

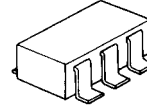
## SINGLE COMPARATOR

### ■ 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

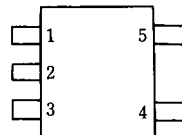


NNJM2406F3

### ■ FEATURES

- Operating Voltage (2.5V~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 MTP5,SC88A
- Bipolar Technology

### ■ PIN CONFIGURATION

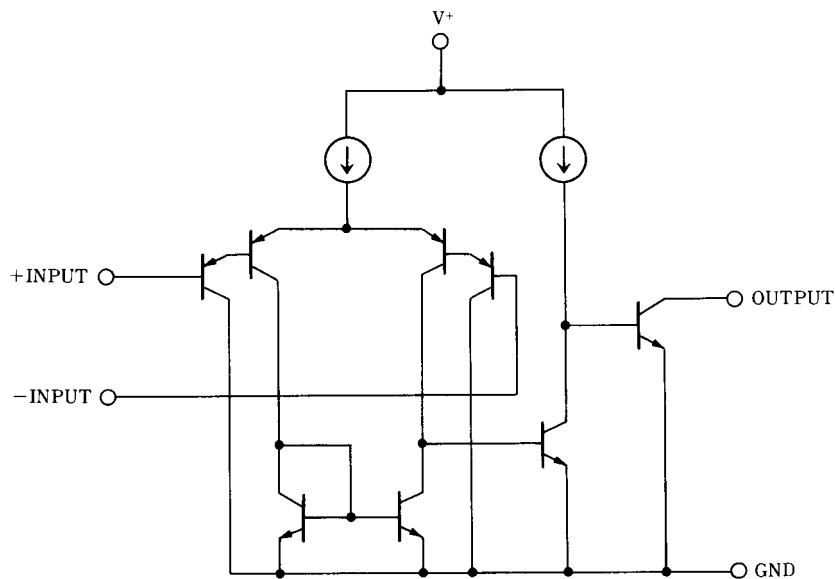


NJM2406F  
NJM2406F3

#### PIN FUNCTION

1. -INPUT
2. GND
3. +INPUT
4. OUTPUT
5. V<sup>+</sup>

### ■ EQUIVALENT CIRCUIT



# NJM2406

## ■ ABSOLUTE MAXIMUM RATINGS

( Ta=25°C )

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+$	7	V
Differential Input Voltage	$V_{ID}$	7	V
Input Voltage	$V_{IN}$	-0.3~7	V
Power Dissipation	$P_D$	( MTP5 ) 200 ( SC88A ) 250 ( note1 )	mW
Output to Negative Supply Voltage	$V_{SUS}$	20	V
Operating Temperature Range	$T_{opr}$	-40~+85	°C
Storage Temperature Range	$T_{stg}$	-40~+125	°C

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

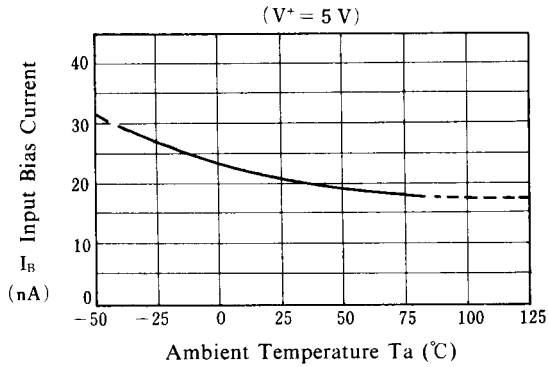
## ■ ELECTRICAL CHARACTERISTICS

(  $V^+=5V, Ta=25°C$  )

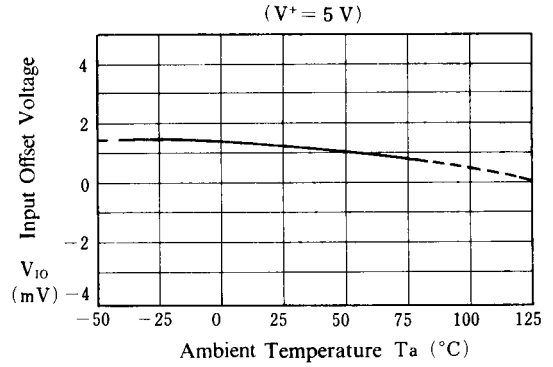
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	$V_{IO}$	$R_S=0\Omega, V_O=1.4V$	-	1	7	mV
Input Offset Current	$I_{IO}$		-	1	50	nA
Input Bias Current	$I_B$		-	20	250	nA
Input Common Mode Voltage Range	$V_{ICM}$		0~3.5	-	-	V
Large Signal Voltage Gain	$A_V$	$R_L=15k\Omega$	-	106	-	dB
Response Time	$t_R$	$R_L=5.1k\Omega$	-	1.5	-	$\mu s$
Output Sink Current	$I_{SINK}$	$V_{IN}^- = 1V, V_{IN}^+ = 0V, V_O = 1.5V$	6	-	-	mA
Output Saturation Voltage	$V_{SAT}$	$V_{IN}^- = 1V, V_{IN}^+ = 0V, I_{SINK} = 5mA$	-	300	500	mV
Output Leakage Current	$I_{LEAK}$	$V_{IN}^- = 0V, V_{IN}^+ = 1V, V_O = 20V$	-	-	1	$\mu A$
Operating Current	$I_{CC}$		200	400	800	$\mu A$

