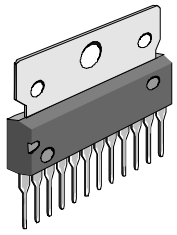
2-CH MOTOR DRIVER

The KA9257 is a monolithic integrated circuit, and suitable for the 2-CH motor driver of CD/CD-ROM/DVD systems.

12-SIPH-B



FEATURES

- 2 channel BTL driver
- Low input bias (Iib=30nA)
- Built in phase compensation capacitor
- Improved crosstalk: (CT=80dB)
- Operating voltage range (6~13.2V)

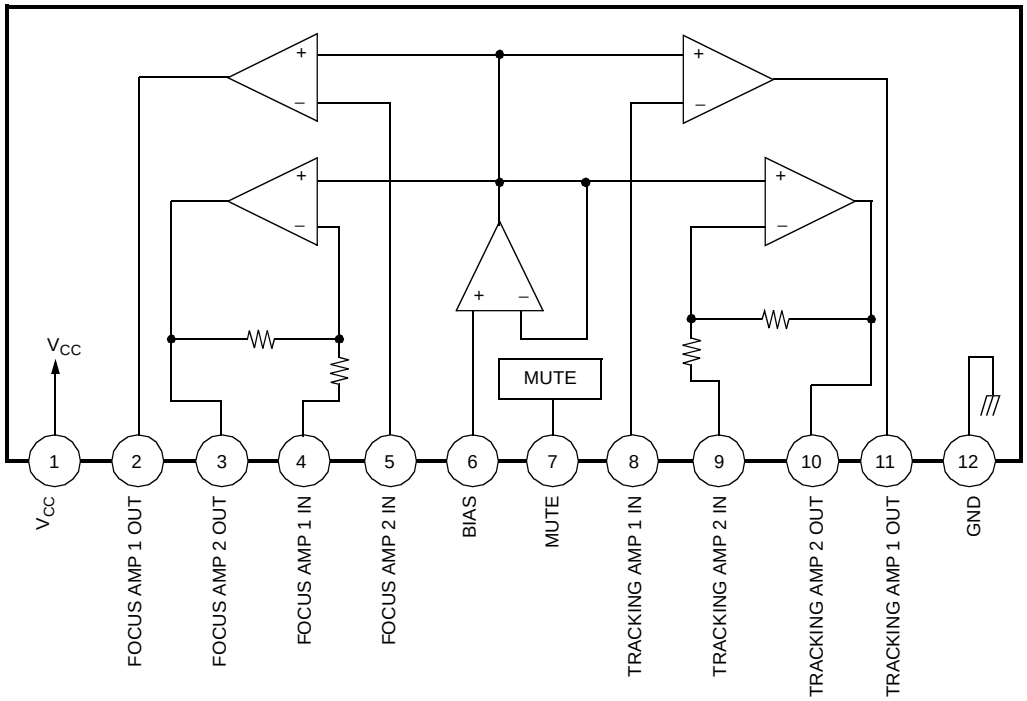
ORDERING INFORMATION

Device	Package	Operating Temperature
KA9257	12-SIPH	–25°C ~ +75°C

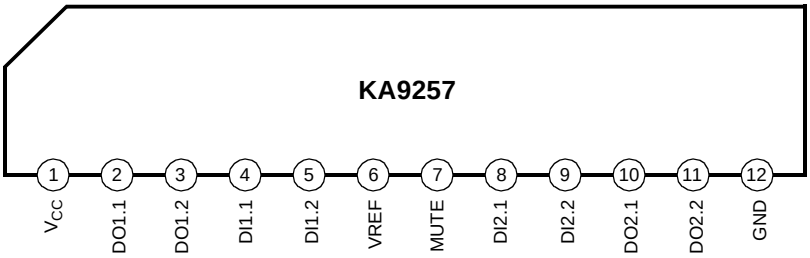
TARGET APPLICATION

- CD PLAYER
- VIDIO-CD
- CAR-CD

BLOCK DIAGRAM



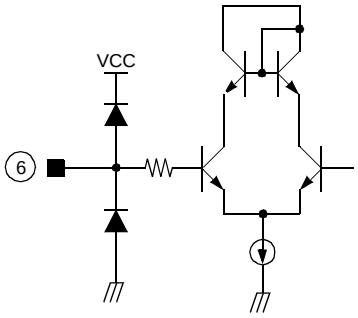
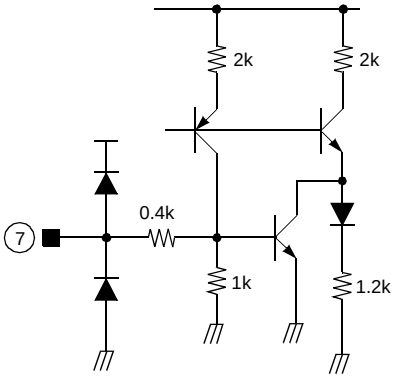
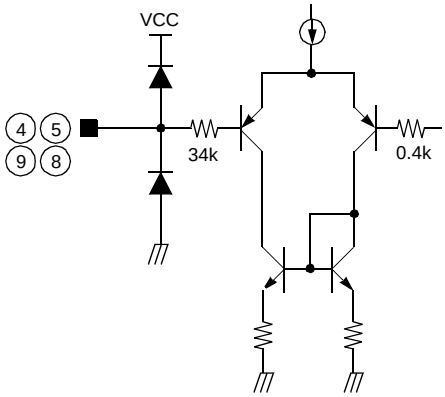
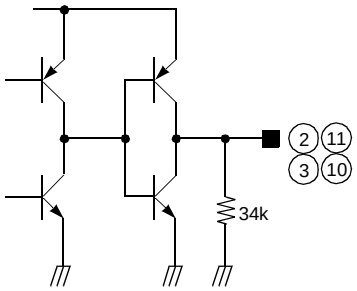
