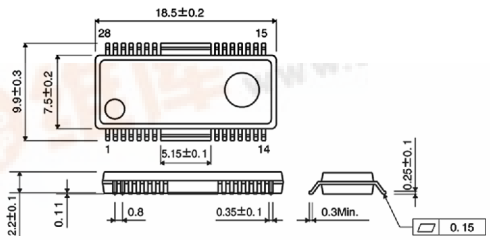
5 Channel Drivers/Regulator for car Mini Disk

BA5813FM

●Description

The BA5813FM is a 5-channel driver including a 4-channel BTL driver and a 1-channel reversible motor driver and regulator for car applications. Separating the Vcc into Pre and Pow can make the unit morepower efficient.

●Dimension (Units : mm)



HSOP-M28

●Features

1) Wide dynamic range
   (4.0V typical at PreVcc=8V, PowVcc=5V)
2) The loading output voltage is adjustable by the voltage control terminal.
3) Variable regulator built-in
4) Thermal shut down circuit built-in
5) Small surface mount power package HSOP-M28

●Applications

MD

●Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Limits	Unit
Power supply voltage	PREVcc, POWVcc	13.5	V
Power dissipation	Pd	2.2	W
Operating temperature range	Topr	–40 ~ +85	˚C
Storage temperature range	Tstg	–55 ~ +150	˚C

Derating : 17.6mV/˚C for operation above Ta=25˚C.
On less than 3% (percentage occupied by copper foil), 70mm 70mm, t=1.6mm, glass epoxy mounting.

● Guaranteed operating ranges (Ta=25˚C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	PREVcc	4.3	—	13.2	V
	POWVcc	4.3	—	PREVcc	V

● Electrical characteristics

(Unless otherwise noted, Ta=25˚C, PREVcc=RVcc=8V, POWVcc1,2=5V, BIAS=1.65V, R_L=8)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Quiescent current	I_{CC}	—	17	23	mA	No load
<BTL driver>						
Output offset voltage	Voo	–50	0	50	mV	
Maximum output voltage	V_{OM}	3.6	4.0	—	V	
Closed loop voltage gain (CH1)	G_{VC1}	16.2	18.0	19.8	dB	
Closed loop voltage gain (CH2)	G_{VC2}	22.7	24.5	26.3	dB	
Closed loop voltage gain (CH3, 4)	G_{VC3}	10.5	12.0	13.5	dB	
<Regulator>						
Threshold voltage of REG-P pin	V_{REGPTH}	1.14	1.20	1.26	V	
Output sink current of REG-B pin	I_{SIN}	10	—	—	mA	
Input bias current of REG-P pin	I_{BOP}	—	20	300	nA	
<Loading driver>						
Output saturation voltage 1	V_{SAT1}	0.7	1.1	1.5	V	I_L=200mA (Upper + Lower)
Output adjustable gain on "H" side voltage	G_{VH}	7.4	9.2	11.0	dB	"H" side output for GND

※This product is not designed for protection against radioactive rays.

● Application circuit