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ICs

1-1. IC Regulators

- Switching Type
- Dropper Type

1-2. Stepper Motor Driver ICs

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1-3. Other ICs

- Voltage Doubler/Bridge Rectifier Automatic Switch ICs
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1-1. IC Regulators (Refer to the individual specifications for measurement requirements of the electrical characteristics.)

■ Surface Mount Switching Type IC Regulators

Type No.	Absolute Maximum Ratings		Recommended Operating Conditions			Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks
	DC Input Voltage VIN (V)	Storage Temperature Tstg (°C)	DC Input Voltage Range VIN (V)	Output Current Range Io (A)	Operating Temperature Top (°C)	Output Voltage Vo (V)	Efficiency η (%) typ	Switching Frequency f (kHz) typ		
SAI01	35	-40 to +125	7 to 33	0 to 0.5	-30 to +125	5.0 ±0.20	80	60	1	Built-in over current and thermal protection circuits
02			5.3 to 33			3.3 ±0.13	75			
03			15 to 33	12.0 ±0.60		88				
04			18 to 33	15.0 ±0.75		89				
06			12 to 33	9.0 ±0.45		86				

■ Switching Type IC Regulators

Type No.	Absolute Maximum Ratings		Recommended Operating Conditions			Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks
	DC Input Voltage VIN (V)	Storage Temperature Tstg (°C)	DC Input Voltage Range VIN (V)	Output Current Range Io (A)	Operating Temperature Top (°C)	Output Voltage Vo (V)	Efficiency η (%) typ	Switching Frequency f (kHz) typ		
SI-8033S	35	-40 to +125	5.3 to 28	0 to 3.0	-30 to +125	3.3 ±0.13	79	60	2	Built-in over current and thermal protection Soft start circuits
-8050S			7 to 40			5.0 ±0.20	84			
-8090S			12 to 40			9.0 ±0.45	88			
-8120S			15 to 40			12.0 ±0.50	90			
-8150S			18 to 40			15.0 ±0.75	91			

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)				Fig. No.	Remarks
	DC Input Voltage VIN (V)	Output Current Io (A)	Operating Temperature (Tc) Top (°C)	Storage Temperature Tstg (°C)	DC Input Voltage Range VIN (V)	Output Voltage Vo (V)	Efficiency η (%) typ	Switching Frequency f (kHz) typ		
STR2005	45	2.0	-20 to +100	-20 to +125	11 to 40	5.1 ±0.1	72	25	3	Variable output voltage
2012					18 to 45	12.0 ±0.2	85			
2013					19 to 45	13.0 ±0.2				
2015					21 to 45	15.0 ±0.2				
2024					30 to 50	24.0 ±0.3				
20005	45				8 to 40	5.1 ±0.1	72	30	4	

■ Switching Type/2-Pack Type IC Regulators

Combination Line-up		
Control Section (SI-8020 series)	Power Section (STR7000 and STR7100 series)	
	Io = 6A	Io = 12A
SI-8020 (Vo = 5.1V)	STR7001	STR7101
SI-8021 (Vo = 12V)	STR7002	STR7102
SI-8022 (Vo = 15V)	STR7002	STR7102
SI-8023 (Vo = 24V)	STR7003	STR7103

Type No.	Maximum Ratings of Power Section (Ta = 25°C)			Fig. No.
	Power Transistor Breakdown Voltage V4-1 (V)	Operating Temperature (Tc) Top (°C)	Storage Temperature Tstg (°C)	
STR7001	60	-30 to +125	-30 to +125	3
7002				
7003				
STR7101	60	-30 to +125	-30 to +125	3
7102				
7103				

Type No.	Maximum Ratings of Control Section (Ta = 25°C)			Fig. No.
	DC Input Voltage VIN (V)	Operating Temperature Top (°C)	Storage Temperature Tstg (°C)	
SI-8020	55	-20 to +85	-20 to +100	5
8021				
8022				
8023				

Combined Type No.	Total Characteristics (Ta = 25°C)					Remarks
	DC Input Voltage Range VIN (V)	Output Voltage Vo (V)	Output Current Range Io (A)	Efficiency η (%) typ	Switching Frequency f (kHz) typ	
STR7001 -SI-8020	11 to 40	5.1 ±0.1	0 to 6.0	72	35	Built-in over current protection circuit output ON/OFF control Variable output voltage
STR7002 -SI-8021	18 to 50	12.0 ±0.2		84		
STR7002 -SI-8022	21 to 50	15.0 ±0.2		86		
STR7003 -SI-8023	30 to 50	24.0 ±0.3		90		
STR7101 -SI-8020	11 to 40	5.1 ±0.1	0 to	70		
STR7102 -SI-8021	18 to 50	12.0 ±0.2		82		
STR7102 -SI-8022	21 to 50	15.0 ±0.2		84		
STR7103 -SI-8023	30 to 50	24.0 ±0.3		87		

