

SLA7022MU/SLA7029M/SMA7022MU/SMA7029M 2-Phase Excitation

■Absolute Maximum Ratings

(T_a=25°C)

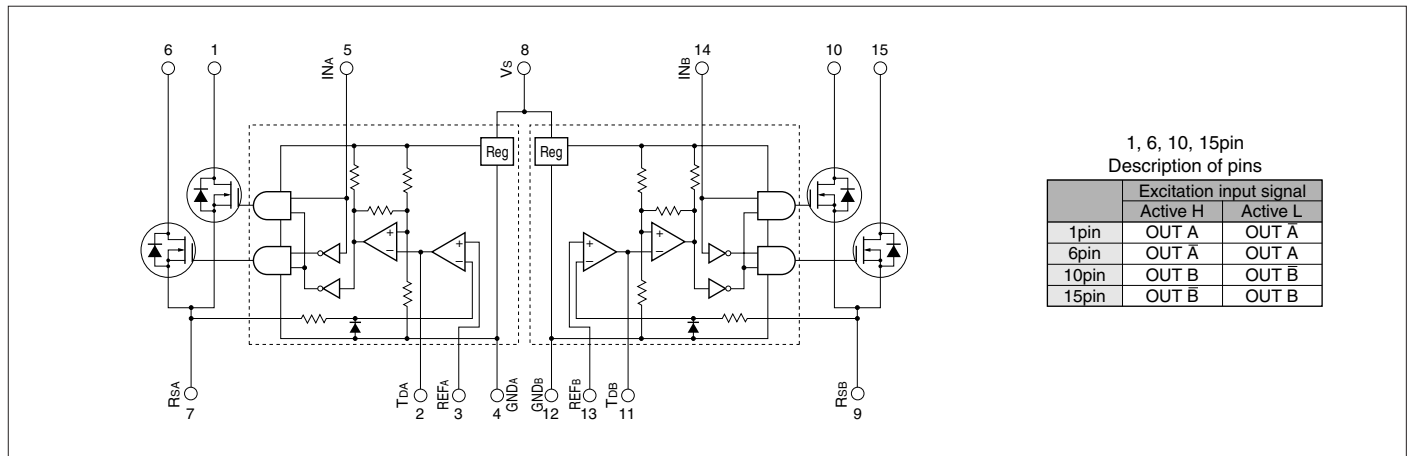
Parameter	Symbol	Ratings				Unit
		SLA7022MU	SLA7029M	SMA7022MU	SMA7029M	
Motor Supply Voltage	V _{CC}	46				V
FET Drain-Source Voltage	V _{DSS}	100				V
Control Supply Voltage	V _S	46				V
TTL Input Voltage	V _{IN}	7				V
Reference Voltage	V _{REF}	2				V
Output Current	I _O	1	1.5	1	1.5	A
Power Dissipation	P _{D1}	4.5 (Without Heatsink)		4.0 (Without Heatsink)		W
	P _{D2}	35 (T _C =25°C)		28 (T _C =25°C)		W
Channel Temperature	T _{ch}	+150				°C
Storage Temperature	T _{stg}	−40 to +150				°C

■Electrical Characteristics

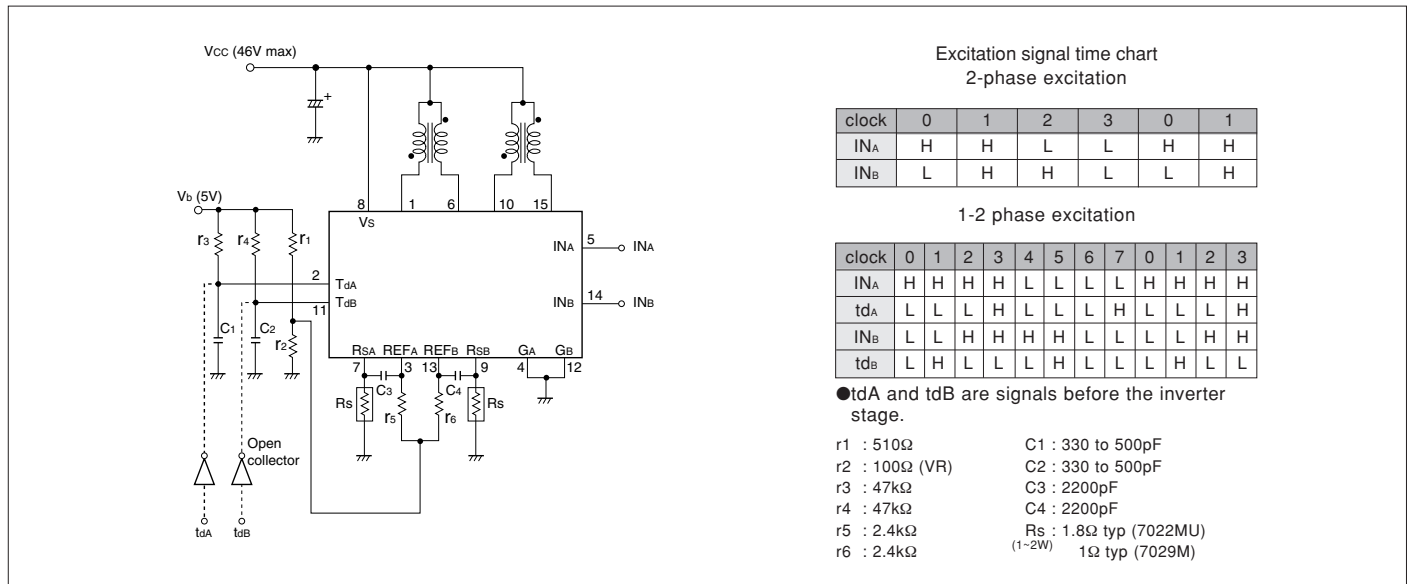
(T_a=25°C)

