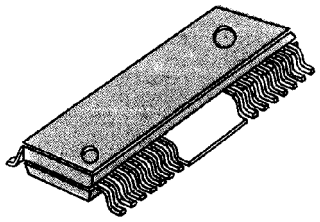
INTRODUCTION

The KA9258D is a Quad Power Operational Amplifier to drive spindle motor, sled motor, focus actuator and tracking actuator.

28-SSOPH-375



FEATURES

- 4-channel BTL driver
- Built in 5V regulator
- Built-in themal shut down circuit
- Operating supply voltage: 6 ~ 13V

ORDERING INFORMATION

Device	Package	Operating Temperature
KA9258D	28-SSOPH-375	-25℃~ +75℃

BLOCK DIAGRAM

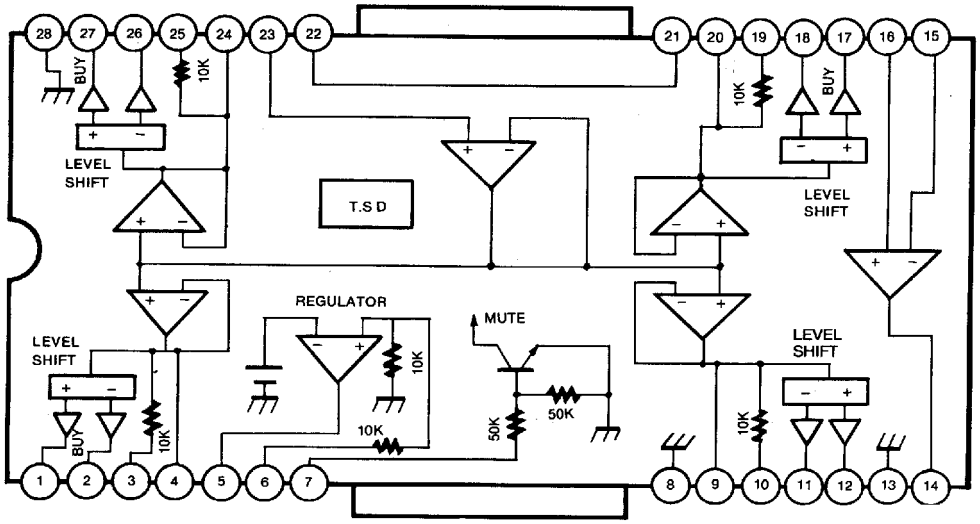


Fig. 1

PIN DESCRIPTION

Pin No.	Symbol	I/O	Description
1	DO1.1	O	DRIVE OUTPUT
2	DO1.2	O	DRIVE OUTPUT
3	DI1.1	I	DRIVE INPUT
4	DI1.2	I	DRIVE INPUT
5	REG		REGULATOR
6	REO	O	REGULATOR OUTPUT
7	MUTE	I	MUTE
8	GND1	-	GROUND
9	DI2.1	I	DRIVE OUTPUT
10	DI2.2	I	DRIVE OUTPUT
11	DO2.1	O	DRIVE INPUT
12	DO2.2	O	DRIVE INPUT
13	GND2	-	GROUND
14	OPOUT	O	OPAMP OUTPUT
15	OPIN (-)	I	OPAMP INPUT (-)
16	OPIN (+)	I	OPAMP INPUT (+)
17	DO3.1	O	DRIVE OUTPUT
18	DO3.2	O	DRIVE OUTPUT
19	DI3.1	I	DRIVE INPUT
20	DI3.2	I	DRIVE INPUT
21	VCC1	-	SUPPLY VOLTAGE
22	VCC2	-	SUPPLY VOLTAGE
23	VREF	I	2.5V BIAS VOLTAGE
24	DI4.1	I	DRIVE INPUT
25	DI4.2	I	DRIVE INPUT
26	DO4.1	O	DRIVE OUTPUT
27	DO4.2	O	DRIVE OUTPUT
28	GND3	-	GROUND

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	18	V
Power Dissipation	P_D	1.7	W
Operating Temperature	T_{OPR}	-25 ~ + 75	℃
Storage Temperature	T_{STG}	-55 ~ + 150	℃

(NOTE) Power Dissipation value: at V_{CC} = 8V.

ELECTRICAL CHARACTERISTICS

(Ta = 25℃, V_{CC} = 8V, Unless Otherwise Specified)