Switching Type IC Regulators with Coil

Type No.	Absolute Maximum Ratings (Ta = 25°C)		Recommended Operating Conditions			Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks
	DC Input Voltage V _{IN} (V)	Storage Temperature T _{stg} (°C)	DC Input Voltage Range V _{IN} (V)	Output Current Range I _o (A)	Operating Temperature Top (°C)	Output Voltage V _o (V)	Efficiency η (%) typ	Switching Frequency f (kHz)		
SI-8201L	45	-25 to +85	10 to 40	0 to 0.4	-10 to +65	5.0 ± 0.10	73	25min	6	
-8202L			11 to 40	0 to 0.35		6.0 ± 0.10	74			
-8203L			16 to 40			12.0 ± 0.20	79			
-8204L			10 to 40	0 to 0.4		5.2 ± 0.10	73			
-8221L	40		8 to 35			5.0 ± 0.15	80			
-8211L	60		15 to 55	0 to 0.3		5.0 ± 0.10	63			
-8213L			22 to 55	0 to 0.28	12.0 ± 0.20	78				
-8301L	45		8 to 40	0 to 1	-20 to +85	5.1 ± 0.10	73	25typ		9
-8303L			8.5 to 40			5.4 ± 0.10				
-8811L	35		-25 to +85	12 to 30	0.05 to 0.45	-10 to +70	5.0 ± 0.25	72	50typ	2-output type Built-in over current protection circuit
-8911L	60	0 to -0.05			-10 to +60		5.0 ± 0.25			
-8921L				24 to 55		0.02 to 0.3	-10 to +65	5.1 ^{+0.1} _{-0.15}	72	
-8922L		20 to 55		0 to 0.6	68typ					
-8401L		35		-25 to +85	7 to 33	0 to 0.5	-20 to +85	5.0 ± 0.20	80	
-8402L	15 to 33					0 to 0.4		12.0 ± 0.60		
-8403L	5.3 to 33		0 to 0.5		3.3 ± 0.13	75				
-8405L	18 to 33		0 to 0.4		15.0 ± 0.75	89				
-8406L	10 to 33				8.0 ± 0.40	85				
-8501L	7 to 33		0 to 1		5.0 ± 0.20	83				
-8502L	15 to 33				12.0 ± 0.60	89				
-8503L	5.3 to 33				3.3 ± 0.13	79				
-8504L	12 to 33				9.0 ± 0.45	87				
-8505L	18 to 33		15.0 ± 0.75		90	9				

■ Dropper Type IC Regulators

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks	
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommended Input Voltage	Output Voltage Vo (V)				Input-Output Differential Voltage V _{DIF} (V) max
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)		V _{IN} (V)	3000F*			
SI-3050F	25	1.0	-30 to +100	-40 to +125	6.0 to 15	5.0 ±0.20	5.0 ±0.10	1.0	2	
-3090F	30				10.0 to 20	9.0 ±0.36	9.0 ±0.18			
-3120F					13.0 to 25	12.0 ±0.48	12.0 ±0.24			
-3150F	35				16.0 to 27	15.0 ±0.60	15.0 ±0.30			
-3157F					16.7 to 27	15.7 ±0.78	—			
-3025F	30				6.0 to 25	3 to 24 (Variable)				

* "A" may be marked on the right side of marking.

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks	
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommended Input Voltage	Output Voltage Vo (V)				Input-Output Differential Voltage V _{DIF} (V) max
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)		V _{IN} (V)	3000N*			
SI-3050N	25	1.0	-30 to +100	-40 to +125	6 to 15	5.0 ±0.20	5.0 ±0.10	1.0	12	
-3090N	30				10 to 20	9.0 ±0.36	9.0 ±0.18			
-3120N					13 to 25	12.0 ±0.48	12.0 ±0.24			
-3150N	35				16 to 27	15.0 ±0.60	15.0 ±0.30			
					16 to 27	15.0 ±0.60	15.0 ±0.30			

* "A" may be marked on the right side of marking.

