

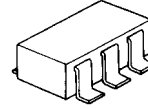
## SINGLE COMPARATOR

### ■ GENERAL DESCRIPTION

The NJM2406 is a single comparator of ultra miniature surface mount package.

The NJM2406 is suitable for small electronic equipments and hybrid circuits.

### ■ PACKAGE OUTLINE



NJM2406F

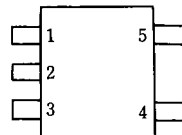


NNJM2406F3

### ■ FEATURES

- Operating Voltage ( 2.5V to 7V )
- Single Supply Operation
- Mounted in Ultra Miniature Package 2.0x1.25mm ( 1/8 of DMP8 package )
- Ground Shield Plate between +Input and Output
- Ground Shield Plate between +Input and -Input
- Suitable Pin Arrangement for Application
- Package Outline SOT-23-5, SC88A
- Bipolar Technology

### ■ PIN CONFIGURATION

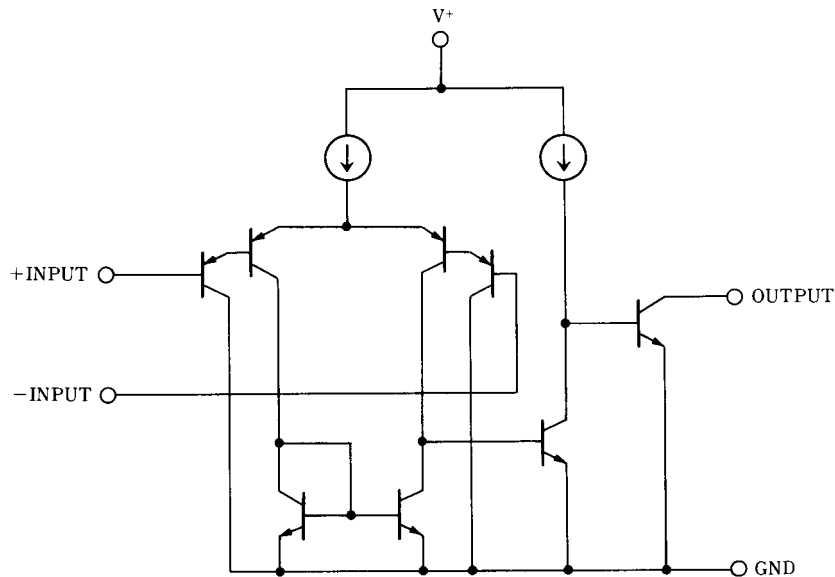


NJM2406F  
NJM2406F3

#### PIN FUNCTION

1. -INPUT
2. GND
3. +INPUT
4. OUTPUT
5.  $V^+$

### ■ EQUIVALENT CIRCUIT



# NJM2406

## ■ ABSOLUTE MAXIMUM RATINGS

( Ta=25°C )

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	7	V
Differential Input Voltage	V <sub>ID</sub>	7	V
Input Voltage	V <sub>IN</sub>	-0.3~7	V
Power Dissipation	P <sub>D</sub>	(SOT-23-5 ) 200 ( SC88A ) 250 ( note1 )	mW
Output to Negative Supply Voltage	V <sub>SUS</sub>	20	V
Operating Temperature Range	T <sub>opr</sub>	-40~+85	°C
Storage Temperature Range	T <sub>stg</sub>	-40~+125	°C

( note1 ) On glass epoxy board. ( 50x50x1.6mm )

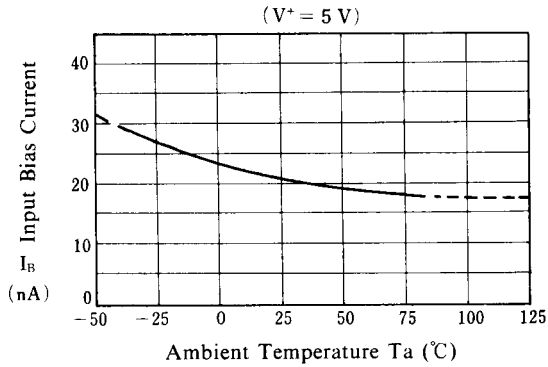
## ■ ELECTRICAL CHARACTERISTICS

( V<sup>+</sup>=5V, Ta=25°C )

