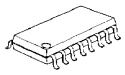
4 INPUT / 1 OUTPUT STEREO AUDIO SELECTOR

■ GENERAL DESCRIPTION

The NJM2750 is 4 Input / 1 Output Stereo Audio Selector. Based on the internal Switch OP-AMP technology, the NJM2750 has lower Output Noise, lower Distortion and higher Channel Separation than the ordinary Multiplexers or Analogue Switches.

The NJM2750 is suitable for any kinds of audio equipments, such as TV, Car Stereo, Mini-Compo and so on.

■ PACKAGE OUTLINE

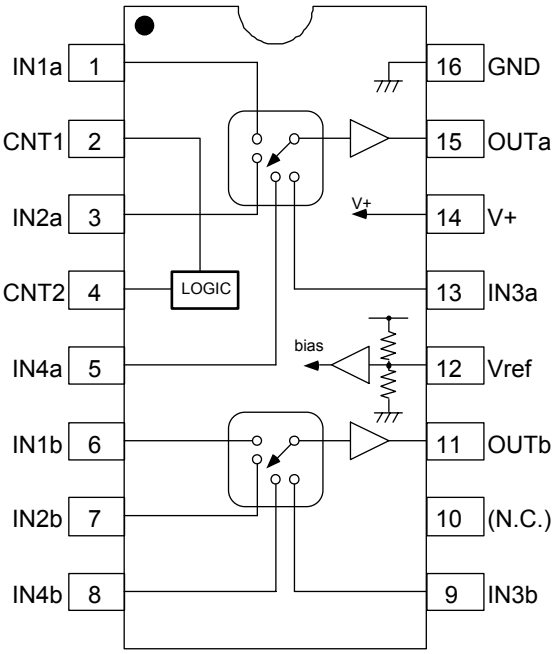


NJM2750M

■ FEATURES

- Operating Voltage (4.7 to 13V)
- 4 Input / 1 Output Audio Selectors
- Dual Channel for Stereo Use
- Low Output Noise (-110dBV typ.)
- Low Distortion (0.005% typ.)
- Bipolar Technology
- Package Outline (DMP16)

■ BLOCK DIAGRAM



■ PIN CONFIGURATION

PIN No.	SYMBOL	FUNCTION
1	IN1a	Ach INPUT SELECTOR
2	CNT1	CONTROL 1
3	IN2a	Ach INPUT SELECTOR 2
4	CNT2	CONTROL 2
5	IN4a	Ach INPUT SELECTOR 4
6	IN1b	Bch INPUT SELECTOR 1
7	IN2b	Bch INPUT SELECTOR 2
8	IN4b	Bch INPUT SELECTOR 4
9	IN3b	Bch INPUT SELECTOR 3
10	(N.C.)	NO CONNECT
11	OUTb	Bch OUTPUT
12	Vref	REFERENCE VOLTAGE
13	IN3a	Ach INPUT SELECTOR 3
14	V+	POWER SUPPLY
15	OUTa	Ach OUTPUT
16	GND	GROUND

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	V^+	15	V
Power Dissipation	P_D	300	mW
Operating Temperature Range	T_{OPR}	-40 to +85	°C
Storage Temperature Range	T_{STR}	-40 to +125	°C