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks	
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommended Input Voltage	Output Voltage Vo (V)				Input-Output Differential Voltage V _{DIF} (V) max
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)		V _{IN} (V)	3000C*			
SI-3033C	20	1.5	-30 to +100	-40 to +125	4.5 to 15	3.3 ±0.132	3.3 ±0.066	1.0	2	
-3050C	35				6.0 to 30	5.0 ±0.200	5.0 ±0.100			
-3090C					10.0 to 30	9.0 ±0.360	9.0 ±0.180			
-3120C	35				13.0 to 30	12.0 ±0.480	12.0 ±0.240			
-3150C					16.0 to 30	15.0 ±0.600	15.0 ±0.300			
-3240C	45				25.0 to 40	24.0 ±0.960	24.0 ±0.480			

* "A" may be marked on the right side of marking.

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks	
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommended Input Voltage	Output Voltage Vo (V)				Input-Output Differential Voltage V _{DIF} (V) max
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)		V _{IN} (V)	3001N*			
SI-3051N	35	1.5	-30 to +100	-40 to +125	6 to 30	5.0 ±0.20	5.0 ±0.10	1.0	11	
-3091N					10 to 30	9.0 ±0.36	9.0 ±0.18			
-3121N					13 to 30	12.0 ±0.48	12.0 ±0.24			
-3151N					16 to 30	15.0 ±0.60	15.0 ±0.30			
-3241N					45	25 to 40	24.0 ±0.96			24.0 ±0.48

* "A" may be marked on the right side of marking.

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommend Input Voltage	Output Voltage	Input-Output Differential Voltage V _{DIF} (V) max		
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)	V _{IN} (V)	Vo (V)	V _{DIF} (V) max		
SI-3050J	25	2.0	-30 to +100	-40 to +125	6 to 15	5.0 ±0.10	1.0	2	
-3090J	30				10 to 25	9.0 ±0.18			
-3120J	35				13 to 27	12.0 ±0.24			
-3150J					16 to 27	15.0 ±0.30			

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)			Fig. No.	Remarks
	Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommend Input Voltage	Output Voltage	Input-Output Differential Voltage V _{DIF} (V) max		
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)	V _{IN} (V)	Vo (V)	V _{DIF} (V) max		
SI-3052N	25	2.0	-30 to +100	-40 to +125	6 to 15	5.0 ±0.10	1.0	11	
-3092N	30				10 to 25	9.0 ±0.18			
-3122N	35				13 to 27	12.0 ±0.24			
-3152N					16 to 27	15.0			

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)				Fig. No.	Remarks
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Recommended Input Voltage	Output Voltage	Input-Output Differential Voltage	Reset Detection Voltage Level		
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)	V _{IN} (V)	V _O (V)	V _{DIF} (V) max	V _{oh} /V _o (%)		
SI-3050R	35	1.5	-30 to +100	-30 to +125	6 to 30	5.0 ± 0.2	1.0	90 to 94	2	Reset function Low power dissipation type Built-in over current, input over voltage and thermal protection circuits

Type No.	Absolute Maximum Ratings (Ta = 25°C)				Electrical Characteristics (Ta = 25°C)		Fig. No.	Remarks
	DC Input Voltage	Output Current	Operating Temperature	Storage Temperature	Output Voltage	Input-Output Differential Voltage		
	V _{IN} (V)	I _O (A)	Top (°C)	Tstg (°C)	V _O (V)	V _{DIF} (V) max		
SI-3052V	25	2.0	-20 to +100 (T _C)	-30 to +125	5.0 ± 0.1	1.0	12	Low power dissipation type Built-in over current protection circuits
-3122V	30				12.0 ± 0.2			
-3152V	30				15.0 ± 0.2			
SI-3052P	45	2.0	-20 to +80	-30 to +125	5.0 ± 0.1	3.0	12	Built-in over current protection circuits
-3122P					12.0 ± 0.2			
-3152P					15.0 ± 0.2			
-3242P					24.0 ± 0.2			
STR9005	25	4.0	-20 to +100 (T _C)	-30 to +125	5.0 ± 0.1	1.0	3	Low power dissipation type Built-in over current protection circuits Output ON/OFF control and fine-adjustment of output voltage possible
9012	30				12.0 ± 0.2			
9015	30				15.0 ± 0.2			