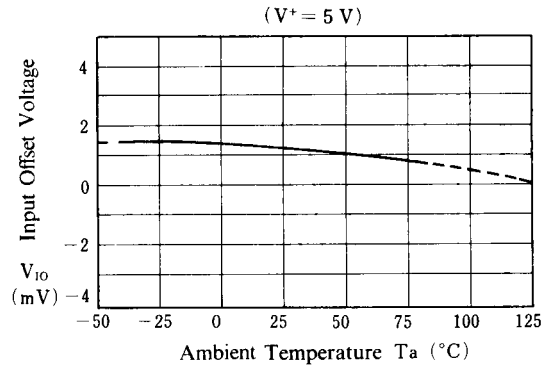
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V <sub>IO</sub>	R <sub>S</sub> =0Ω, V <sub>O</sub> =1.4V	-	1	7	mV
Input Offset Current	I <sub>IO</sub>		-	1	50	nA
Input Bias Current	I <sub>B</sub>		-	20	250	nA
Input Common Mode Voltage Range	V <sub>ICM</sub>		0~3.5	-	-	V
Large Signal Voltage Gain	A <sub>V</sub>	R <sub>L</sub> =15kΩ	-	106	-	dB
Response Time	t <sub>R</sub>	R <sub>L</sub> =5.1kΩ	-	1.5	-	μs
Output Sink Current	I <sub>SINK</sub>	V <sub>IN</sub> <sup>-</sup> =1V, V <sub>IN</sub> <sup>+</sup> =0V, V <sub>O</sub> =1.5V	6	-	-	mA
Output Saturation Voltage	V <sub>SAT</sub>	V <sub>IN</sub> <sup>-</sup> =1V, V <sub>IN</sub> <sup>+</sup> =0V, I <sub>SINK</sub> =5mA	-	300	500	mV
Output Leakage Current	I <sub>LEAK</sub>	V <sub>IN</sub> <sup>-</sup> =0V, V <sub>IN</sub> <sup>+</sup> =1V, V <sub>O</sub> =20V	-	-	1	μA
Operating Current	I <sub>CC</sub>		200	400	800	μA

## ■ TYPICAL CHARACTERISTICS

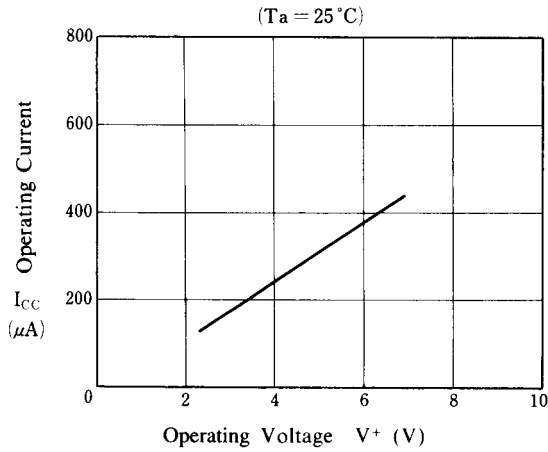
**Input Bias Current vs. Temperature**



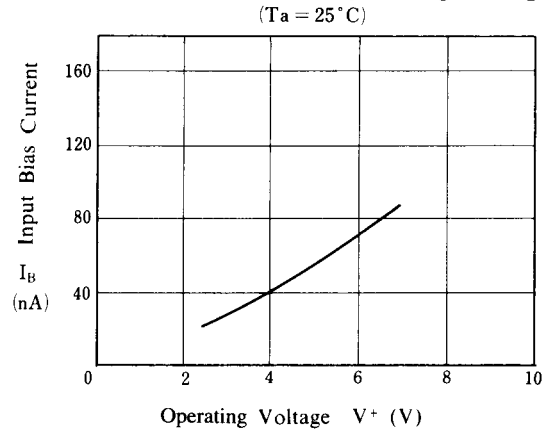
**Input Offset Voltage vs. Temperature**