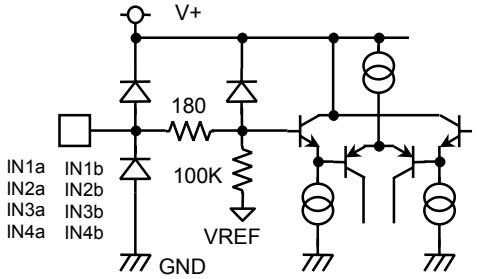
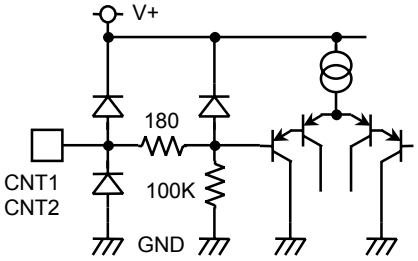
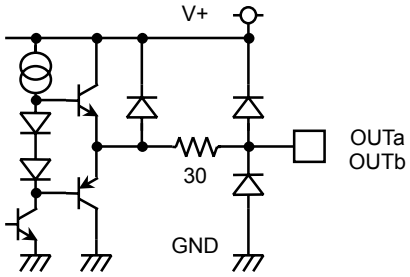
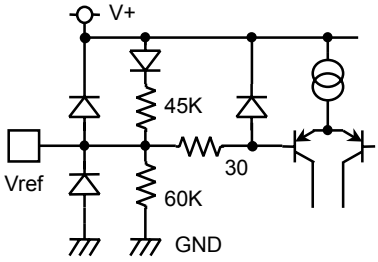
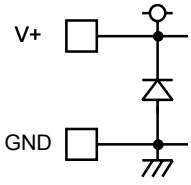
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V^+=9V)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V^+		4.7	9.0	13.0	V
Supply Current	I_{CC}	No Signal	-	10	20	mA
Reference Voltage	V_{REF}		-	4.5	-	V
Voltage Gain	G_V	Vin=1Vrms, f=1kHz	-1	0	1	dB
Total Harmonic Distortion	THD+N	Vin=1Vrms, f=1kHz	-	0.005	0.05	%
Output Noise Voltage	V_{NO}	A-Weighted	- -	-110 (3)	-100 (10)	dBV (μVrms)
Maximum Output Voltage	V_{OM}	f=1KHz, THD=1%	6 (2.0)	8 (2.5)	-	dBV (Vrms)
Cross Talk	CT	Vin=1Vrms, f=1kHz, A-Weighted	70	90	-	dB
Channel Separation	CS	Vin=1Vrms, f=1kHz, A-Weighted	70	90	-	dB
Switch-ON Voltage Level	V_{CH}		2.4	-	-	V
Switch-OFF Voltage Level	V_{CL}		-	-	0.8	V