3-Output IC Regulators

Type No.	Absolute Maximum Ratings (Ta = 25°C)					Electrical Characteristics (Ta = 25°C)					Fig. No.	Remarks
	DC Input Voltage	Output Current	Power Dissipation (All Output ON)	Operating Temperature	Storage Temperature	DC Input Voltage Range	Output Voltage	Minimum Input-Output Differential Voltage	Efficiency	Regulator Type		
	V _{IN} (V)	I _O (A)	P _D (W)	Top (°C)	Tstg (°C)	V _{IN} (V)	V _O (V)	V _{DIF} (V) max	η (%) typ			
SLA 3001M	Reg1	1.5	40	-30 to +85	-40 to +125	13 to 25	12.0 ± 0.48	1.0	-	Dropper type	13	Low power dissipation type Remote sensing possible Built-in overcurrent, input overvoltage and thermal protection circuits
	Reg2					6 to 15	5.0 ± 0.15					
	Reg3					10 to 20	9.0 ± 0.36					
SLA 3002M	Reg1	0.5	37.5	-30 to +85	-40 to +150	7 to 33	5.0 ± 0.25	3.0	80	Switching type	13	Low power dissipation type Remote sensing possible (Reg 2 only) Built-in overcurrent and thermal protection circuits
	Reg2	1.0				17 to 30	15.7 ± 0.78	1.0	-	Dropper type		
	Reg3	0.4				12 to 33	9.0 ± 0.45	3.0	85	Switching type		
SLA 3004M	Reg1	0.5	37.5	-30 to +85	-40 to +150	7 to 33	5.0 ± 0.25	3.0	80	Switching type	13	Built-in overcurrent and thermal protection circuits
	Reg2	0.4				12 to 33	9.0 ± 0.45		85			
	Reg3	0.4				12 to 33	9.0 ± 0.36		85			

1.2 Stepper Motor Driver ICs

■ Unipolar Driver ICs

● SLA package product (Heat sink attachable type)

Type No.	Output Current I _o (A)	Control Supply Voltage (= Motor Supply Voltage) (V)	Step sequence mode	Package	Fig. No.	Remarks	
SLA7026M	3.0 max	46 max	1-2 phase excitation enabled	ZIP18pin	14		
SLA7024M	1.5 max						
SLA7027MU	1.0 max		2-phase excitation only	ZIP15pin	15		
SLA7029M	1.5 max						
SLA7022MU	1.0 max						
SLA7044M (PG001M)	3.0 max		Micro-step enabled	ZIP18pin (DIP16pin)	14		Driver + Pulse generator
SLA7042M (PG001M)	1.2 max				(16)		
				14			
				(16)			

● SMA package (Compact type)

Type No.	Output Current I _o (A)	Control Supply Voltage (= Motor Supply Voltage) (V)	Step sequence mode	Package	Fig. No.	Remarks
SMA7029M	1.5 max	46 max	2-phase excitation only	ZIP15pin	17	
SMA7022MU	1.0 max					

● SDK package (Surface mount type)

Type No.	Output Current I _o (A)	Control Supply Voltage (= Motor Supply Voltage) (V)	Step sequence mode	Package	Fig. No.	Remarks
SDK03M	1.0 max	46 max	1-2 phase excitation enabled	SMD16pin	18	1 motor driven by 2 packages

■ Bipolar Driver ICs

Type No.	Output Current I _o (A)	Supply Voltage Range (V)	Step sequence mode	Package	Fig. No.	Remarks
SI-7230M	±3.0 max	15 to 45	1-2 phase excitation enabled	SIP20pin	19	Open air package
SI-7502 (SLA5011) (SLA6503)	1.5max *Per 1 phase of motor coil	15 to 45	Pentagonal 4-phase excitation	ZIP27pin (Powder coating) (SIP12pin) (SIP12pin)	20 21	1 set of 3 products

1-3. Other ICs

Voltage Doubler/Bridge Rectifier Automatic Switch ICs

Type No.	Absolute Maximum Ratings (Ta = 25°C)					Electrical Characteristics (Ta = 25°C)				Fig. No.	Remarks	
	Repetitive Peak Off-state Voltage	RMS On-state Current	Surge On-state Current	Operating Temperature	Storage Temperature	Voltage Doubler Function Turn-on Voltage Vs (V)	Setting Switchover Voltage		OFF-state Current			ON-state Voltage
							Vc1 (V)	Vc2 (V(AC))*				
STR 80145A	500	5.0	50	-10 to +100 (Tc)	-30 to +125	AC80 max	196 ±5	145	100 max	1.8 max	22	
81145A		10.0	100				215 ±5	159				
81159A		5.0	50				DC100 max	205 ±5				
STR 82145	500	10.0	100	-20 to +100 (Tc)	-40 to +125	225 ±5		159	100 max	1.8 max	22	With latching capability
83145		5.0	50									
83159		10.0	100									

*Reference value

Error Amplifier ICs (SE series)

