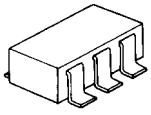
SINGLE COMPARATOR

■ 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



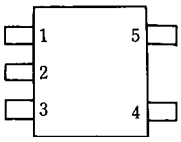
NJM2406F

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

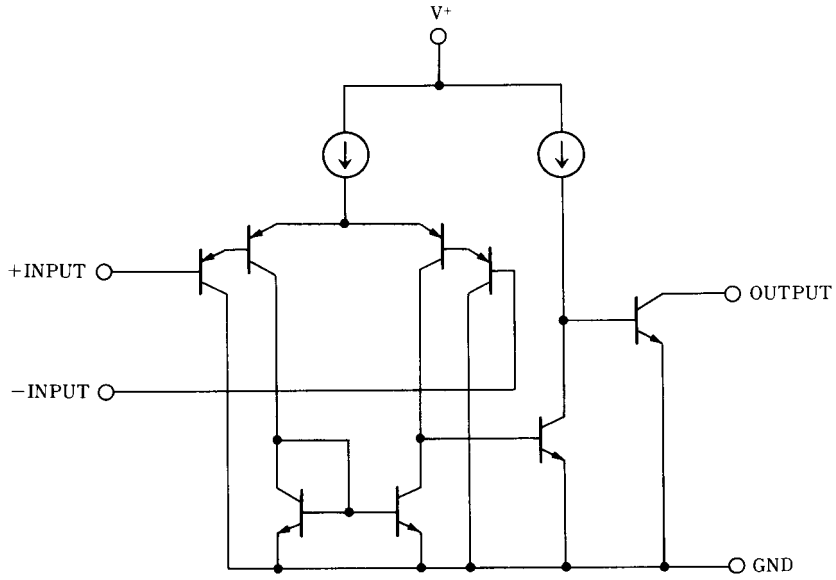


NJM2406F
NJM2406F3

PIN FUNCTION

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

■ EQUIVALENT CIRCUIT



■ 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	(SOT-23-5) 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

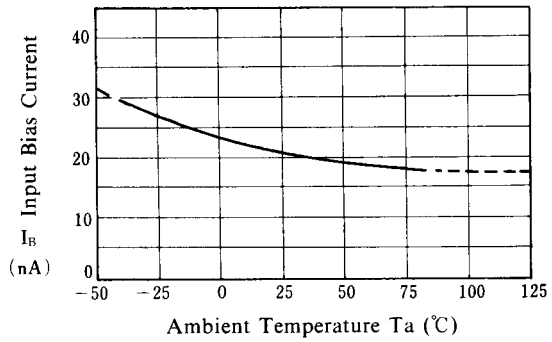
(V^+=5V,Ta=25˚C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	R_S=0Ω,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=15kΩ	-	106	-	dB
Response Time	t_R	R_L=5.1kΩ	-	1.5	-	µs
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	µA
Operating Current	I_{CC}		200	400	800	µA

■ TYPICAL CHARACTERISTICS

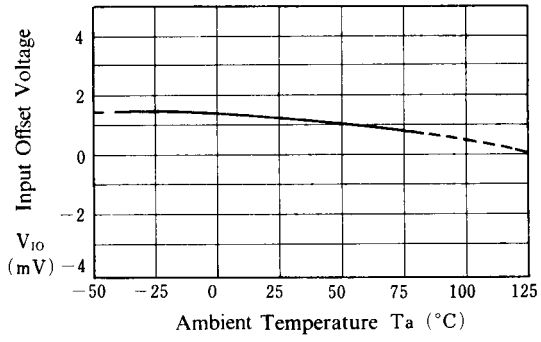
Input Bias Current vs. Temperature

($V^+ = 5$ V)