PIN CONFIGURATION



PIN DESCRIPTION

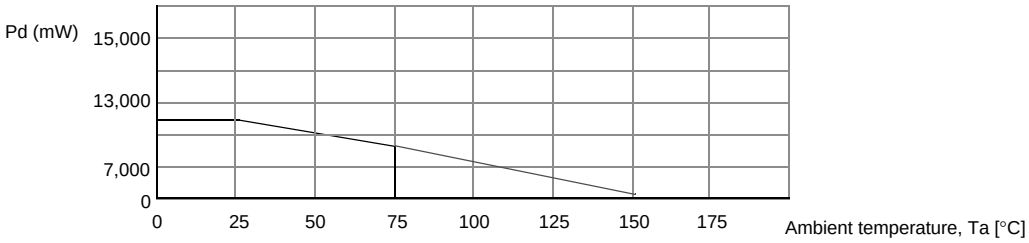
Pin No.	Symbol	I/O	Description
1	V_{CC}	–	Supply voltage
2	DO1.1	O	Drive output
3	DO1.2	O	Drive output
4	DI1.1	I	Drive input
5	DI1.2	I	Drive input
6	VREF	I	2.5V bias voltage
7	MUTE	I	Mute
8	DI2.1	I	Drive input
9	DI2.2	I	Drive input
10	DO2.1	O	Drive output
11	DO2.2	O	Drive output
12	GND	–	Ground

EQUIVALENT CIRCUITS

Bias	Mute
	
Regulator	**Drive output**
	

ABSOLUTE MAXIMUM RATING (Ta=25°C)

Characteristics	Symbol	Value	Unit
Supply voltage	V_{CC}	18	V
Power dissipation	P_D	12.5[note]	W
Operating temperature	T_{OPR}	–25 ~ +75	°C
Storage temperature	T_{STG}	–55 ~ +150	°C
Operating supply voltage	Vopr	6 ~ 13.2	V
Maximum output current	I_{OMAX}	1	A



RECOMMENTED OPERATING CONDITION (Ta=25°C)