Type No.	Absolute Maximum Ratings (Ta = 25°C)			Electrical Characteristics (Ta = 25°C)	Fig. No.	Remarks
	Collector-Ground Voltage	Collector Current	Operating Temperature	Output Detection Voltage		
	VcGo (V)	Ic (mA)	Top (°C)	Vs (V)		
SE005N	12	20	-20 to +125 (Tc)	5.0 ±0.1	23	Low Vs
012N	50			12.0 ±0.2		
015N				15.0 ±0.2		
024N				24.0 ±0.2		
034N				34.0 ±0.3		
040N				40.0 ±0.4		
070N				70.2 ±0.8		High Vs
080N	80.2 ±0.8					
090N	90.0 ±0.8					
105N	105.2 ±0.8					
110N	110.2 ±0.8					
115N	115.2 ±0.8					
120N	120.2 ±0.8					
125N	125.2 ±0.8					
130N	130.2 ±0.8					
135N	135.2 ±0.8					
140N	141.2 ±0.8					

Variable Voltage Detection Type Error Amplifier ICs

Type No.	Absolute Maximum Ratings (Ta = 25°C)			Electrical Characteristics (Ta = 25°C)	Fig. No.	Remarks
	Collector-Ground Voltage	Collector Current	Operating Temperature	Output Detection Voltage		
	VcGo (V)	Ic (mA)	Top (°C)	Vs (V)		
SE-B3	150	20	-20 to +125 (Tc)	141.2 ± 0.6 Condition $I_{IN} = 4\text{mA}, R_C = 9.1\text{k}\Omega$ $R_S = 88.7\text{k}\Omega$	23	Variable voltage detection Gain adjustment possible

● External Dimensions (unit: mm)

Fig. 1

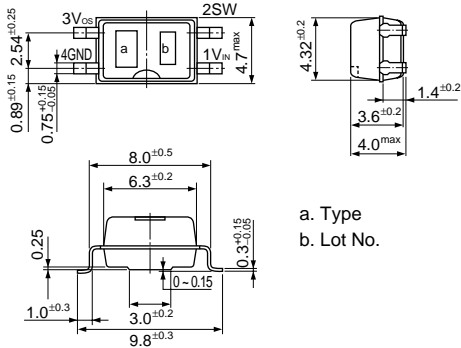
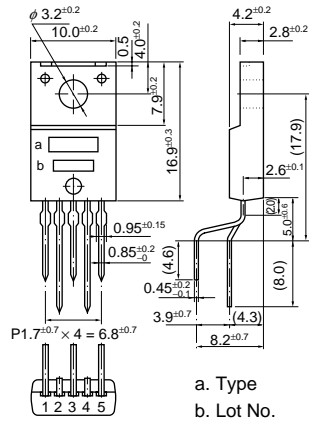


