



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SLA7031M/SLA7032M/SLA7033M

2-Phase/1-2 Phase Excitation

■ Absolute Maximum Ratings

(T_a=25°C)

Parameter	Symbol	Ratings			Unit
		SLA7031M	SLA7032M	SLA7033M	
Motor Supply Voltage	V _{CC}	46			V
Control Supply Voltage	V _S	46			V
FET Drain-Source Voltage	V _{DSS}	100			V
Input Voltage	V _{IN}	-0.3 to +7			V
	V _{SYNC}	-0.3 to +7			
Reference Voltage	V _{REF}	-0.3 to +7			V
Sense Voltage	V _{RS}	-5 to +7			V
Output Current	I _O	1	1.5	3	A
	P _{D1}	4.5(Without Heatsink)			W
Power Dissipation	P _{D2}	35(T _c =25°C)			W
Channel Temperature	T _{ch}	+150			°C
Operating Ambient Temperature	T _a	-20 to +85			°C
Storage Temperature	T _{stg}	-40 to +150			°C

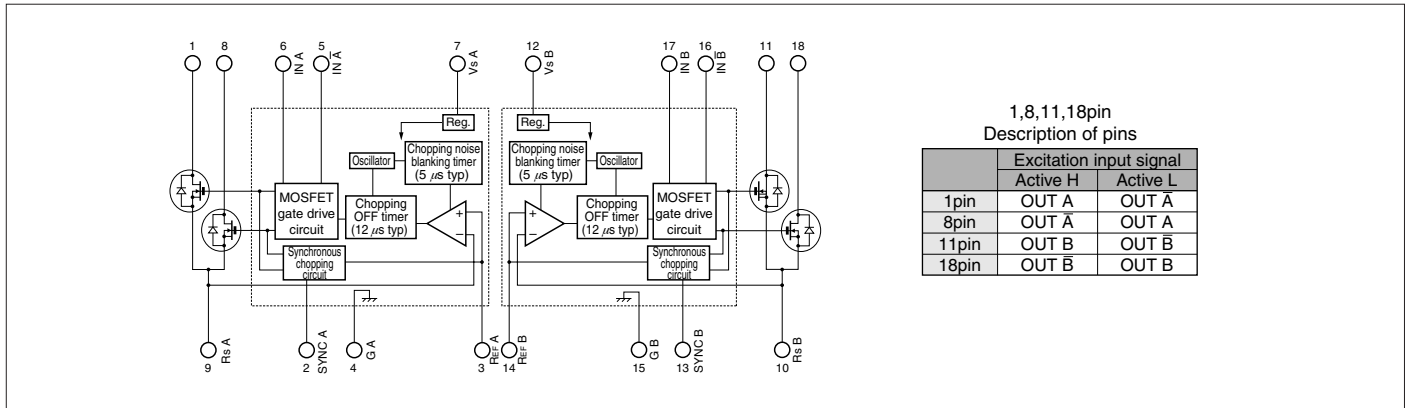
■ Recommended Operating Conditions

Parameter	Symbol	Ratings		Unit	Remarks
		min.	max.		
Motor Supply Voltage	V _M		44	V	
Control Supply Voltage	V _S	10	44	V	
REF Input Voltage	V _{REF}	0.1	1.0	V	The control current precision is degraded at 0.1V or lower.
	V _{REF(dis)}	4.0	5.5	V	Output MOS FET OFF
Case Temperature	T _C		100	°C	Temperature of 4(15)-Pin Lead(without heatsink)

