

LB1909M

Allowable Operating Range at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V _{CC}		2.5 to 16	V
Input high level voltage	V _{IH}	Pins ENA, IN1, IN2	1.8 to 10	V
Input low level voltage	V _{IL}		-0.3 to +0.7	V

Electrical Characteristics at Ta = 25°C, V_{CC} = 12V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Power source current	I _{CC0}	ENA = L		0.1	10	μA
	I _{CC1}	ENA = H		25	35	mA
Output saturation voltage	V _{OUT1}	I _{OUT} = 200mA		0.25	0.35	V
	V _{OUT2}	I _{OUT} = 400mA		0.50	0.75	V
Input current	I _{IN}	V _{IN} = 5V		120	160	μA
Thermal protection block *1						
Thermal shutdown operation temperature	T _{tsd}	Design guarantee *2		180		°C
Temperature hysteresis width	ΔT _{tsd}			60		°C
Spark killer diode						
Reverse current	I _S (leak)				30	μA
Forward voltage	V _{SF}	I _{OUT} = 400mA			1.7	V

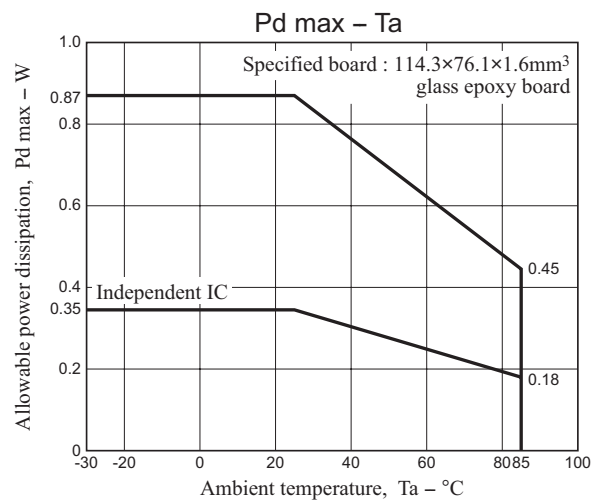
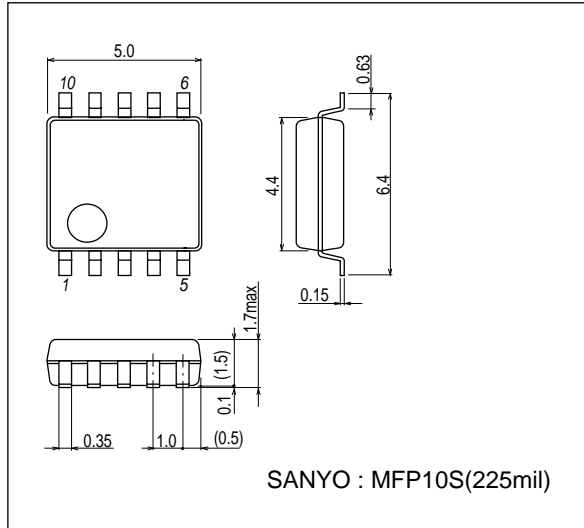
*1 The thermal protection function is a feature to prevent the product from smoking and firing under unusual conditions. It is not intended to guarantee operation of the product under an ambient temperature exceeding the operating temperature range.

*2 Design guarantee is not tested in individual units.

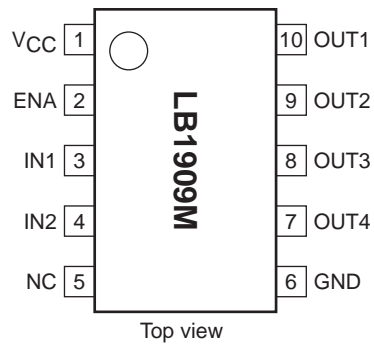
Package Dimensions

unit : mm (typ)

