AN5826NK

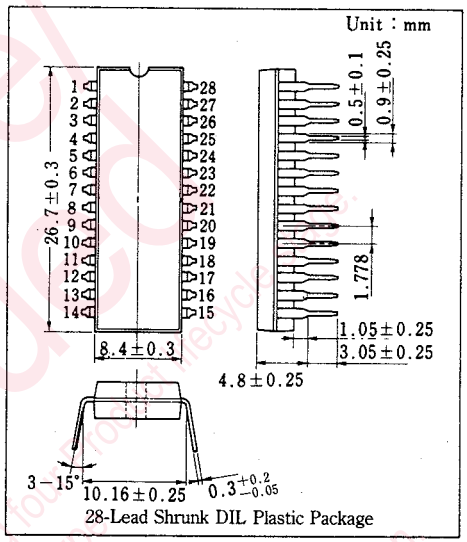
TV Multiplex Sound System Demodulator Circuit

■ Outline

The AN5826NK is an integrated circuit designed for TV multiplex sound system demodulator circuit.

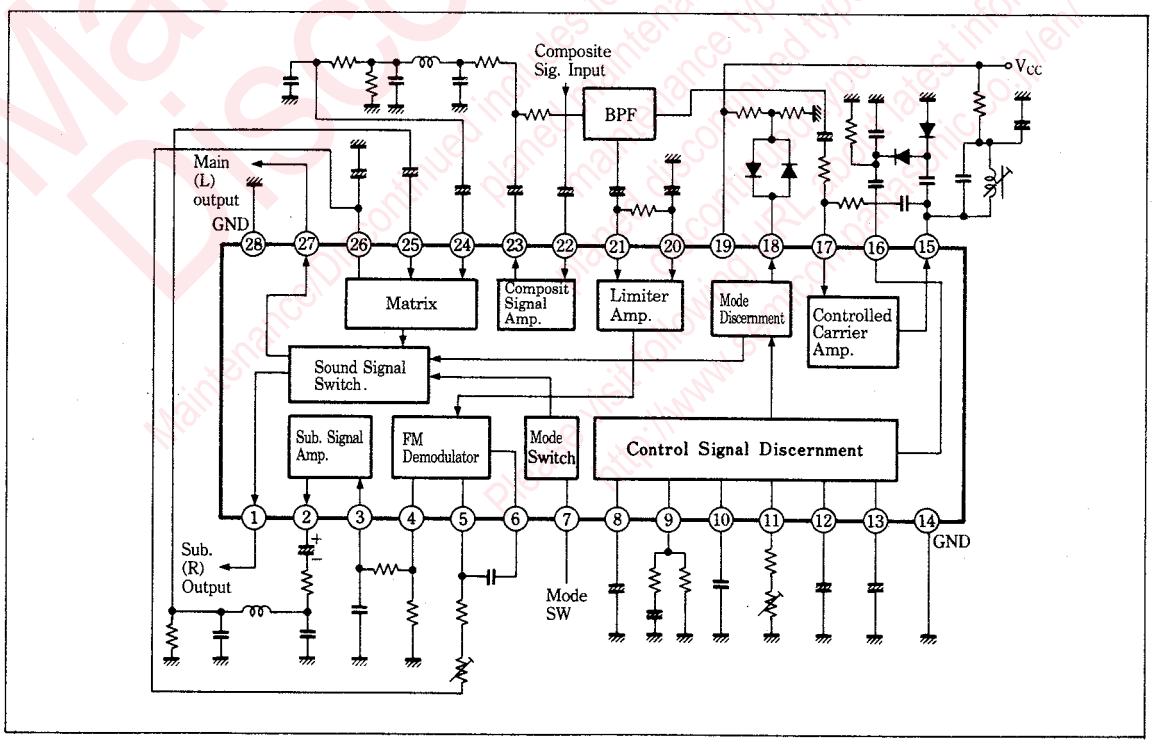
■ Features

- Including multiplex sound signal processing circuit on a single chip, for easier compact set design
- Sub signal demodulator circuits free from signal adjustment
- Lead filter not required



