

GENERAL DESCRIPTION

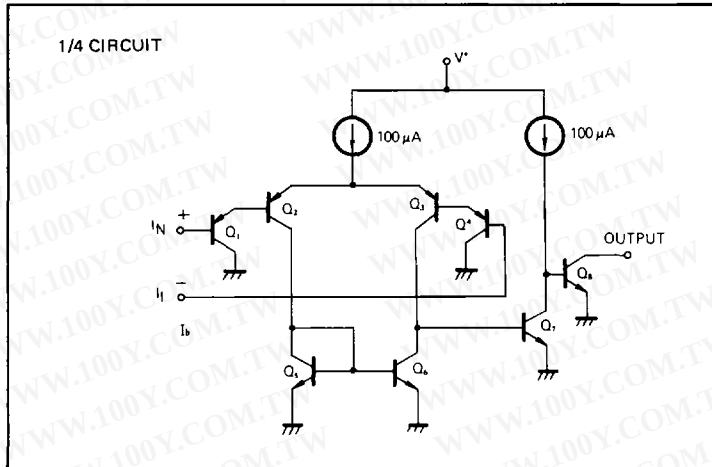
The μPC177/339 are quad comparators which are designed to operate from a single power supply over a wide range of voltages. Operation from split power supplies, is also possible and the power supply current drain is very low. Further advantage, the input common-mode voltage includes ground, even though operated from a single power supply voltage.

Two kinds of ICs are available according to reliability, the μPC177 for industry, the μPC339 for commercial.

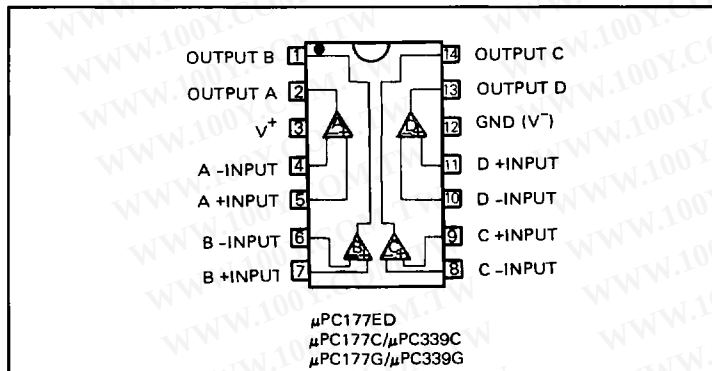
FEATURES

- Input Common-Mode Voltage Range Includes Ground
- Wide Power Supply Range
Single Supply 2 V to 36 V DC
Dual Supplies ±1 V to ±18 V DC
- Low Power Consumption
- Compatible with All Forms Logic
- Open Collector Output
- LM339 Direct Replacement

EQUIVALENT CIRCUIT



CONNECTION DIAGRAM (Top View)



ORDERING INFORMATION

μPC177ED 14 pin Ceramic DIP (Dual In-Line Package)
μPC177C/μPC339C 14 pin Plastic Molded DIP (Dual In-Line Package)
μPC177G/μPC339G 14 pin Plastic Molded Flat Package (MINI FLAT IC)

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-34970699
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

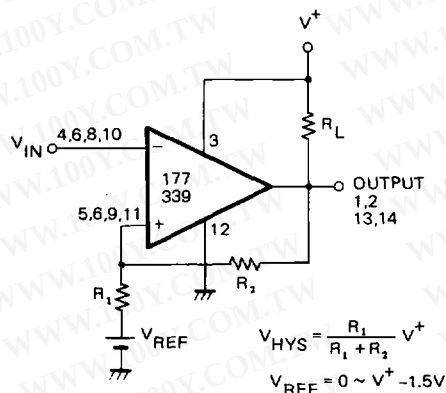
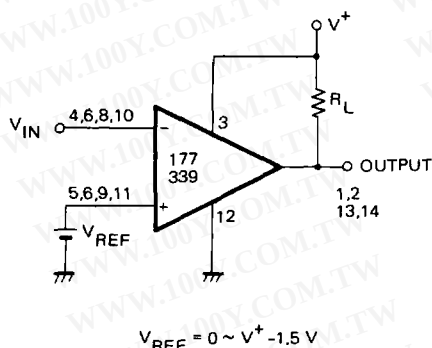
PARAMETER		μPC177	μPC339	UNIT
Voltage between V ⁺ and V ⁻		36	36	V
Differential Input Voltage		36	36	V
Common Mode Input Voltage		-0.3 to +36	-0.3 to +36	V
Power Dissipation *	D Package	900	—	
	C Package	570	570	mW
	G Package	550	550	
Output Short Circuit to Ground		Indefinite	Indefinite	s
Operating Temperature Range	D Package	-20 to +80	—	°C
	C or G Package	-20 to +70	0 to +70	
Storage Temperature Range	D Package	-20 to +80	—	°C
	C or G Package	-55 to +125	-55 to +125	

* See thermal information in chapter 11.