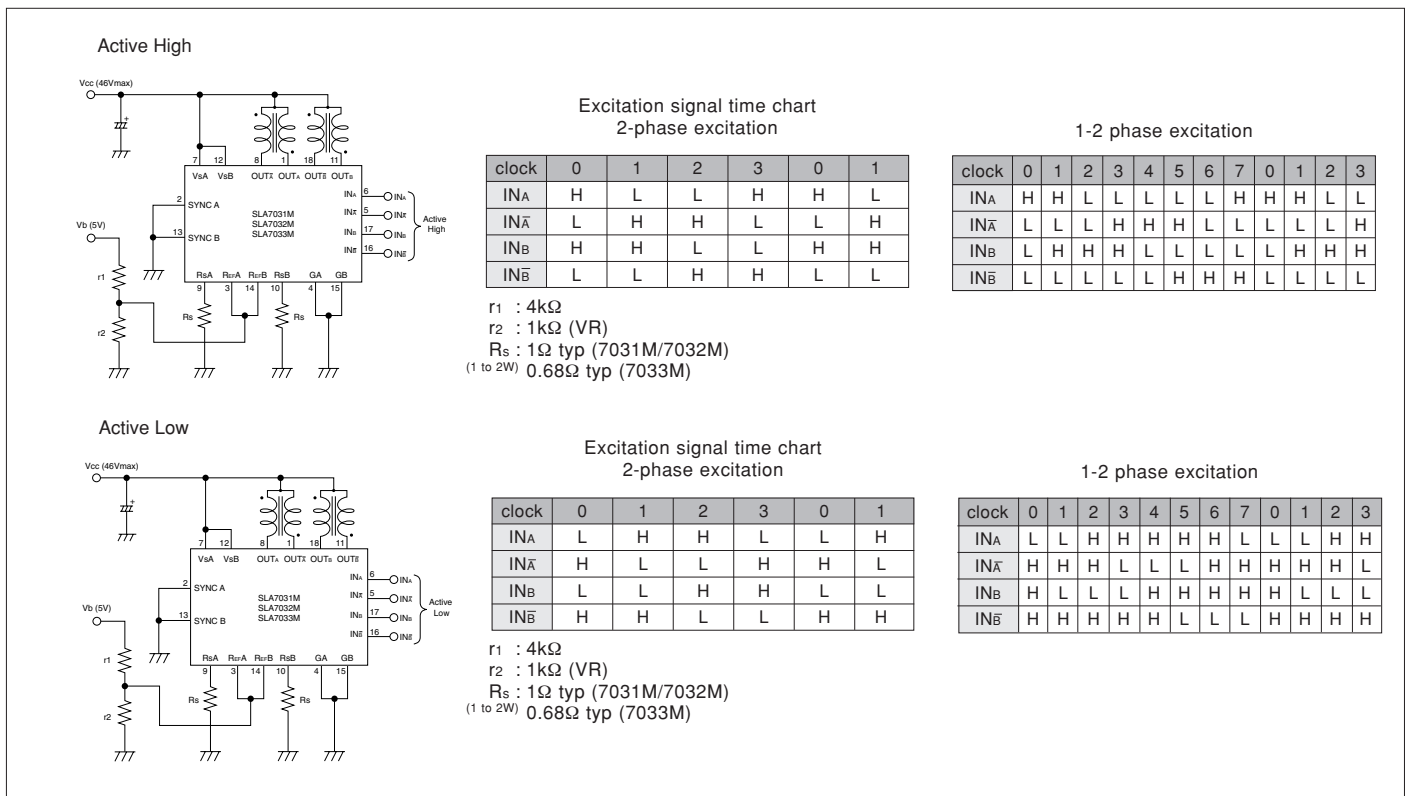
■ Electrical Characteristics

Parameter	Symbol	Ratings									Unit				
		SLA7031M			SLA7032M			SLA7033M							
		min.	typ.	max.	min.	typ.	max.	min.	typ.	max.					
Control Supply Current	I _S	10			15			10			15			mA	
	Condition	V _S =44V													
Control Supply Voltage	V _S	10	24	44	10	24	44	10	24	44	V				
FET Drain-Source Voltage	V _{DSS}	100									V				
	Condition	V _S =44V, I _{DSS} =250μA													
FET ON Voltage	V _{DS}				0.85						0.85			V	
	Condition	I _D =1A, V _S =10V													
FET Diode Forward Voltage	V _{SD}				1.2						2.3			V	
	Condition	I _{SD} =1A													
FET Drain Leakage Current	I _{DSS}				250						250			μA	
	Condition	V _{DSS} =100V, V _S =44V													
IN Terminal	Input Voltage (Active High)	V _{IH}	2.0									V			
		Condition	I _D =1A												
		V _{IL}				0.8							0.8		
	Input Voltage (Active Low)	V _{IH}	2.0									V			
		Condition	V _{DSS} =100V												
		V _{IL}				0.8							0.8		
Input Current	I _I				±1						±1			μA	
	Condition	V _S =44V, V _I =0 or 5V													
SYNC Terminal	Input Voltage	V _{SYNC}	4.0									V			
		Condition	Synchronous chopping mode												
		V _{SYNC}				0.8							0.8		
	Input Current	Condition	Asynchronous chopping mode									mA			
		I _{SYNC}				0.1							0.1		
		Condition	V _S =44V, V _{SYNC} =5V												
REF Terminal	Input Current	I _{SYNC}				-0.1						-0.1			μA
		Condition	V _S =44V, V _{SYNC} =0V												
		V _{REF}	0		2.0	0		2.0	0		2.0	V			
	Input Current	Condition	Reference Voltage input									V			
		V _{REF}	4.0		5.5	4.0		5.5	4.0		5.5				
		Condition	Output FET OFF												
Internal Resistance	I _{REF}				±1						±1			μA	
	Condition	No synchronous trigger													
Sense Voltage	R _{REF}				40						40			Ω	
	Condition	Resistance between GND and REF terminal at synchronous trigger													
Switching Time	V _{RS}	V _{REF}										V			
		T _r	0.5												
	T _{stg}	T _r	0.7									μs			
		T _f	0.1												
		Condition	V _S =24V, I _D =0.8A												
Chopping OFF Time	T _{OFF}				12						12			μs	
	Condition	V _S =24V													

Internal Block Diagram



Typical Connection Diagram (Recommended component values)



External Dimensions (ZIP18 with Fin [SLA18Pin])

(Unit : mm)

