

**NJM 2404**

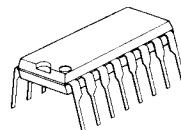
NJM2404 is 3/4 wired remote controller integrated circuit for tape player.

NJM2404 consist of the compartor for 3/4 wired with REF and the section which amplifier and rectifier P.B. Amp. output signal.

**■ Absolute Maximum Ratings (Ta=25°C)**

Supply Voltage	V <sup>+</sup>	12V
Input Voltage	V <sub>I</sub>	-0.3~+12V
Power Dissipation	P <sub>D</sub>	700mW
Operating Temperature Range	T <sub>opr</sub>	-20~+75°C
Storage Temperature Range	T <sub>stg</sub>	-40~+125°C

**■ Package Outline**



NJM 2404 D

**■ Electrical Characteristics**

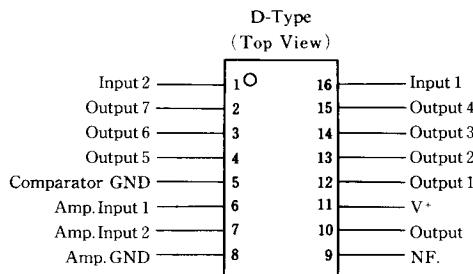
**Comparator Section (Ta=25°C, V<sup>+</sup>=10V)**

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Voltage1	V <sub>T1</sub>	R <sub>L</sub> =100kΩ, Output Pin 12, Input Pin 16	0.95	1.08	1.34	V
Threshold Voltage 2	V <sub>T2</sub>	R <sub>L</sub> =100kΩ, Output Pin 13, Input Pin 16	2.85	3.10	3.40	V
Threshold Voltage 3	V <sub>T3</sub>	R <sub>L</sub> =100kΩ, Output Pin 14, Input Pin 16	4.98	5.30	5.65	V
Threshold Voltage 4	V <sub>T4</sub>	R <sub>L</sub> =100kΩ, Output Pin 15, Input Pin 16	7.18	7.45	7.77	V
Threshold Voltage 5	V <sub>T5</sub>	R <sub>L</sub> =100kΩ, Output Pin 4, Input Pin 1	6.25	6.55	6.84	V
Threshold Voltage 6	V <sub>T6</sub>	R <sub>L</sub> =100kΩ, Output Pin 3, Input Pin 1	7.45	7.70	7.95	V
Threshold Voltage 7	V <sub>T7</sub>	R <sub>L</sub> =100kΩ, Output Pin 2, Input Pin 1	8.61	8.85	9.11	V
Hysteresis Voltage	V <sub>TH</sub>	V <sub>T</sub> (OFF→ON)-V <sub>T</sub> (ON→OFF)	—	0.2	0.4	V
Output Tx. Saturation Voltage	V <sub>osat</sub>	I <sub>SINK</sub> =1mA	—	0.2	0.4	V
Output Tx. Leakage Current	I <sub>OFF</sub>	V <sub>O</sub> =10V	—	—	1	μA
Output Tx. Sink Current	I <sub>SINK</sub>	V <sub>O</sub> =1.5V	4	10	—	mA
Supply Current 1	I <sub>CC1</sub>	R <sub>L</sub> =100kΩ, Output OFF (Pin 5)	—	3	5	mA

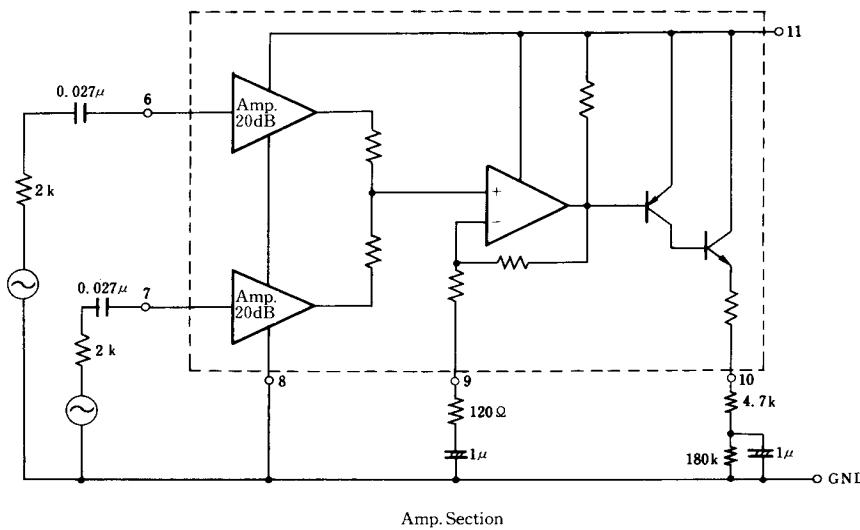
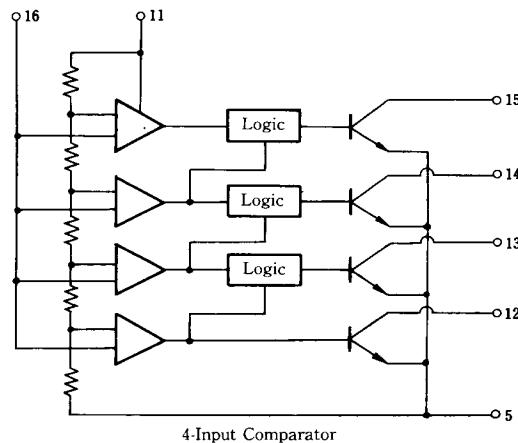
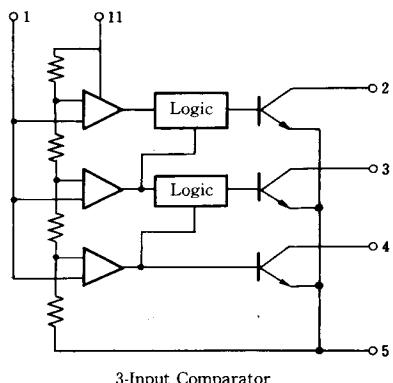
**Amplifier Section**

