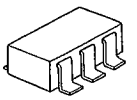
SINGLE COMPARATOR

■ GENERAL DESCRIPTION

The NJM2406F is a single comparator of ultra miniature surface mount package.

The NJM2406F is suitable for small electronic equipments and hybrid circuits.

■ PACKAGE OUTLINE

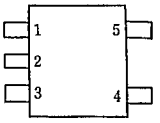


NJM2406F

■ FEATURES

- Operating Voltage (2.5V~7V)
- Single Supply Operation
- Mounted in Ultra Miniature Package 2.9×1.5mm (1/5 of DMP-8 package)
- Ground Shield Plate between + Input and Output
- Ground Shield Plate between + Input and - Input
- Suitable Pin Arrangement for Application
- Package Outline MTP5
- Bipolar Technology

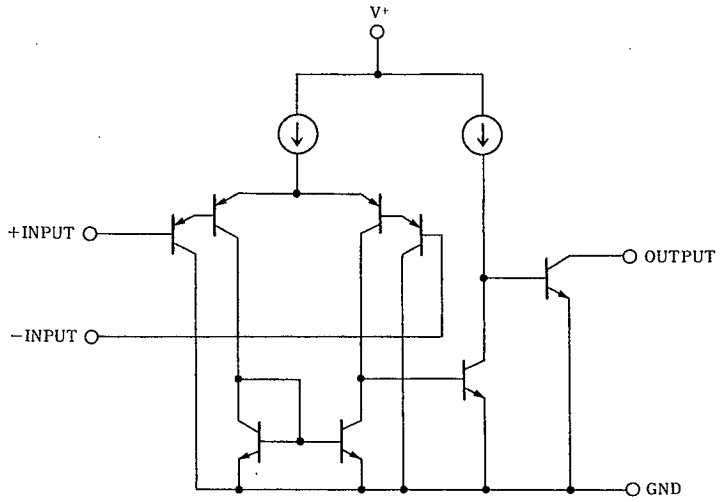
■ PIN CONFIGURATION



NJM2406F

PIN FUNCTION
1. −INPUT
2. GND
3. +INPUT
4. OUTPUT
5. V+

■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS

(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	7	V
Differential Input Voltage	V_{ID}	7	V
Input Voltage	V_{IN}	−0.3 to 7	V
Power Dissipation	P_D	200	mW
Output to Negative Supply Voltage	V_{SUS}	20	V
Operating Temperature Range	T_{OPR}	−40～+85	℃
Storage Temperature Range	T_{STG}	−40～+125	℃

■ ELECTRICAL CHARACTERISTICS

(V^+=5V, Ta=25℃)

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

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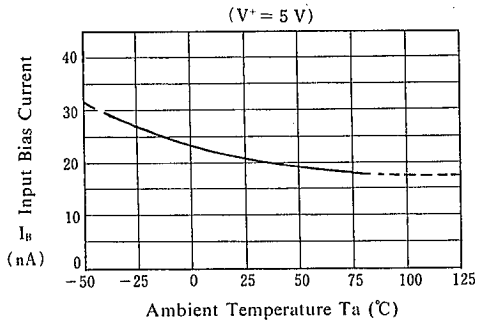
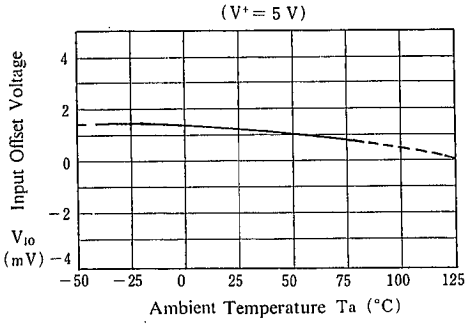
■ TYPICAL CHARACTERISTICS