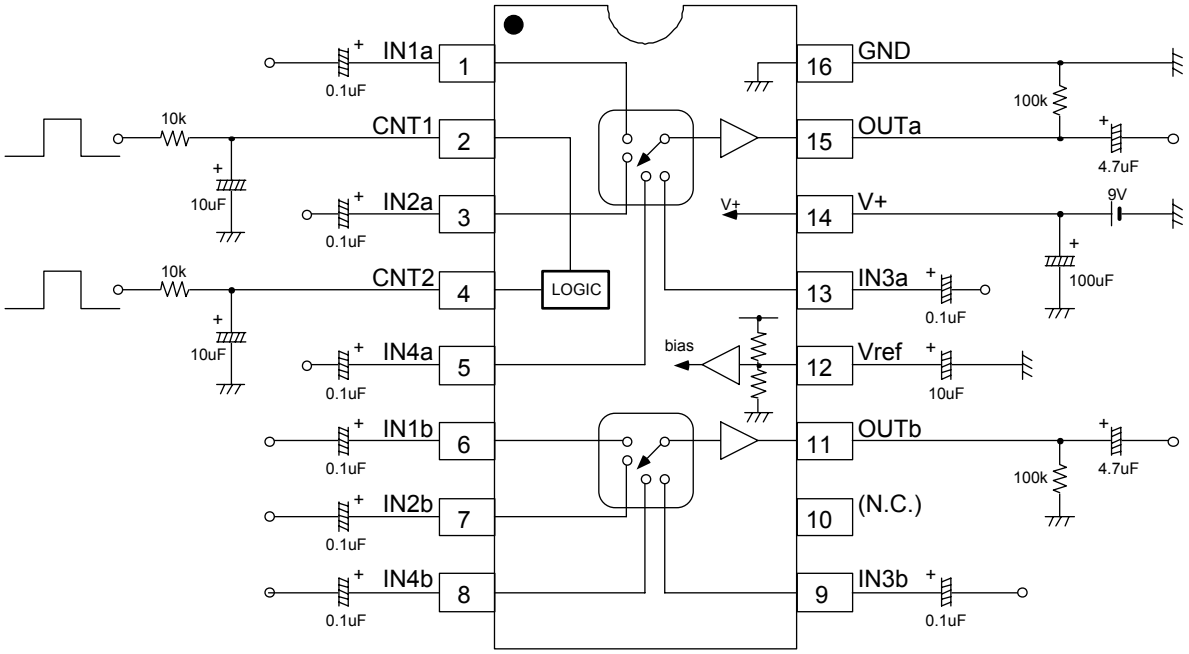
■ SWITCH CONTROL LOGIC

CNT2	CNT1	INPUT SELECTOR Ach / Bch
L	L	1
L	H	2
H	L	3
H	H	4

■ TERMINAL DESCRIPTION

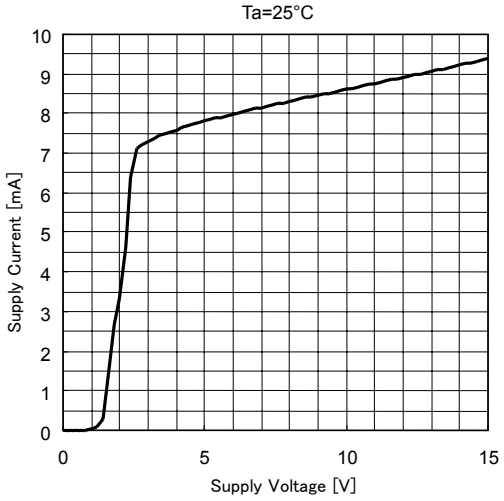
PIN No.	SYMBLE	EQUIVALENT CIRCUIT	VOLTAGE	NOTE
1 3 5 6 7 8 9 13	IN1a IN2a IN4a IN1b IN2b IN4b IN3b IN3a		V+/2	
2 4	CNT1 CNT2		0V (GND)	
11 15	OUTb OUTa		V+/2	
12	Vref		V+/2	
14 16	V+ GND		V+ 0V	

