

SANYO

No. 1103B

LA6393M**High-Performance Dual Comparator**

The LA6393M is a high-performance dual comparator that is capable of operating from a single power supply over a wide range of 2V to 36V. Because of its excellent input characteristics and low power, it can be very conveniently applied to multisignal parallel comparator circuits that require high-density assembly.

Features

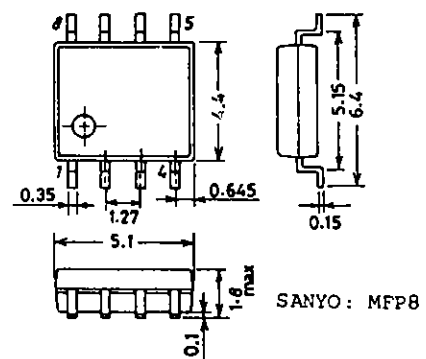
- Wide supply voltage range (Single supply: 2.0 to 36.0V, dual supplies: ± 1.0 to 18.0V)
- Wide common-mode input voltage range (0 to $V_{CC}-1.5V$)
- Open collector output enabling wired OR
- Small current dissipation (0.6mA) and low power
- Mini flat package enabling compactness of sets

Maximum Ratings/ $T_a=25^\circ C$

			unit
Maximum power supply voltage	V_{CC} max	36	V
Differential input voltage	V_{ID}	36	V
Common-mode input voltage range	V_{ICM}	$-0.3 \sim +36$	V
Allowable power dissipation	P_d max	300	mW
Operating temperature	T_{opr}	$-30 \sim +85$	$^\circ C$
Storage temperature	T_{stg}	$-55 \sim +125$	$^\circ C$

Operating Characteristics/ $T_a=25^\circ C, V_{CC}=5V$

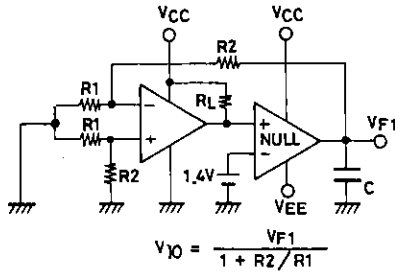
		Test Circuit	Test			unit
			min	typ	max	
Input offset voltage	V_{IO}	1		± 1	± 5	mV
Input offset current	I_{IO}	2		± 5	± 50	nA
Input bias current	I_B	3		25	250	nA
Common-mode input voltage range	V_{ICM}		0	$V_{CC}-1.5$		V
Current dissipation	I_{CC} $R_L = \infty$	4		0.6	1	mA
Voltage gain	V_G $R_L = 15k\Omega$	5		200		V/mV
Response time	$V_{RL} = 5V, R_L = 5.1k\Omega$	6		1.3		μs
Output sink current	I_{SINK} $V_{IN-} = 1V, V_{IN+} = 0V, V_o \leq 1.5V$	7	6	16		mA
Output saturation voltage	V_{OL} $V_{IN-} = 1V, V_{IN+} = 0V, I_{SINK} \leq 3mA$	8		0.2	0.4	V
Output leak current	I_{LEAK} $V_{IN-} = 0V, V_{IN+} = 1V, V_o = 5V$	9		0.1		nA

Package Dimensions 3032B-M8IC
(unit: mm)

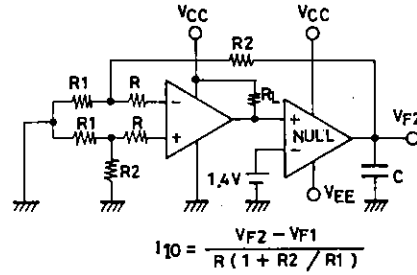
SANYO Electric Co., Ltd. Semiconductor Business Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

Test Circuits

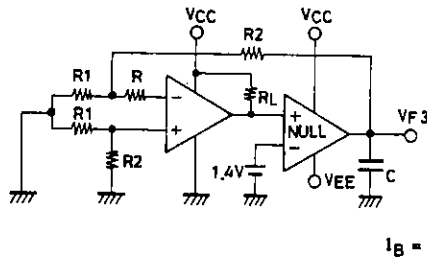
1. Input offset voltage



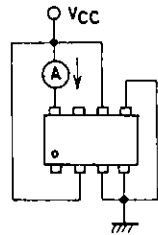
2. Input offset current



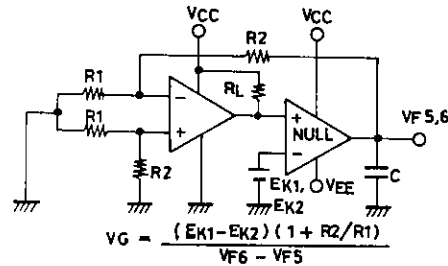
3. Input bias current



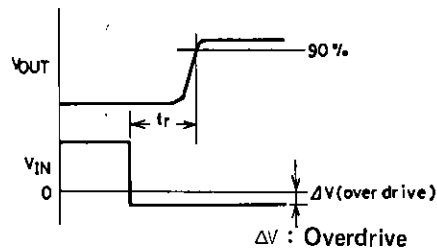
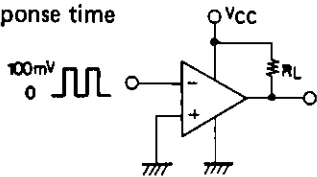
4. Current dissipation