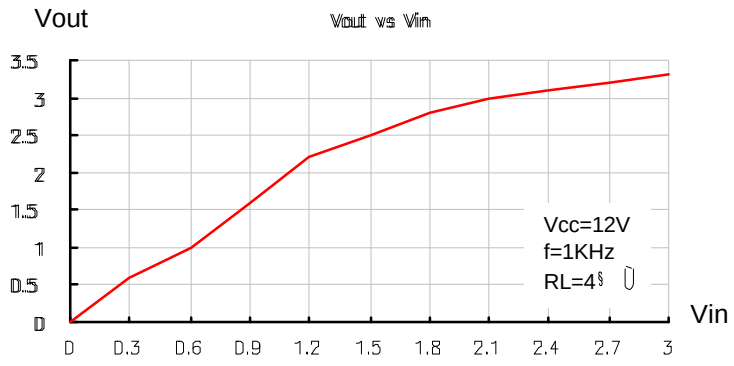
Characteristics	Symbol	Value	Unit
Operating supply voltage	V_{CC}	6~13.2	V

ELECTRICAL CHARACTERISTICS

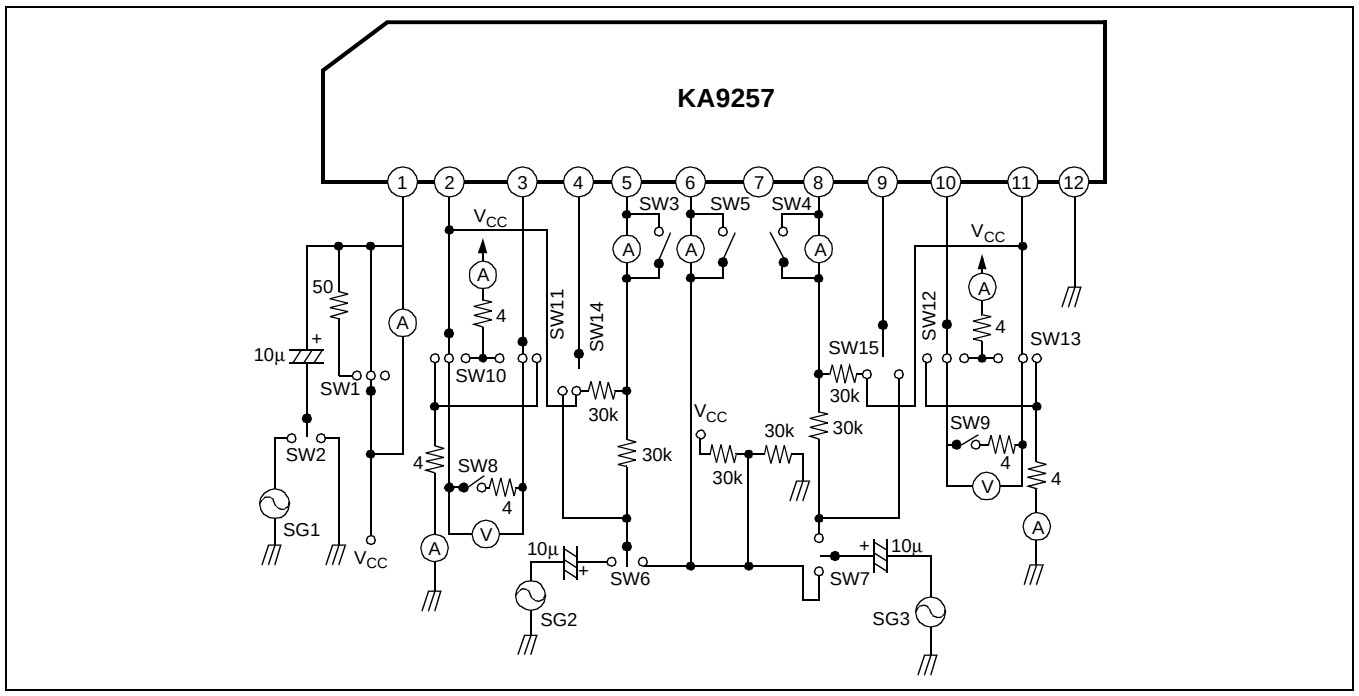
(Unless otherwise specified, Ta=25°C, V_{CC}=8V, R_L=8Ω, f=1kHz)