■ APPLICATION CIRCUIT

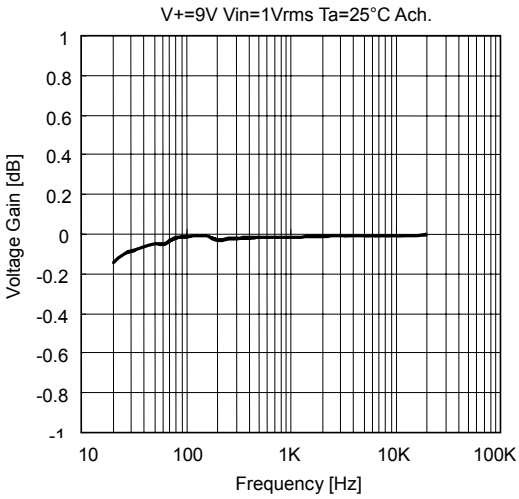


■ TYPICAL CHARACTERISTICS

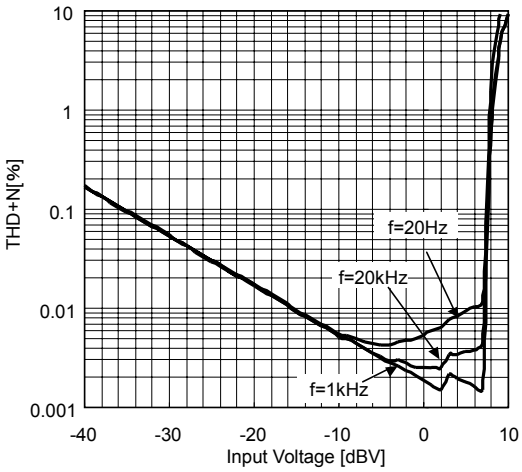
Supply Current vs Supply Voltage



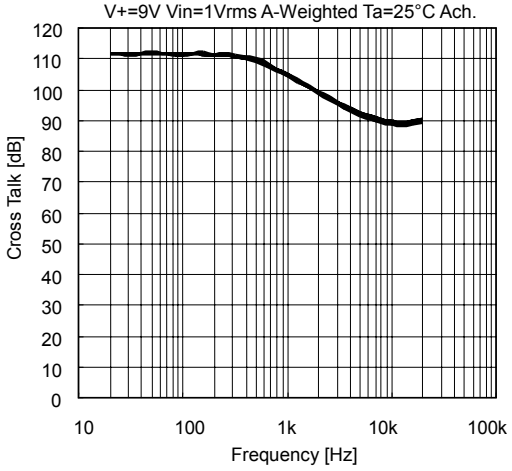
Voltage Gain vs Frequency Response



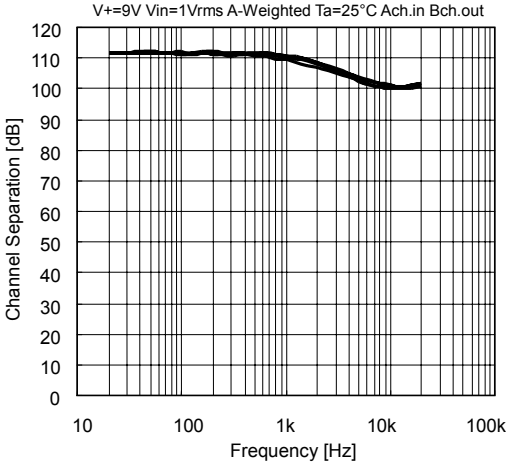
Total Harmonic Distortion vs Input Voltage



