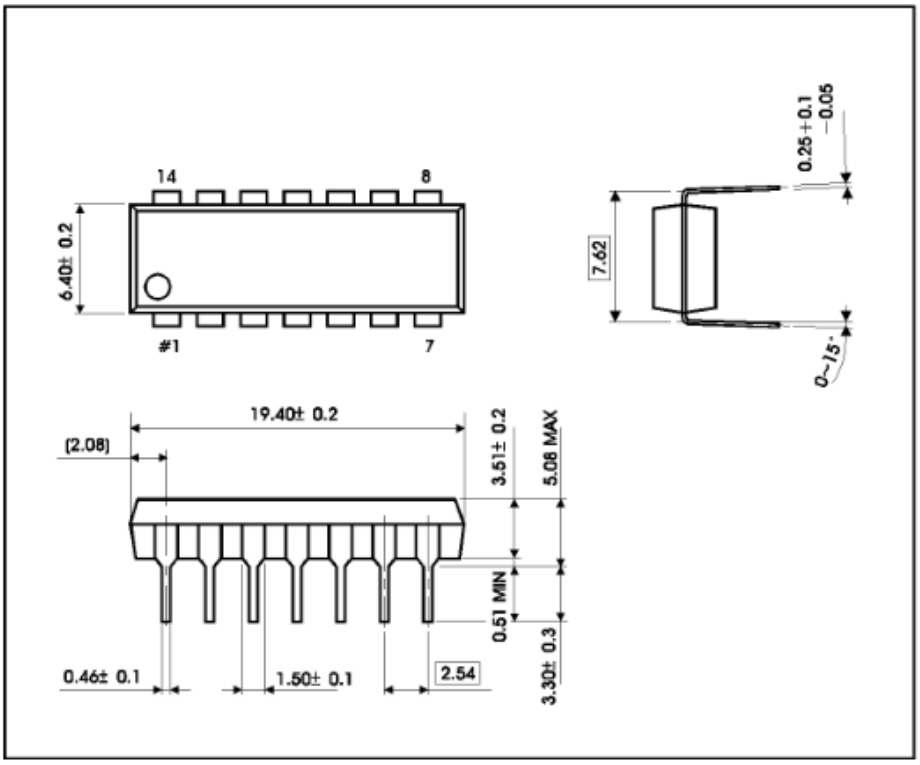
(V_{CC}=5.0V, Tamb=25℃, All voltage referenced to GND unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	V_{CM}=0 to V_{CC}-1.5 $V_{O(P)}$=1.4V, Rs=0		±1.5	±5.0	mV
Input Offset Current	I_{IO}			±2.3	±50	nA
Input Bias Current	Ib			57	250	nA
Input Common-mode Voltage	$V_{I(R)}$		0		V_{CC}-1.5	V
Supply Current	I_{CC}	R_L=∞		1.1	2.0	mA
Large Signal Voltage Gain	G_V	V_{CC}=15V, R_L＞15k		200		V/mV
Large Signal Response Time	tres	Vi=TTL logic wing Vref=1.4V, V_{RL}=5V, R_L=5.1k		350		ns
Response Time	tres	V_{RL}=5V, R_L=5.1kΩ		1400		ns
Output Sink Current	lsink	Vi(-)＞1V, Vi(+)=0V, Vo(p)＜1.5V	6	18		mA

OUTLINE DRAWING

DIP-14

unit:mm



SOP-14

unit:mm