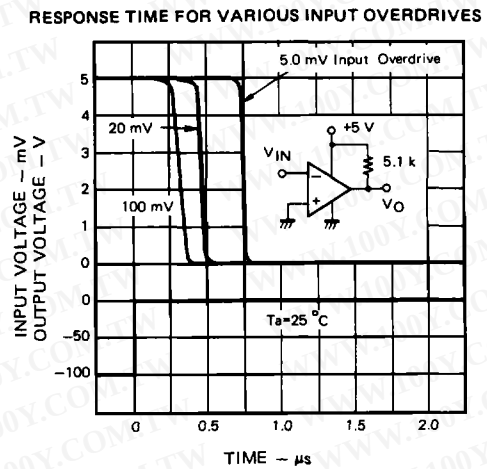
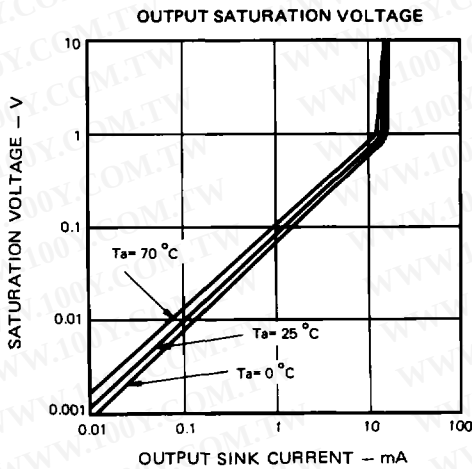
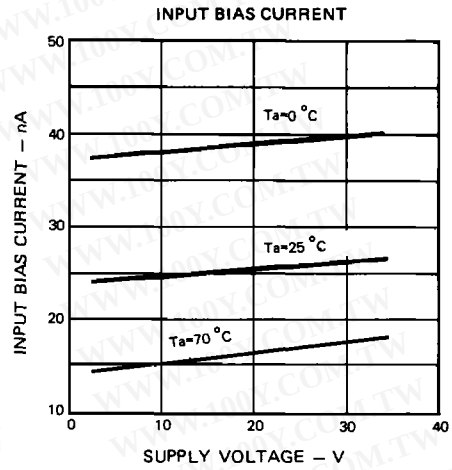
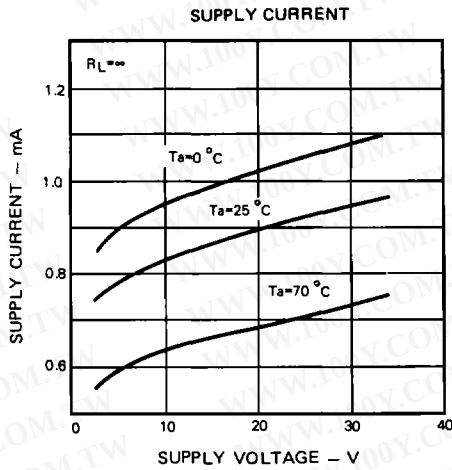
ELECTRICAL CHARACTERISTICS (Ta = 25°C, V⁺ = 5 V)

CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Input Offset Voltage		2	5	mV	V _o = 1.4 V, V _{REF} = 1.4 V, R _s = 0 Ω
Input Bias Current		25	250	nA	V _o ≈ 1.4 V
Input Offset Current		5	50	nA	V _o ≈ 1.4 V
Common Mode Input Voltage Range	0		V ⁺ - 1.5	V	
Supply Current		0.8	2	mA	R _L = ∞
Voltage Gain		200		V/mV	R _L = 15 kΩ
Large Signal Response Time		1.3		μs	R _L = 5.1 kΩ, V _{RL} = 5V
Output Sing Current	6	16		mA	V _{IN(-)} = 1 V, V _{IN(+)} = 0 V, V _o ≤ 1.5 V
Saturation Voltage		0.2	0.4	V	V _{IN(-)} = 1 V, V _{IN(+)} = 0V, I _{sink} = 3 mA
Output Leakage Current		0.1		nA	V _{IN(+)} = 1 V, V _{IN(-)} = 0 V, V _o = 5 V

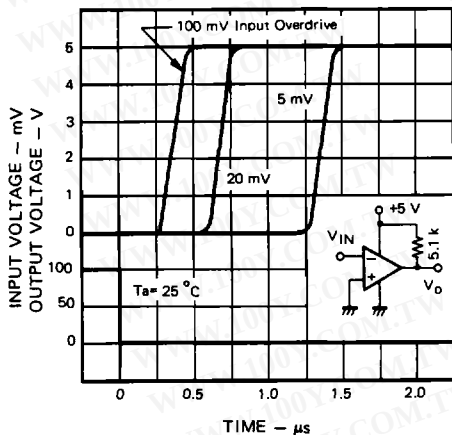
TYPICAL APPLICATIONS



TYPICAL PERFORMANCE CHARACTERISTICS (Ta=25 °C)



RESPONSE TIME FOR VARIOUS INPUT OVERDRIVES



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