QUAD DIFFERENTIAL COMPARATOR—YD393

DESCRIPTION

The YD393 consists of two independent voltage comparators designed specifically to operate from a single power supply over a wide voltage range

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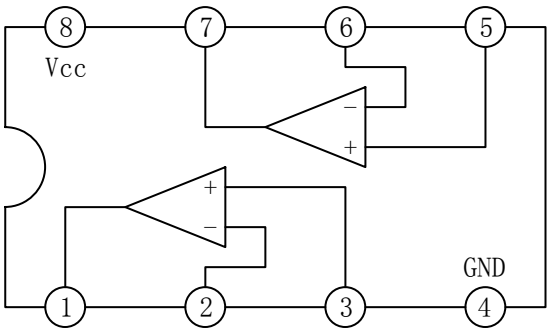
FEATURES

*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)；
*Low input bias current Ibias=25nA(Typical)；
*Output compatable with TTL, DTL, and CMOS logic system；
**Package Outline : DIP8, SOP8。

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

characteristic	symbol	value	Unit
Supply Voltage	V_{CC}	±18 or 36	V
Differential input voltage	V_{ID}	36	V
Input Voltage	V_I	-0.3～36V	V
Power Dissipation	Pd	570	mW
Operating Temperature	Topr	0 to +70	℃
Storage Temperature	Tstg	-55 to 150	℃

ELECTRICAL CHARACTERISTICS

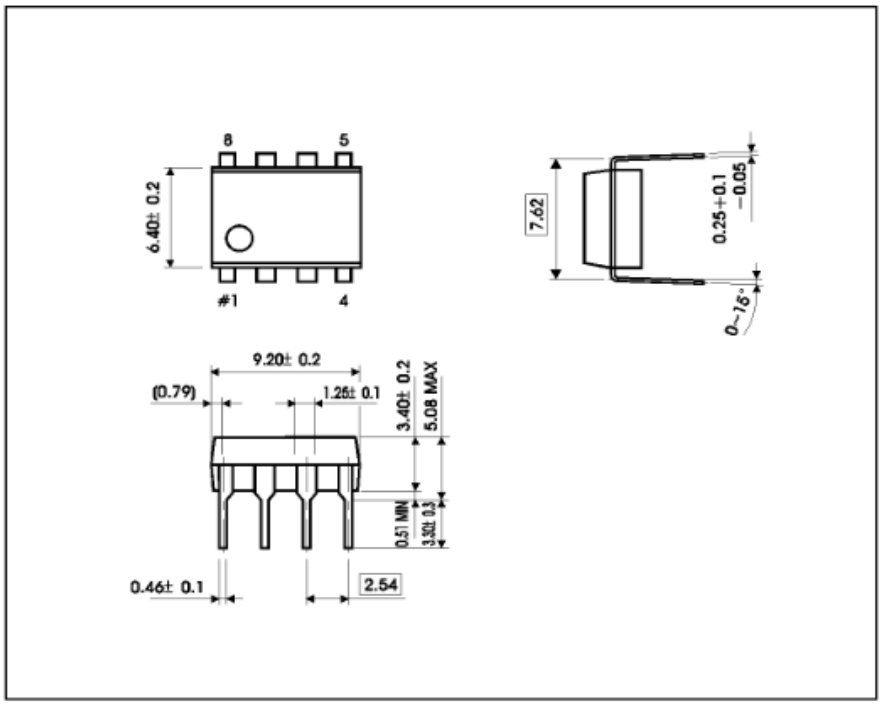
(V_{CC}=5.0V, Tamb=25℃, All voltage referenced to GND unless otherwise specified)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Input offset voltage	V_{IO}	V_{CM}=0 to V_{CC}-1.5 $V_{O(P)}$=1.4V, Rs=0		±1.0	±5.0	mV
Input offset current	I_{IO}			±5	±50	nA
Input Bias current	Ib			65	250	nA
Input Common-mode voltage	$V_{I(R)}$		0		V_{CC}-1.5	V
Supply Current	I_{CC}	R_L=∞		0.6	1.0	mA
		R_L=∞, V_{CC}=30V		0.8	2.5	mA
Large signal Voltage gain	G_V	V_{CC}=15V, R_L＞15kΩ	50	200		V/mV
Large signal response time	tres	Vi=TTL logic wing Vref=1.4V,V_{RL}=5V, R_L=5.1kΩ		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
Output saturation voltage	Vsat	Vi(-)＞1V, Vi(+)=0V, lsink=4mA	160			mV
Output leakage current	lıeakage	V_I(+)=1V, V_I(-)=0, Vo(p)=5V	0.10			nA

OUTLINE DRAWING

DIP-8

unit:mm



SOP-8

unit:mm