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Quiescent circuit current	I_{CCQ}	V_I=0	–	3	10	mA
Input bias current	I_{BIAS1}	V_I=0	–	30	100	nA
Input bias pin current	I_{BIAS2}	C=0	–	100	300	nA
Output offset voltage	V_{CO}	V_I=0	–50	0	50	mV
Maximum source current	I_{SOURCE}	R_L=4Ω, V_O=GND	0.7	1.4	–	A
Maximum sink current	I_{SINK}	R_L=4Ω, V_O=V_{CC}	0.4	0.8	–	A
Maximum output voltage	$V_{O(MAX)}$	V_I=2Vrms	1.8	2.5	–	V
Closed loop voltage gain	G_{VC}	V_I=0.1Vrms	5.0	6.0	7.0	dB
Cut-off frequency	f_T	V_I=0.1Vrms, 3dB Down	15	20	–	kHz
Cross-talk	CT	V_I=0.1Vrms, BPF: 20-20kHz	40	80	–	dB
Ripple rejection ratio	RR	V_{RR}=0.1Vrms, F_{RR}=120Hz	30	40	–	dB
Slew-rate	ST	V_I=0.3V_{PP} Squarewave	–	0.3	–	V/μs

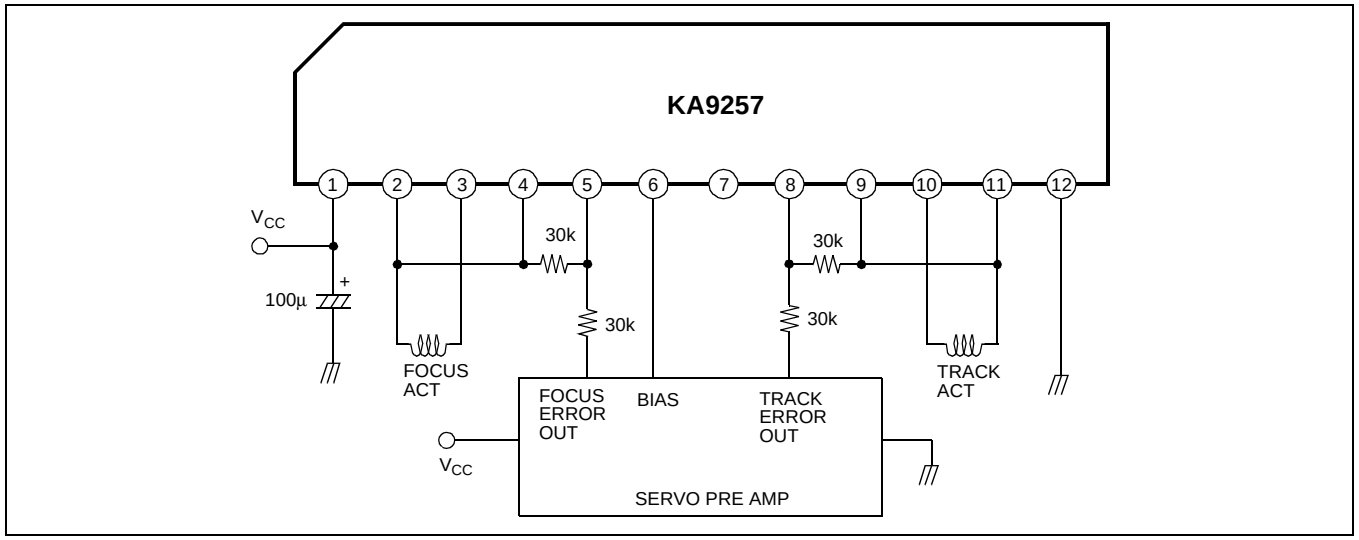
ELECTRICAL CHARATERISTICS CURVES



TEST CIRCUIT



APPLICATION CIRCUIT



Precautions

1. In designing the board, a minimum of 6cms of segregation should be allowed between the motor drive IC (KA9257) and other components such as the micom and/or Recorder/Player ICS.
2. To get a stable supply of voltage and radiation shield effect, the CD Deck needs to be grounded.

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