Cross Talk vs Frequency Response

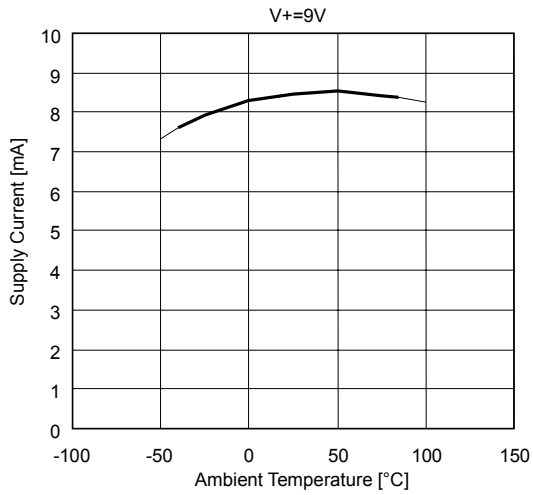


Channel Separation vs Frequency Response

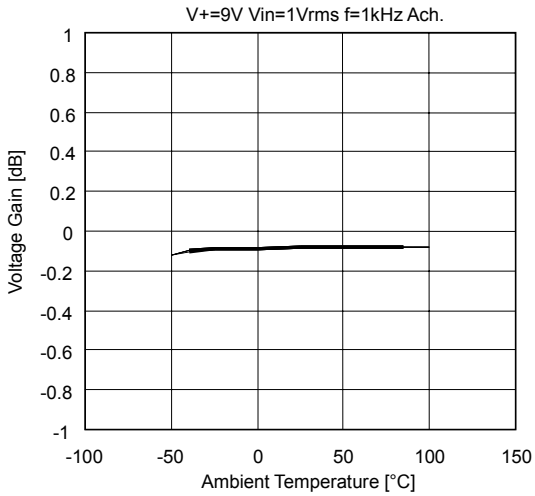


■ TYPICAL CHARACTERISTICS

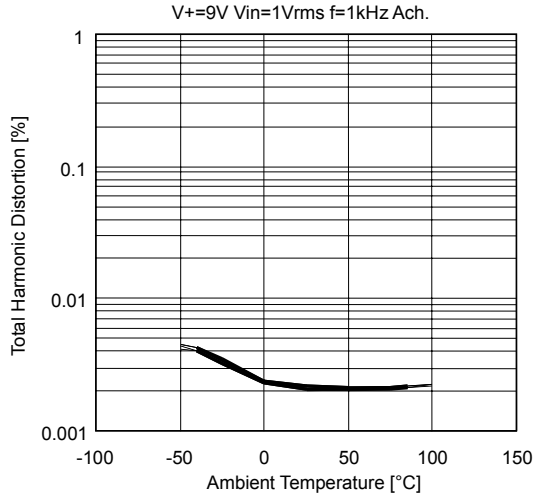
Supply Current vs Ambient Temperature



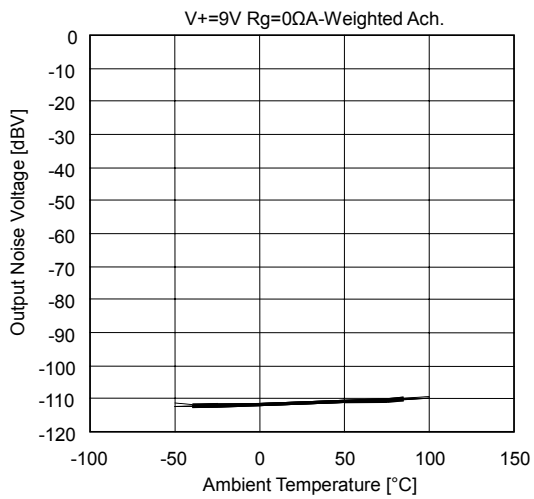
Voltage Gain vs Ambient Temperature



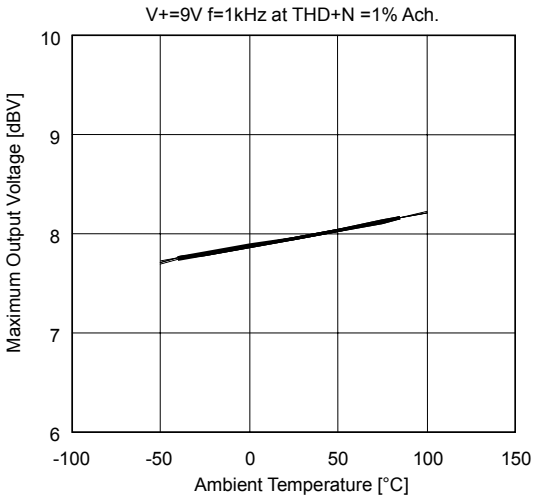
Total Harmonic Distortion vs Ambient Temperature



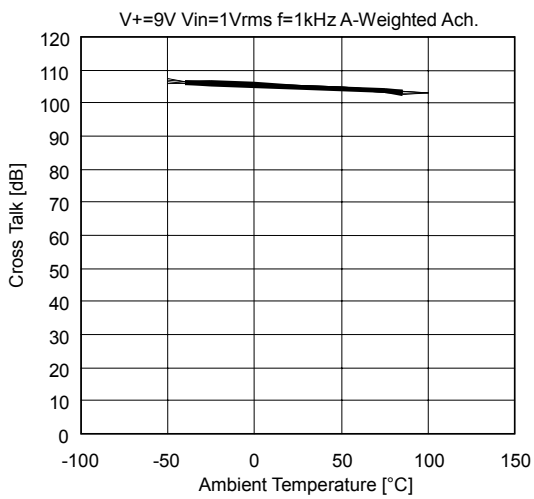
Output Noise Voltage vs Ambient Temperature



Maximum Output Voltage vs Ambient Temperature



Cross Talk vs Ambient Temperature



■ TYPICAL CHARACTERISTICS