## ■ TYPICAL CHARACTERISTICS

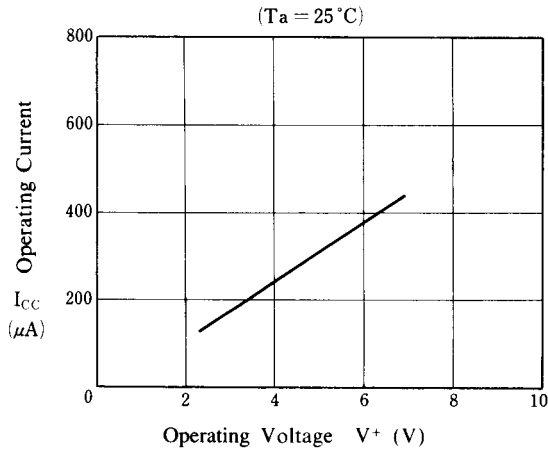
**Input Bias Current vs. Temperature**



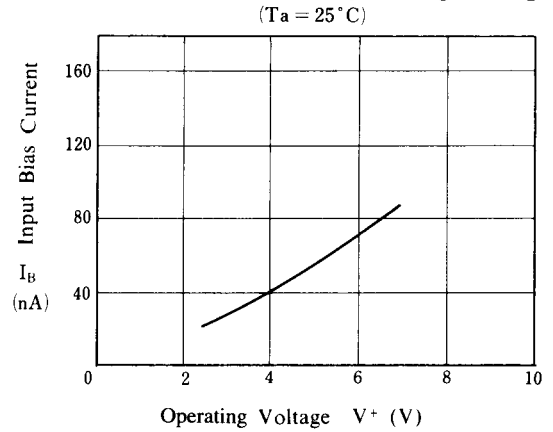
**Input Offset Voltage vs. Temperature**



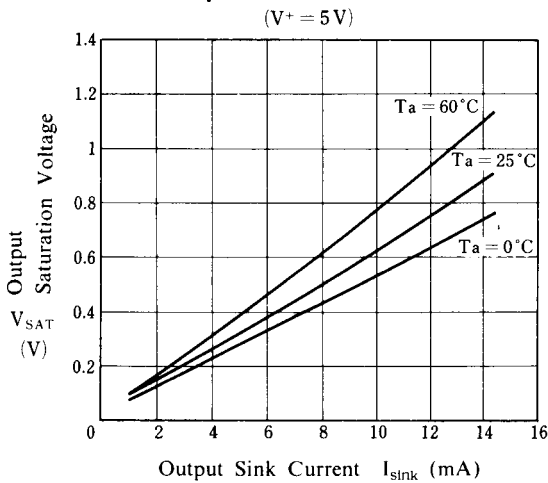
**Operating Current vs. Operating Voltage**



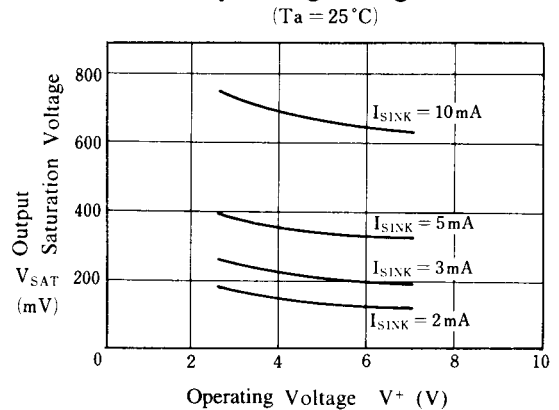
**Input Bias Current vs. Operating Voltage**



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



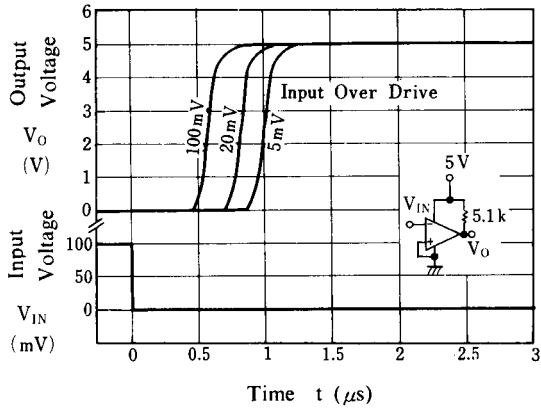
**Output Saturation Voltage vs. Operating Voltage**



## ■ TYPICAL CHARACTERISTICS

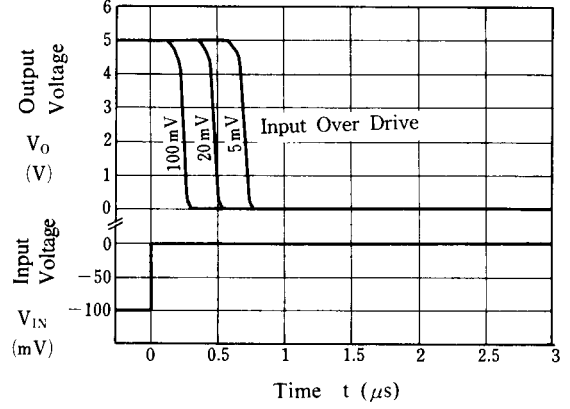
**Response Time for Various Input Over Drives**

( $T_a = 25^\circ\text{C}$ )



**Response Time for Various Input Over Drives**

( $T_a = 25^\circ\text{C}$ )



**[CAUTION]**

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