Parameter		Symbol	Ratings												Unit
			SLA7022MU			SLA7029M			SMA7022MU			SMA7029M			
			min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	min.	typ.	max.	
DC Characteristics	Control Supply Current	I _S		10	15		10	15		10	15		10	15	mA
		Condition	V _S =44V			V _S =44V			V _S =44V			V _S =44V			
	Control Supply Voltage	V _S	10	24	44	10	24	44	10	24	44	10	24	44	V
	FET Drain-Source Voltage	V _{DSS}	100			100			100			100			V
		Condition	V _S =44V, I _{DSS} =250μA			V _S =44V, I _{DSS} =250μA			V _S =44V, I _{DSS} =250μA			V _S =44V, I _{DSS} =250μA			
	FET ON Voltage	V _{DS}			0.85			0.6			0.85			0.6	V
		Condition	I _D =1A, V _S =14V			I _D =1A, V _S =14V			I _D =1A, V _S =14V			I _D =1A, V _S =14V			
	FET Drain Leakage Current	I _{DSS}			4			4			4			4	mA
		Condition	V _{DSS} =100V, V _S =44V			V _{DSS} =100V, V _S =44V			V _{DSS} =100V, V _S =44V			V _{DSS} =100V, V _S =44V			
	FET Diode Forward Voltage	V _{SD}			1.2			1.1			1.2			1.1	V
		Condition	I _D =1A			I _D =1A			I _D =1A			I _D =1A			
	TTL Input Current	I _{IH}			40			40			40			40	μA
			Condition	V _{IH} =2.4V, V _S =44V			V _{IH} =2.4V, V _S =44V			V _{IH} =2.4V, V _S =44V			V _{IH} =2.4V, V _S =44V		
		I _{IL}			-0.8			-0.8			-0.8			-0.8	mA
			Condition	V _{IL} =0.4V, V _S =44V			V _{IL} =0.4V, V _S =44V			V _{IL} =0.4V, V _S =44V			V _{IL} =0.4V, V _S =44V		
	TTL Input Voltage (Active High)	V _{IH}	2			2			2			2			V
			Condition	I _D =1A			I _D =1A			I _D =1A			I _D =1A		
		V _{IL}			0.8			0.8			0.8			0.8	
			Condition	V _{DSS} =100V			V _{DSS} =100V			V _{DSS} =100V			V _{DSS} =100V		
	TTL Input Voltage (Active Low)	V _{IH}	2			2			2			2			V
			Condition	V _{DSS} =100V			V _{DSS} =100V			V _{DSS} =100V			V _{DSS} =100V		
V _{IL}				0.8			0.8			0.8			0.8		
		Condition	I _D =1A			I _D =1A			I _D =1A			I _D =1A			
AC Characteristics	Switching Time	T _r		0.5			0.5			0.5			0.5	μs	
		Condition	V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			
		T _{slg}		0.7			0.7			0.7			0.7		
		Condition	V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			
		T _f		0.1			0.1			0.1			0.1		
		Condition	V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			V _S =24V, I _D =0.8A			V _S =24V, I _D =1A			

Internal Block Diagram



Typical Connection Diagram (Recommended component values)



External Dimensions (ZIP15 with Fin [SLA15Pin] /ZIP15[SMA15Pin])

(Unit:mm)