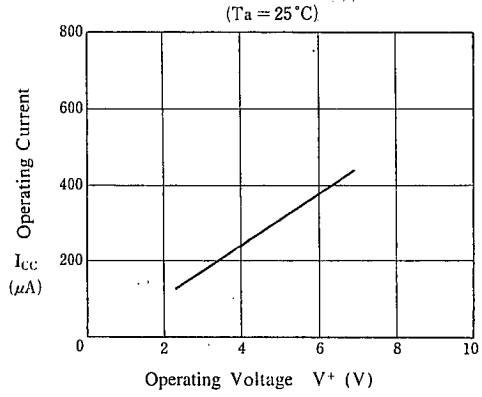
Input Bias Current vs. Temperature



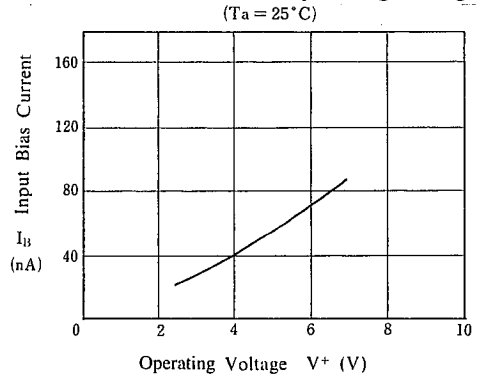
Input Offset Voltage vs. Temperature



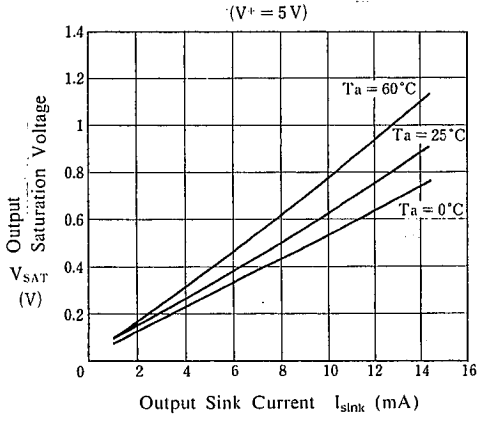
Operating Current vs. Operating Voltage



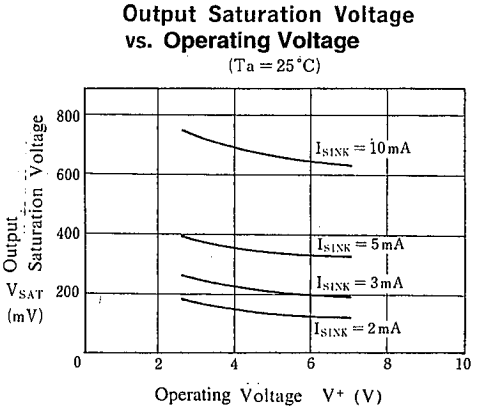
Input Bias Current vs. Operating Voltage



Output Saturation Voltage vs. Output Sink Current



Output Saturation Voltage vs. Operating Voltage



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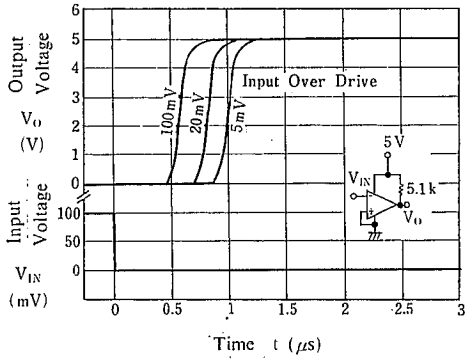
■ TYPICAL CHARACTERISTICS

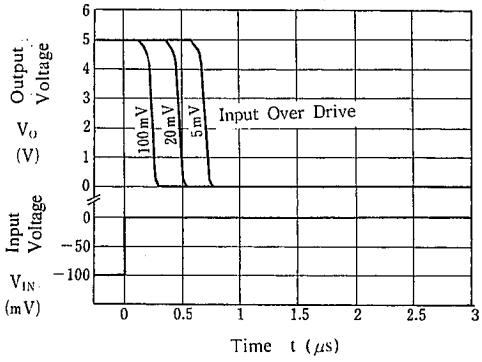
Response Time for Various Input Over Drives

(Ta = 25°C)



Response Time for Various Input Over Drives

(Ta = 25°C)



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