Fig. 2



Forming No. 1101

Fig. 3

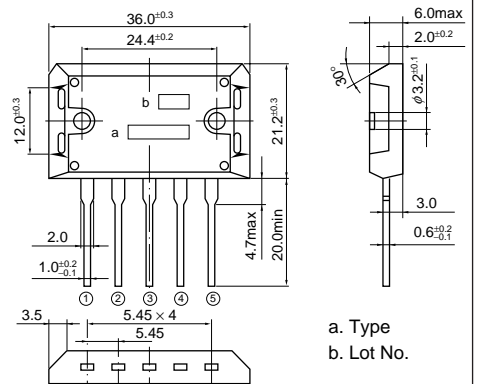


Fig. 4

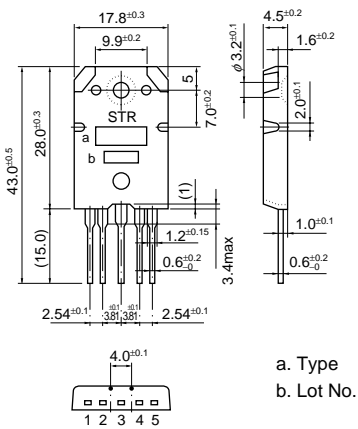


Fig. 5

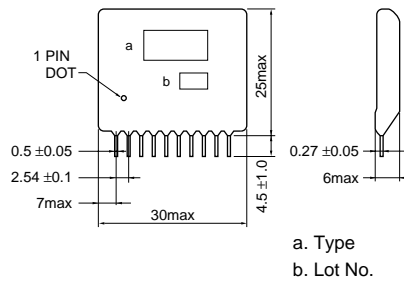


Fig. 6

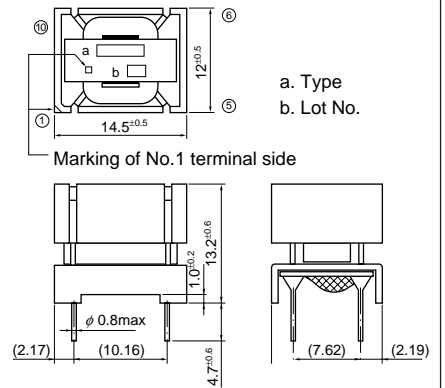


Fig. 7

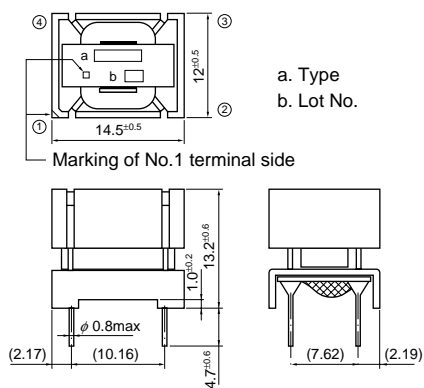


Fig. 8

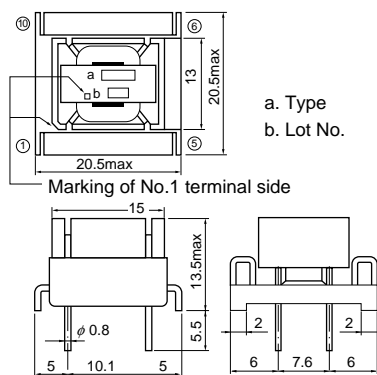


Fig. 9

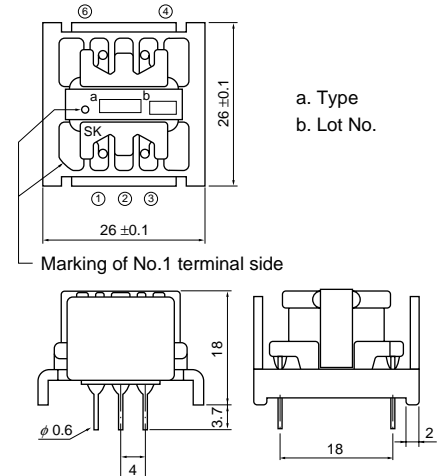


Fig. 10

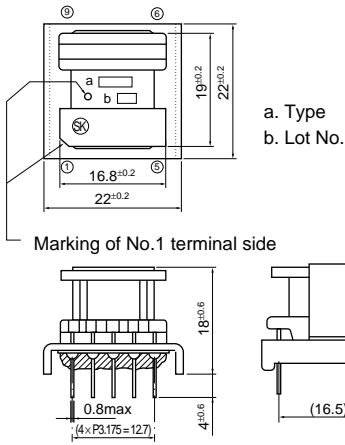


Fig. 11

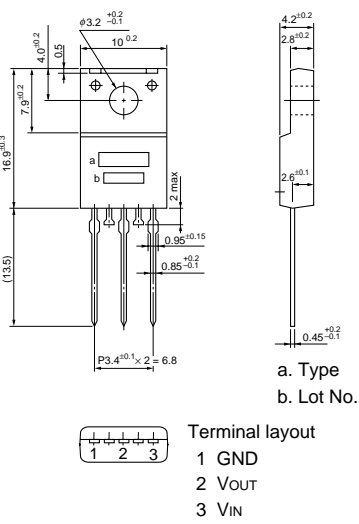


Fig. 12

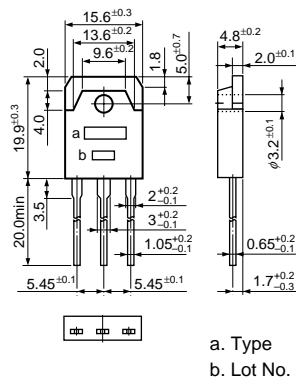