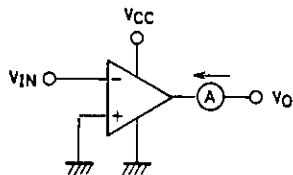
5. Voltage gain



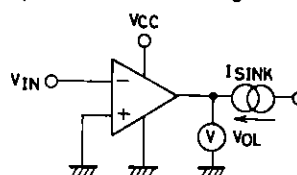
6. Response time



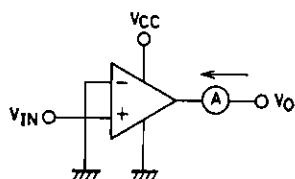
7. Output sink current



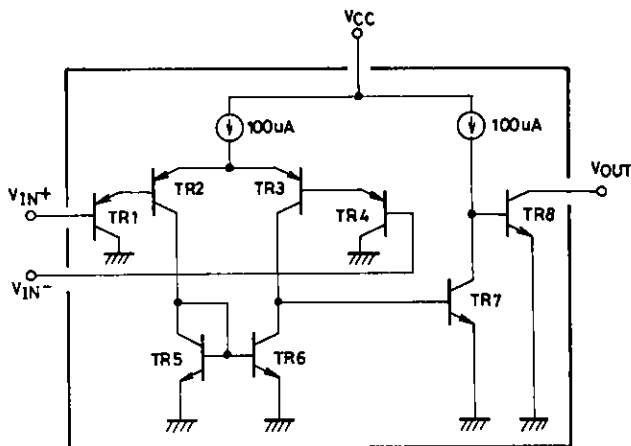
8. Output saturation voltage



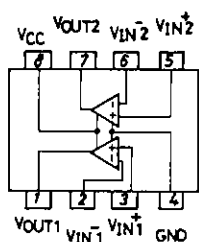
9. Output leak current



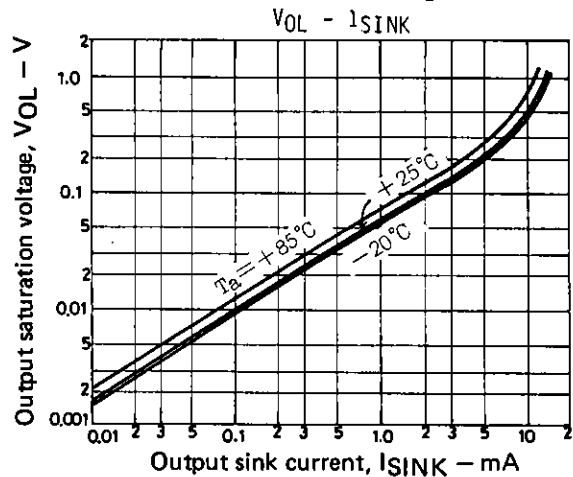
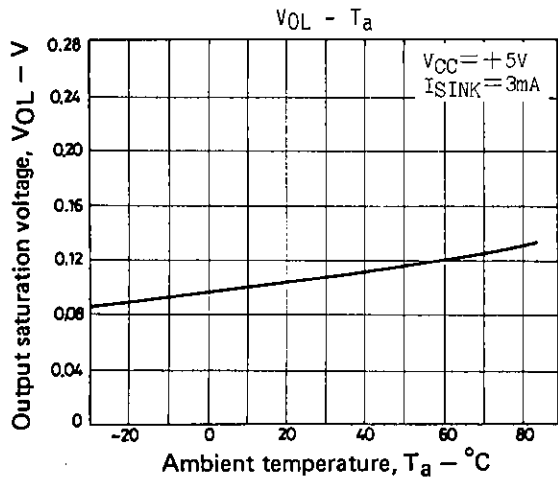
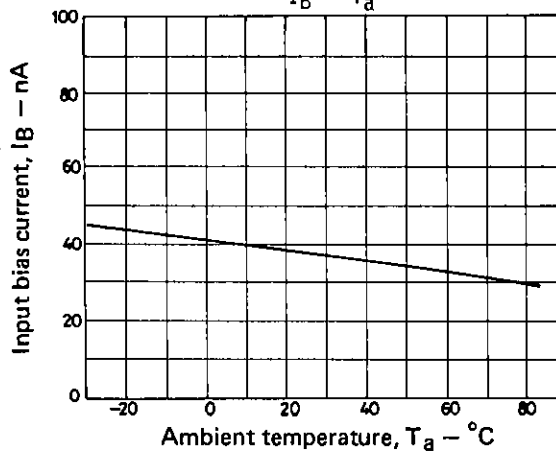
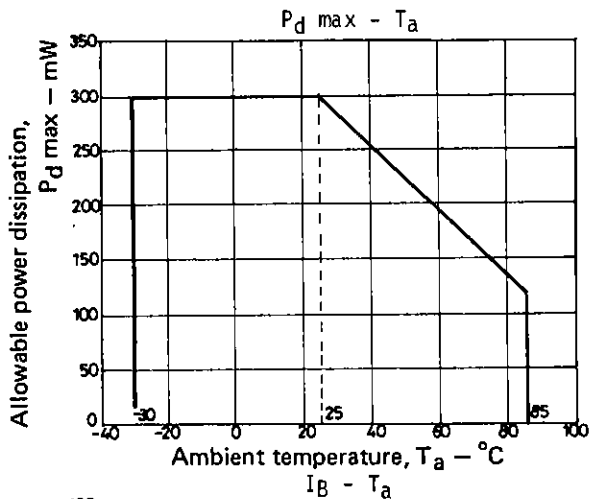
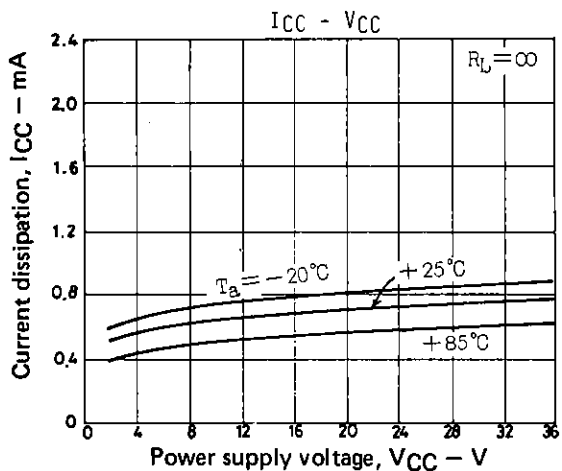
Equivalent Circuit