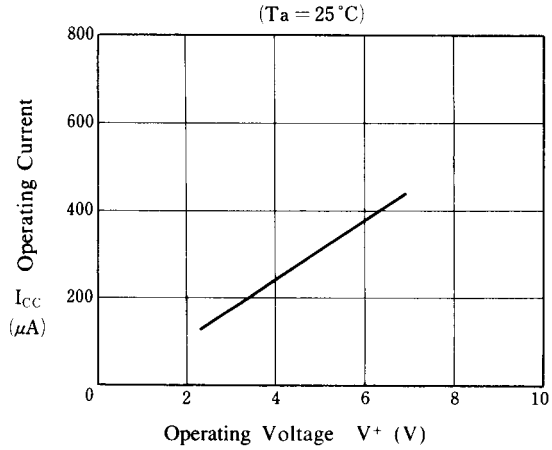
Input Offset Voltage vs. Temperature

($V^+ = 5$ V)



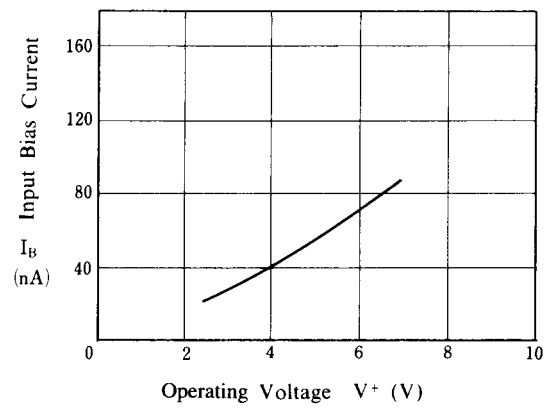
Operating Current vs. Operating Voltage

(Ta = 25°C)



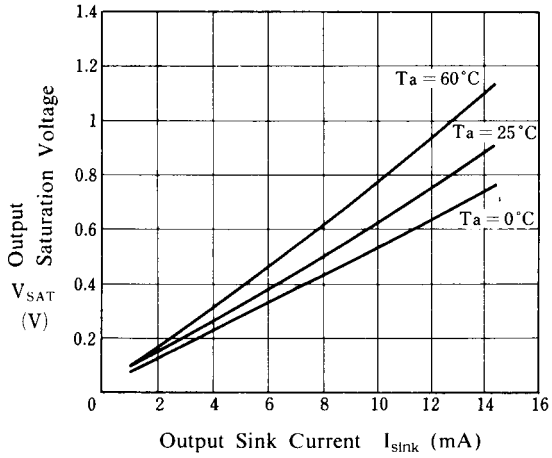
Input Bias Current vs. Operating Voltage

(Ta = 25°C)



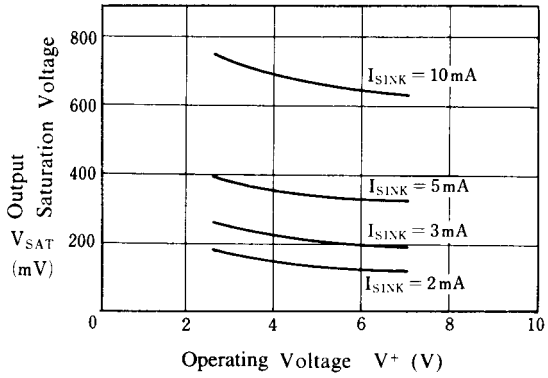
Output Saturation Voltage vs. Output Sink Current

($V^+ = 5$V)



Output Saturation Voltage vs. Operating Voltage

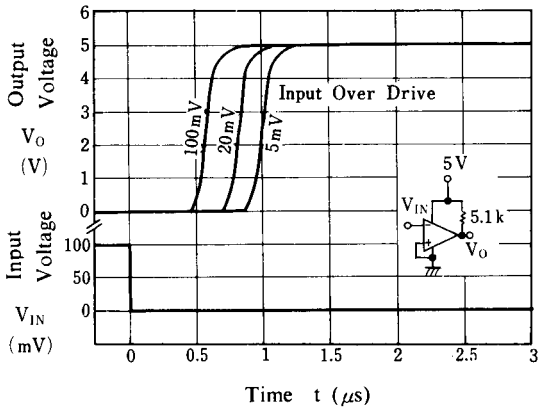
(Ta = 25°C)



■ TYPICAL CHARACTERISTICS

Response Time for Various Input Over Drives

(Ta = 25°C)



Response Time for Various Input Over Drives

(Ta = 25°C)