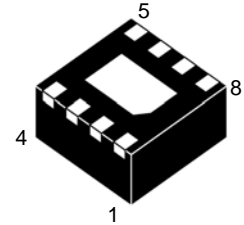


DUAL VOLTAGE COMPARATORS

Description

This device consists of two independent voltage comparators that are designed to operate from a single power supply over a wide range of voltage. Normal operation from dual supplies is also guaranteed over a voltage range from 2V to 36V.

V_{CC} is necessary at least 1.5 volts more than the input common mode voltage. The output can be connected to other open collector outputs to achieve a Wired-OR relationship.

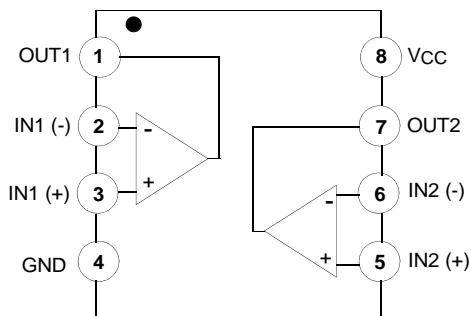


DFN22-8L

Features

- Be Possible to Operate at the Wide Range Single or Two Supply Voltage.
- Low Supply Current : $I_{CC}=0.8\text{mA(Typ.)}$.
- Low Input Offset Voltage : $V_{IO}=2\text{mV(Typ.)}$.
- Wide Common Mode Input Voltage : $0V_{DC}$ to $V_{CC}-1.5V_{DC}$
- Output is Compatible with TTL, DTL, MOS and C-MOS.
- Low Output Saturation Voltage

Pin Connection (Top View)



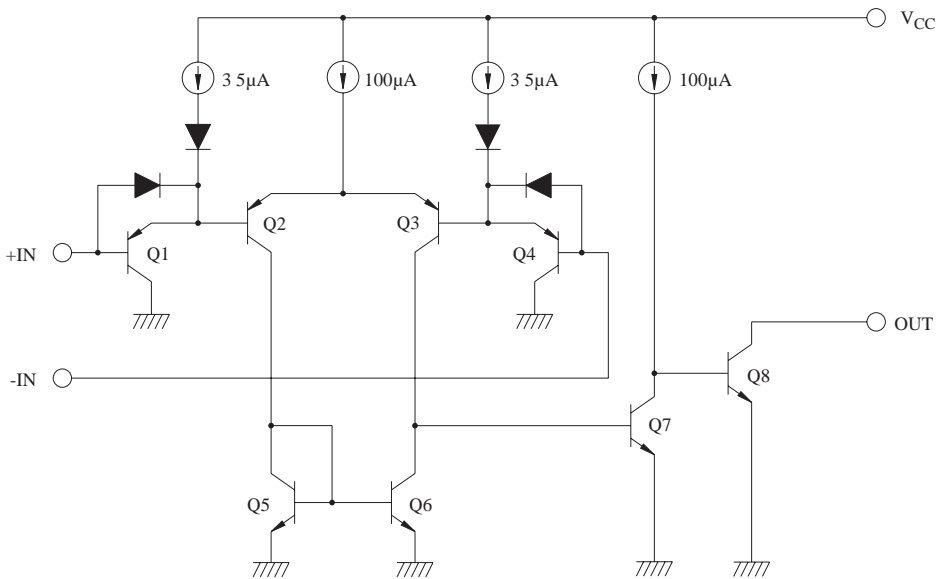
Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	$\pm 18, 36$	V
Differential Input Voltage	DV_{IN}	$\pm 18, 36$	V
Common Mode Input Voltage	CMV_{IN}	$-0.3 \sim V_{CC}$	V
Thermal resistance junction to ambient	R_{thja}	57	$^\circ\text{C/W}$
Operating Temperature	T_{opr}	$-40 \sim 85$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-65 \sim 150$	$^\circ\text{C}$
HBM: human body model	V_{ESD}	500 ~ 1000	V
MM: machine model		100 ~ 200	V
CDM: charged device model		1.5	kV

Electrical Characteristics ($V_{CC}=5V$, $V_{EE}=GND$, $T_a=25^\circ C$)