3086B



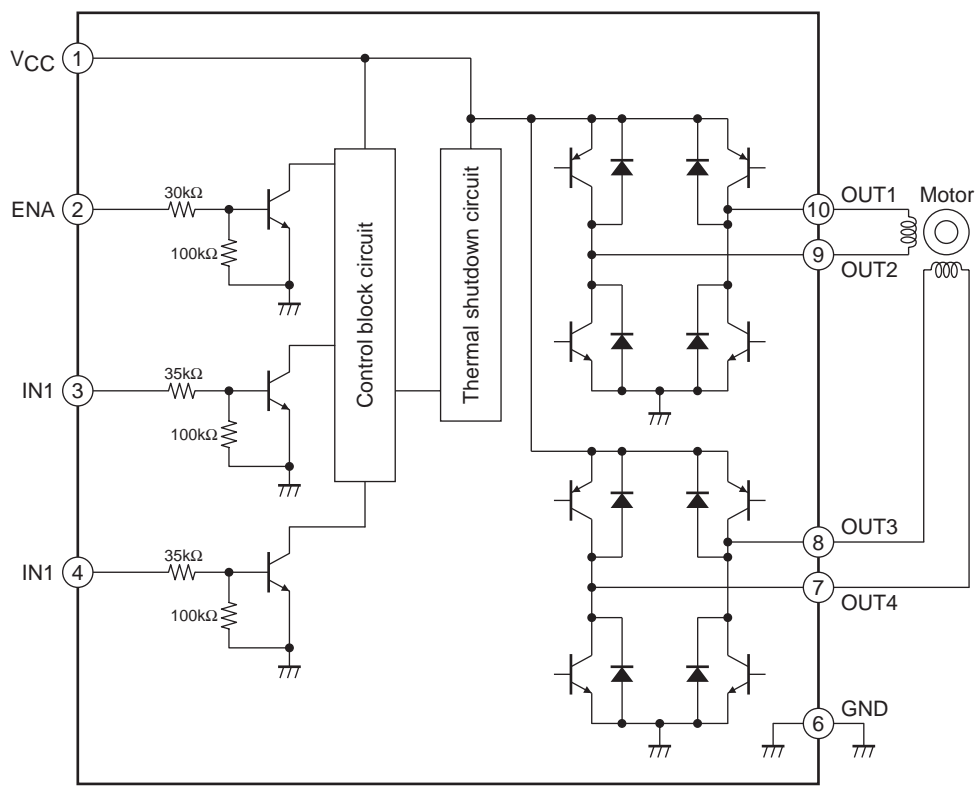
Pin Assignment



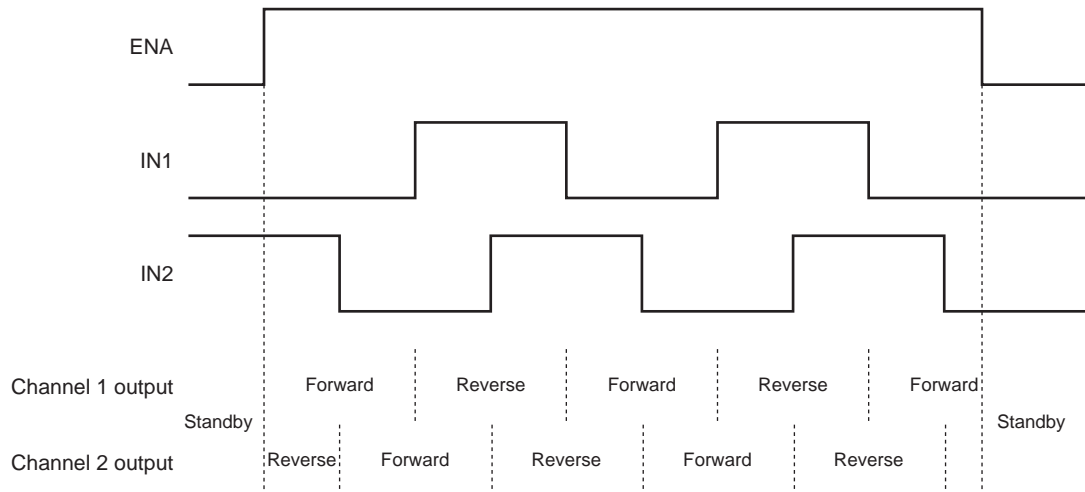
Truth table

Input			Output				Remarks	
ENA	IN1	IN2	OUT1	OUT2	OUT3	OUT4		
L	×	×	OFF	OFF	OFF	OFF	Standby mode	
H	L		H	L			Channel 1	Forward
	H		L	H				Reverse
		L			H	L	Channel 2	Forward
					L	H		Reverse

Block Diagram



Timing Chart (2 phase excitation drive)



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