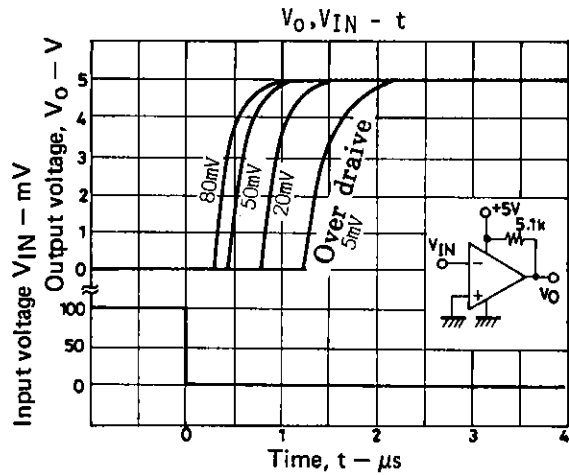
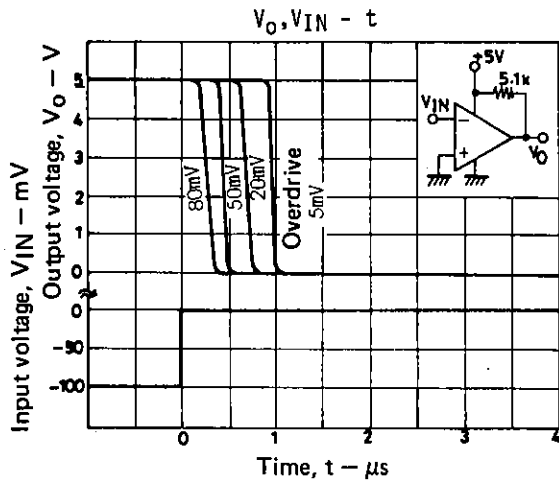


Pin Assignment

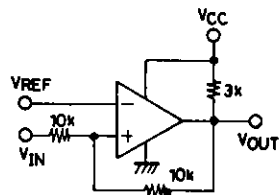


Main Characteristics

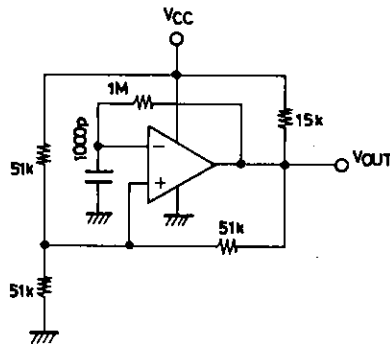




■ Sample Application Circuits



Voltage comparator (with hysteresis)



Square wave generator

Unit (resistance: Ω, capacitance: F)

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