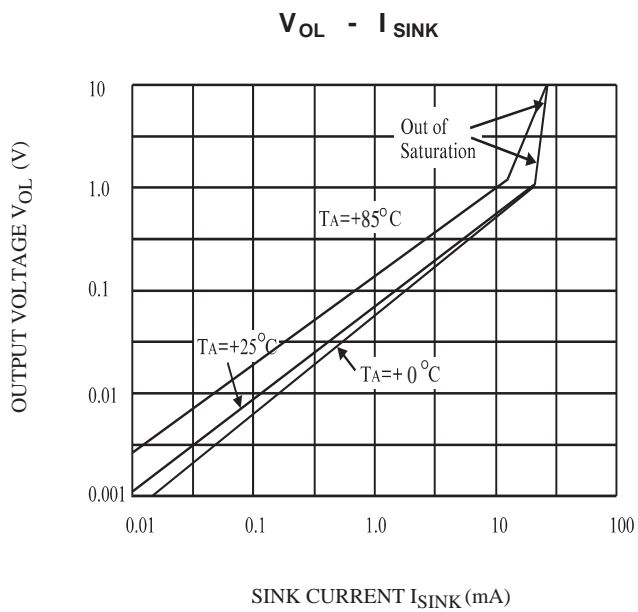
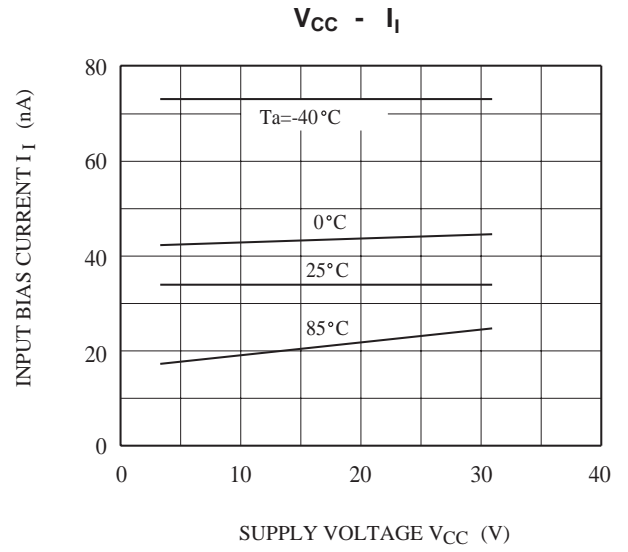
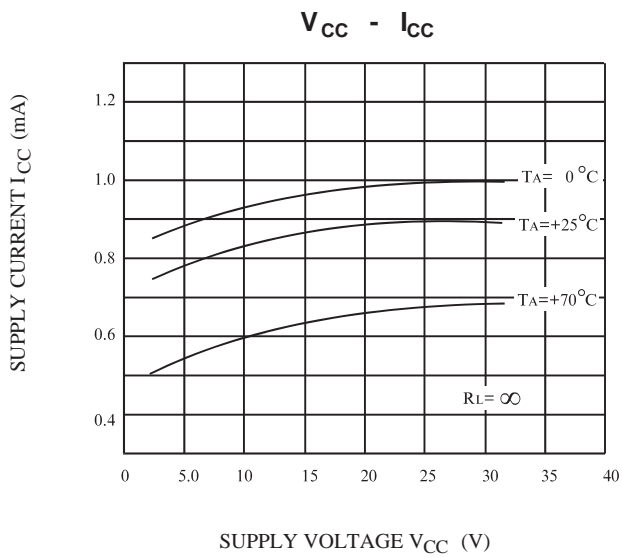
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	$V_O=1.4V$	-	-	5	mV
Input Offset Current	I_{IO}	-	-	-	50	nA
Input Bias Current	I_I	-	-	-	250	nA
Common Mode Input Voltage	CMV_{IN}	-	0	-	$V_{CC}-1.5$	V
Voltage Gain	G_V	$R_L=15k\Omega$, $V_{CC}=15V$	-	200	-	V/mV
Supply Current	I_{CC}	No load	-	-	1	mA
Sink Current	I_{sink}	+IN=0V, -IN=1V, $V_{OL}=1.5V$	6	16	-	mA
Output Voltage ("L" Level)	V_{OL}	+IN=0V, -IN=1V, $I_{sink}=3mA$	-	-	0.7	V
Output Leak Current	I_{LEAK}	+IN=1V, -IN=0V, $V_O=5V$	-	0.1	-	nA
Response Time	t_{rsp}	$R_L=5.1k\Omega$, $C_L=15pF$	-	1.3	-	μs

EQUIVALENT CIRCUIT

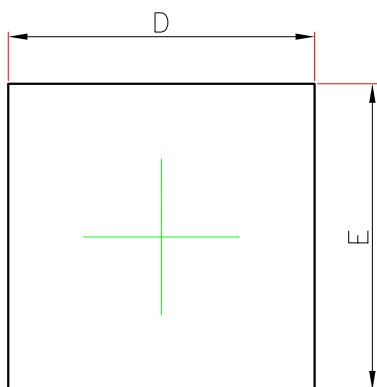




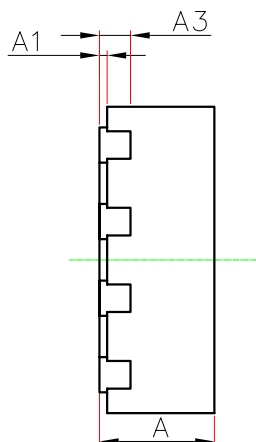
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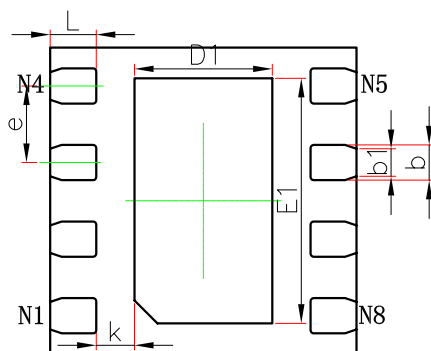
DFN22-8L PACKAGE OUTLINE DIMENSIONS



TOP VIEW



SIDE VIEW



BOTTOM VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.800	1.000	0.031	0.039
E1	1.500	1.700	0.059	0.067
k	0.250 REF.		0.010REF.	
b	0.200	0.300	0.008	0.012
b1	0.180REF.		0.007REF.	
e	0.500BSC.		0.020BSC.	
L	0.224	0.376	0.009	0.015