Input Resistance	R <sub>IN</sub>	V <sub>IN</sub> =10mVrms, f=1kHz	16	24	32	kΩ
Voltage Gain	V <sub>IN</sub>	V <sub>O</sub> =3.5V, f=3kHz	1.03	1.46	2.06	mVrms
Crosstalk	C.R.	V <sub>IN</sub> =77.5mV, f=1kHz, R <sub>IN</sub> =2kΩ	—	-90	-70	dB
Supply Current 2	I <sub>CC2</sub>	No Signal (Pin 8)	—	4	6	mA

■ Connection Diagram

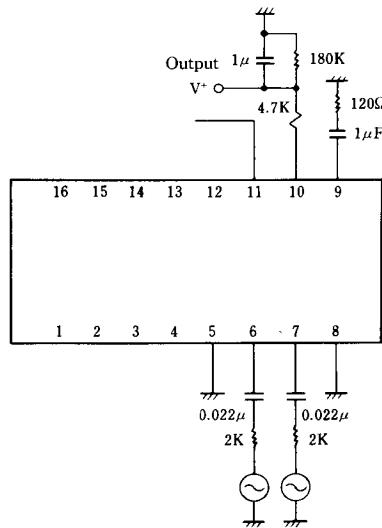
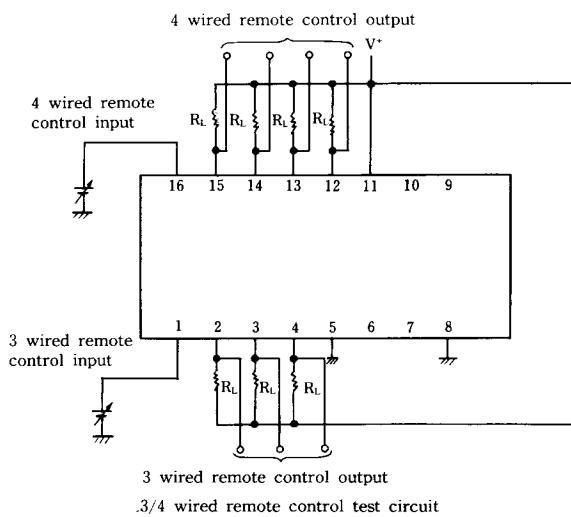


■ Block Diagram

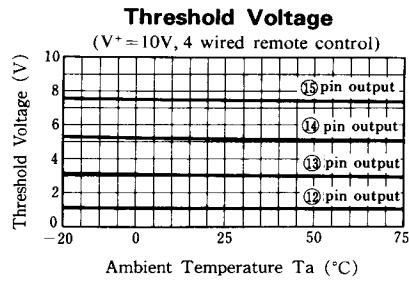
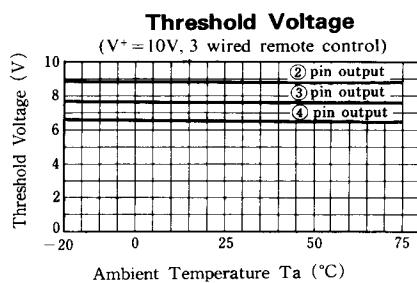


Use the external constant as a measuring constant.

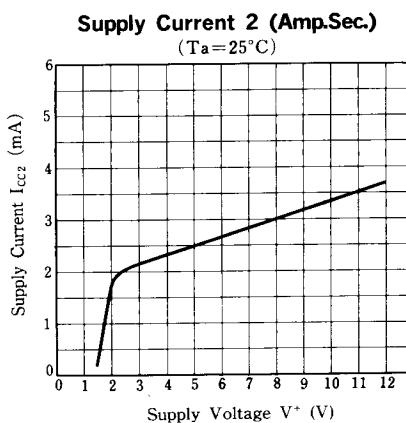
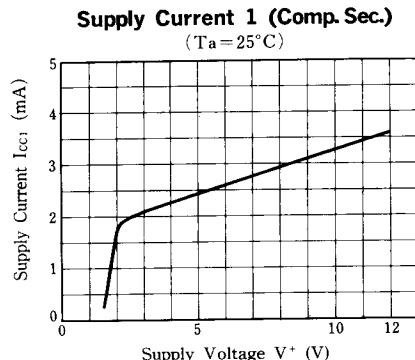
## ■ Test Circuit



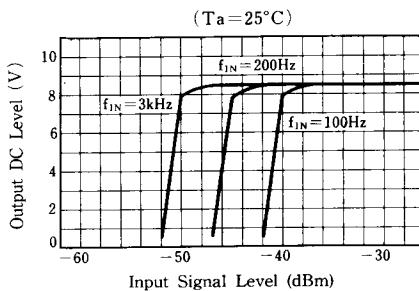
## ■ Typical Characteristics



■ Typical Characteristics



**Input Signal Level vs.  
Output Level (Amp. Sec.)**



■ Typical Application