Fig. 13

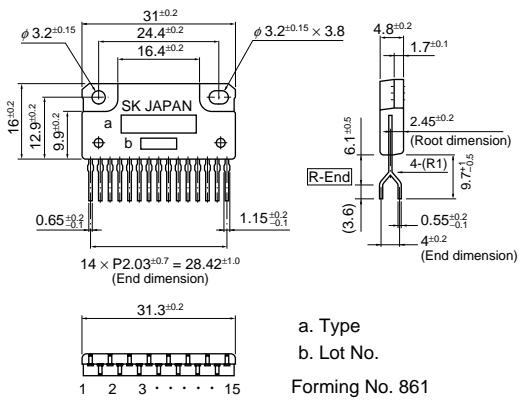


Fig. 14

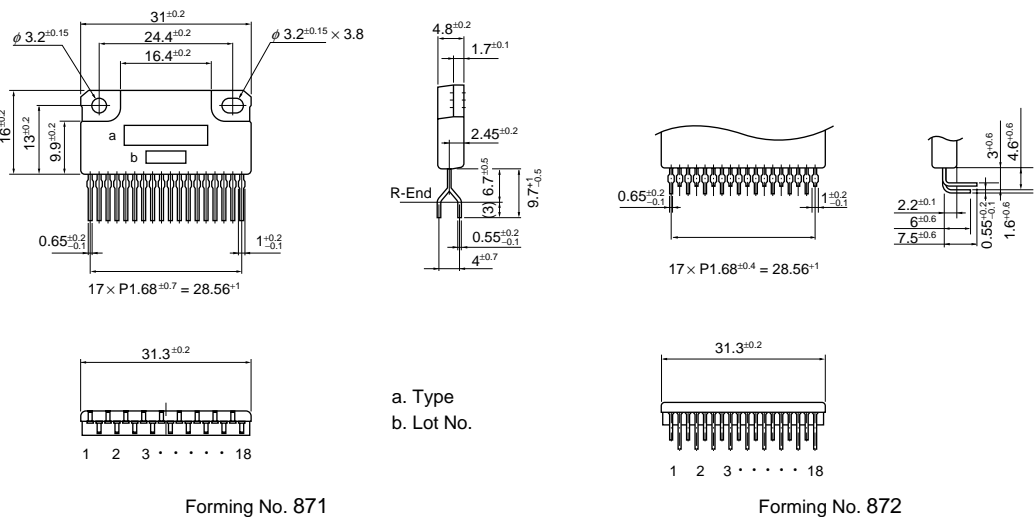
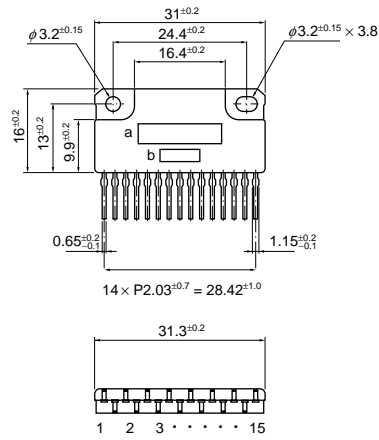
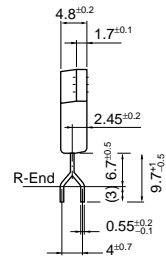


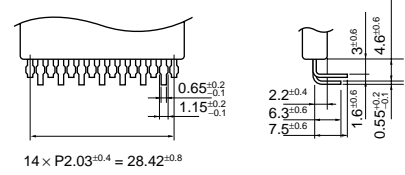
Fig. 15



Forming No. 853



a. Type
b. Lot No.



$14 \times P2.03^{+0.4} = 28.42^{+0.8}$

Forming No. 855

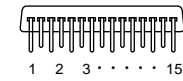


Fig. 16

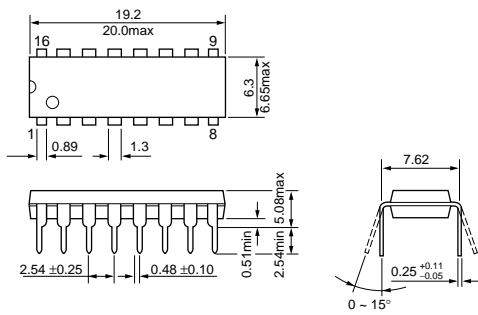
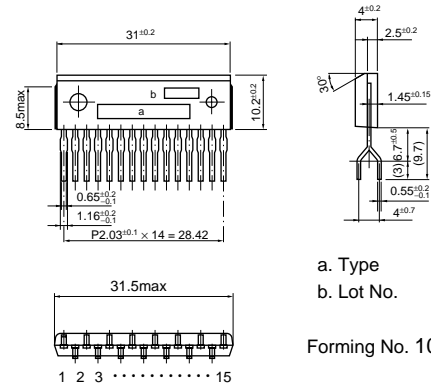


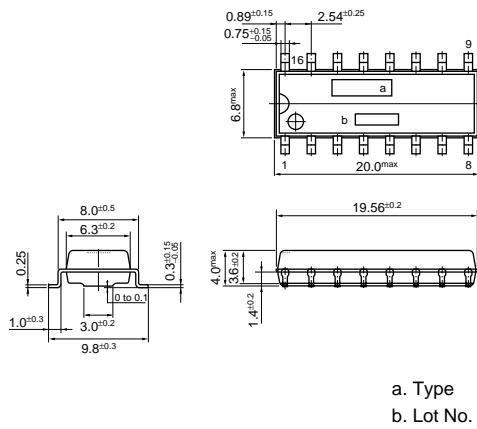
Fig. 17



a. Type
b. Lot No.