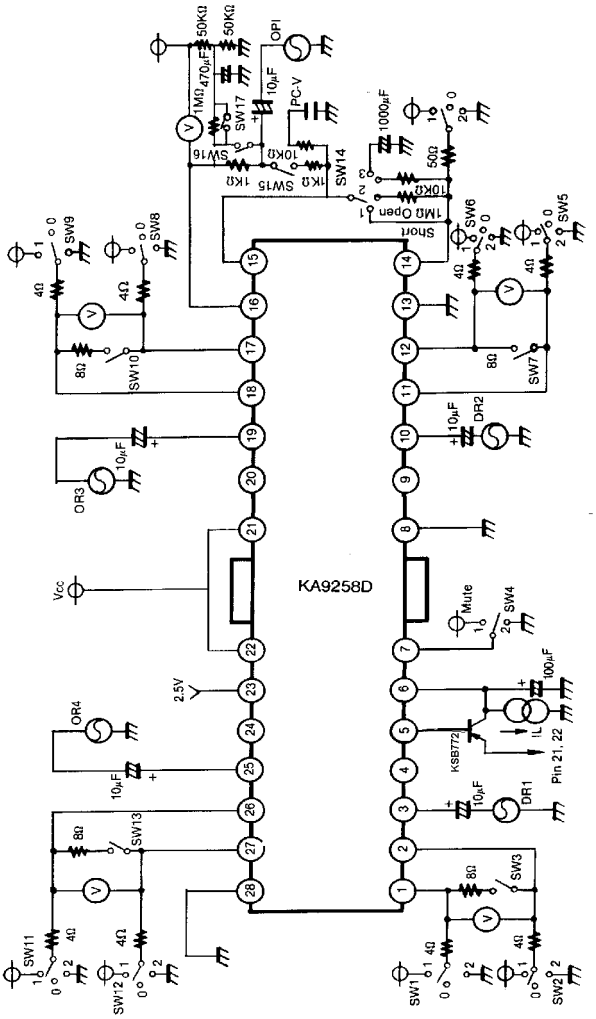
A. REGULATOR PART

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Regulator Output Voltage	V_{REG}	I_L = l00mA	4.75	5	5.25	V
Load Regulation	$\triangle V_{RL}$	I_L = 0mA to 200mA	-40.0	0	10.0	mV
Line Regulation	$\triangle V_{CC}$	I_L = 200mA,V_{CC} = 6 to 9V	-10.0	0	20.0	mV

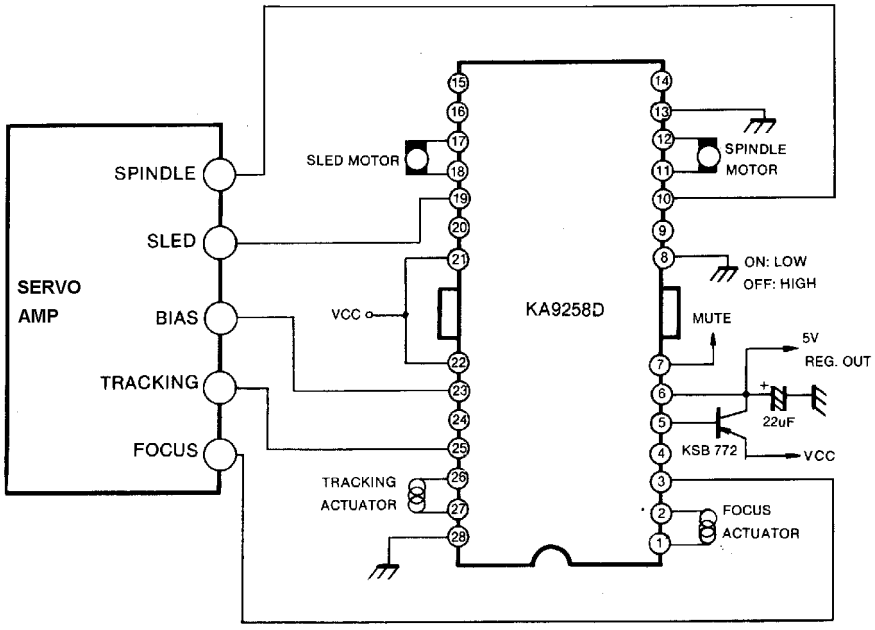
B. DRIVER PART

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I_{CCQ}	V_I = 0	5.5	9.5	13,5	mA
Input Bias Current	I_{BOP}	V_I = 0			300	nA
Input offset voltage	V_{OFOP}		-5.0	0	5.0	mV
Output offset voltage	V_{OO}		-3.0	0	30	
Maximum Sink Current	I_{SINK}	RL = 4ohm, V_{CC}	0.5	0.8		A
Maximum Source Current	I_{SOUCE}	RL = 4ohm, GND	0.5	0.8		
Maximum Output Voltage	V_{MA}	V_I = 2V_{rms}, 1kHz	2.5	3.0		V_{rms}
Closed loop Voltage Gain	A_{VF}	V_I = 0.1V_{rms}, 1kHz	4.5	6.5	7.5	dB
Ripple Rejection Ratio	RR	V_I = -20dB, 120Hz	60 .0	80.0		
Slew Rate	SR	100Hz, Squarewave	1.0	2.0		V/us

Test Circuit



APPLICATION CIRCUIT



★THERMAL SHUT DOWN CIRCUIT

The IC is breaked down by the heat when overload condition continue for a long time So, KA9258D have thermal shut down circuit to prevent this case. At that time the temperature of IC rise over 175℃, the circuit is operating and protect the IC against breakdown.

Dimensions in Milimeters