28-Lead Shrunk DIL Plastic Package

■ Block Diagram



■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	Sub(R)Sound Signal Output	15	Controlled Sub Signal Output
2	Sub Signal Output	16	Controlled Signal Input
3	Sub Signal Input	17	Controlled Sub Signal Output
4	Sub Signal Discriminator Output	18	Mode Display Output
5	Mono Multi Oscillator	19	V_{cc}
6	Mono Multi Oscillator	20	Filter
7	Mode Switch Input	21	Sub Signal Input
8	Filter	22	Composite Signal Output
9	Sound Multiplex Discernment Filter	23	Composite Signal Output
10	Filter	24	Main Sound Signal Input
11	952.5Hz Oscillator	25	Sub Sound Signal Input
12	982.5Hz / 922.5Hz Discernment Filter	26	Bias Filter
13	Filter	27	Main(L)Sound Signal Output
14	GND	28	GND

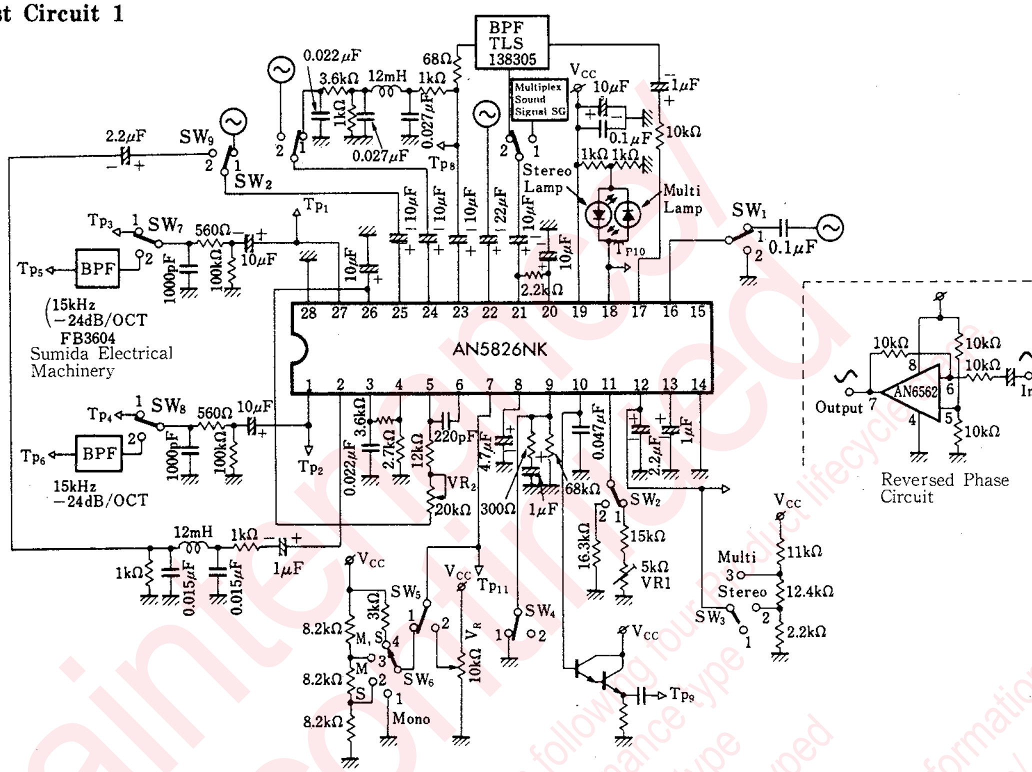
■ Absolute Maximum Ratings(Ta=25℃)

Item		Symbol	Rating	Unit
Supply Voltage		V_{CC}	+14.4	V
Circuit Current		I	76	mA
Power Dissipation		P_D	1 100	mW
Temperature	Operating Ambient Temperature	T_{opr}	−20～+70	℃
	Storage Temperature	T_{stg}	−55～+150	℃