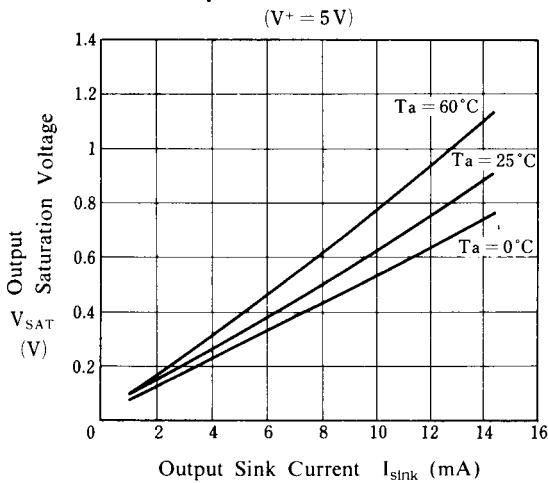
**Operating Current vs. Operating Voltage**



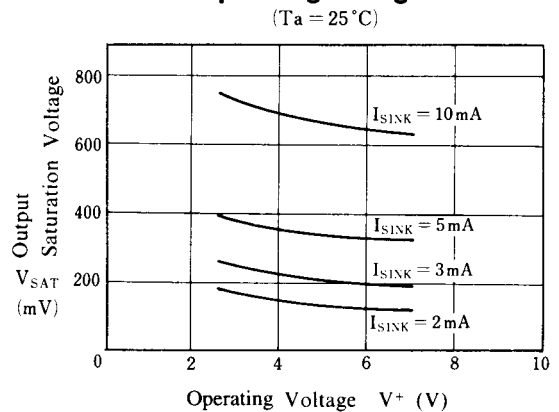
**Input Bias Current vs. Operating Voltage**



**Output Saturation Voltage vs. Output Sink Current**

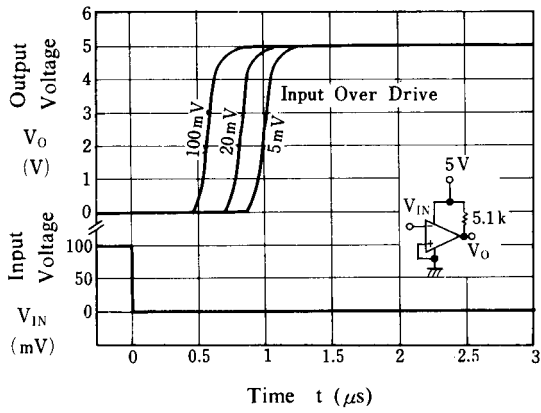


**Output Saturation Voltage vs. Operating Voltage**

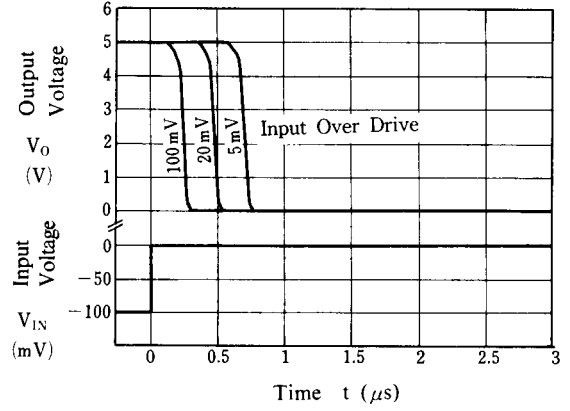


## ■ TYPICAL CHARACTERISTICS

**Response Time for Various Input Over Drives**  
( $T_a = 25^\circ\text{C}$ )



**Response Time for Various Input Over Drives**  
( $T_a = 25^\circ\text{C}$ )



**[CAUTION]**

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