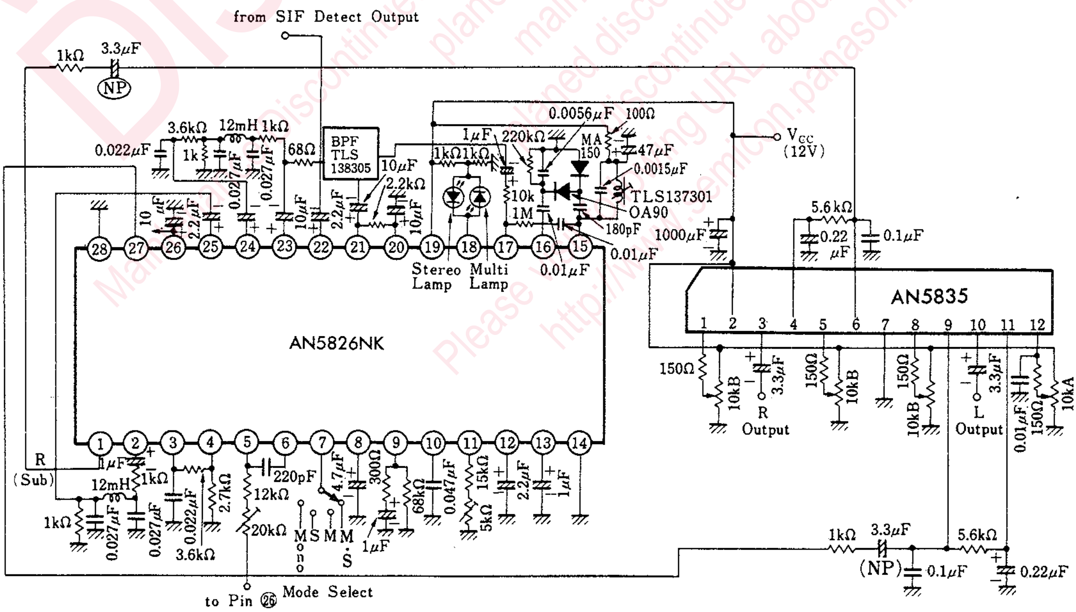
■ Electrical Characteristics(Ta=25℃)

Item		Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Total Circuit Current	Mono	I_{CC1}	1	V_{CC}=12V	30	42	55	mA
	Multi	I_{CC2}	1	V_{CC}=12V	36	48	62	mA
Composite Signal Voltage Gain.		G_V	1	Pin㉒input 200mVp-p 1KHz, Pin㉓output	2.4	3.7	4.9	dB
Total Harmonic Distortion		$THD_{(typ.)}$	1	Pin㉒input 200mVp-p 1KHz, Pin㉓output		0.45	0.6	%
Total Harmonic Distortion		$THD_{(max.)}$	1	Pin㉒input 3Vp-p 1KHz, Pin㉓output		0.85	1.0	%
Sub Signal Detect Max. Output Voltage		$V_{sub(max.)}$	1	Pin㉑input 100%, Mod.400Hz	880	1 150	1 500	mV_{rms}
VCO Oscillation Frequency		f_{OSC}	1	V_{CC}=12V, GND with Pin⑯1KΩ, Monaural mode is set when standerd sample is 952Hz	857	952	1 047	Hz
fosc Change with Supply Voltage		$\Delta f_{OSC}/V_{CC}$	1	V_{CC}=12V±20%, forV_{CC}=12V	−3	0	+3	Hz/V
fosc Change with ambient Temperatuse		$\Delta f_{OSC}/Ta$	1	Ta=−20～+70℃, for Ta=+25℃	−10	0	+10	Hz
Capture Range(Stereo side)		$CR_{(ST)}$	1	Pin⑯0.5V_{rms} frequency variable		67	170	Hz
Capture Range(Dual side)		$CR_{(MU)}$	1	Pin⑯0.5V_{rms} frequency variable	−170	−70		Hz
Main(L)Output DC Offset Level		$V_{O(offset-L)}$	1	V_{CC}=12V, Input invalid signal, Output level difference for each mode		50	120	mV
Sub(R)Output DC Offset Level		$V_{O(offset-R)}$	1	V_{CC}=12V, Input invalid signal,Output level difference for each mode		50	120	mV
Main/Sub Output High Frequency Distortion		$THD_{(L.R)}$	1	V_{CC}=12V,Pin㉑input 100mVrms,1kHz		0.2	0.45	%
Main(L)Output Stereo Separation		$Sep_{(Main)}$	1	Pin㉔, ㉕1kHz, Opposite phase	40	50		dB
Sub(R)Output Stereo Separation		$Sep_{(Sub)}$	1	Pin㉔, ㉕1kHz, Same-phase	40	50		dB
Main(L) Output Dual Crosstalk		$CT_{(R\to L)}$	1	Pin㉔, ㉕1kHz	50	60		dB
Sub(R)Output Crosstalk		$CT_{(L\to R)}$	1	Pin㉔, ㉕1kHz	50	60		dB
Output Noise Voltage		V_{no}	1	V_{CC}=12V, Monaural mode		0.17	0.3	mV_{rms}

Test Circuit 1



■ Application Circuit



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