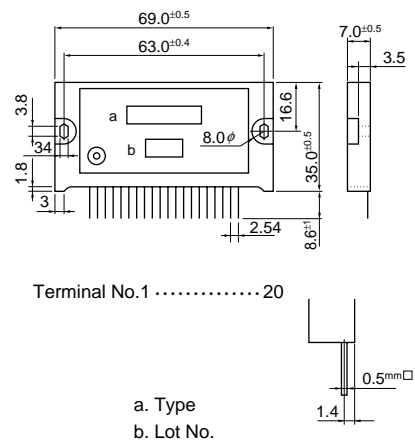
Forming No. 1054

Fig. 18



a. Type
b. Lot No.

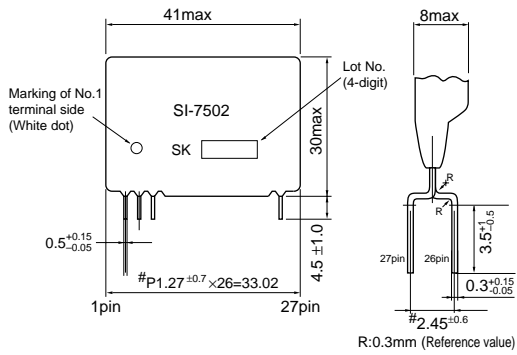
Fig. 19



Terminal No.1 20

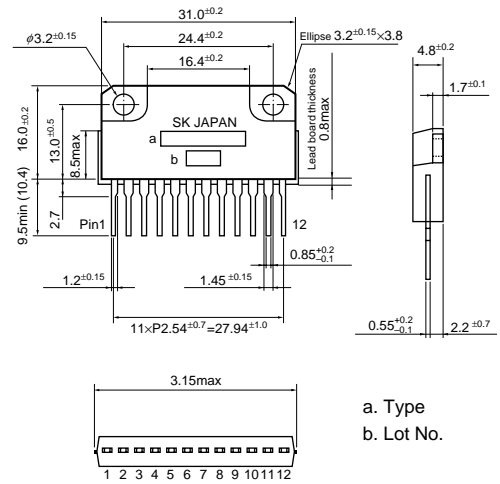
a. Type
b. Lot No.

Fig. 20



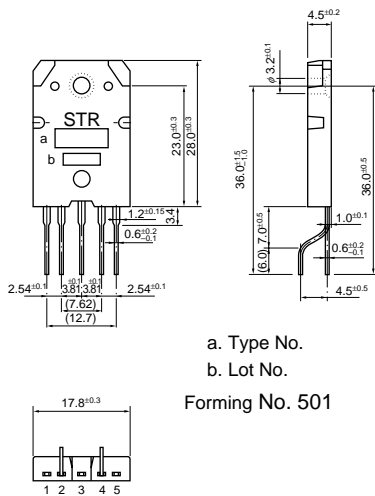
Note) Symbol # indicates the dimension of the lead end.

Fig. 21



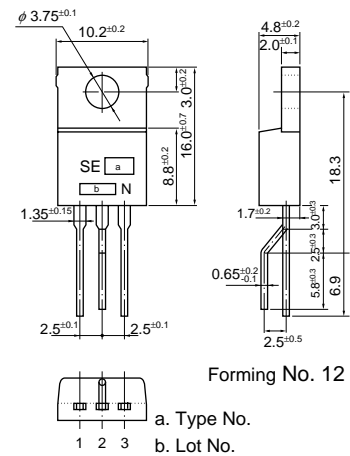
a. Type
b. Lot No.

Fig. 22



a. Type No.
b. Lot No.
Forming No. 501

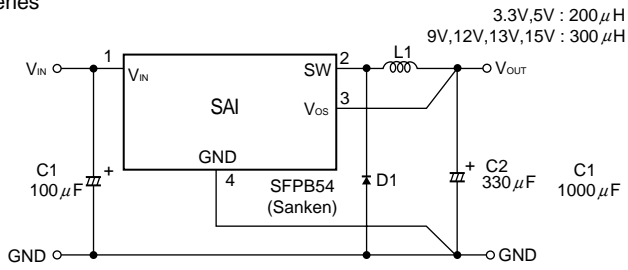
Fig. 23 MT-25 (TO-220)



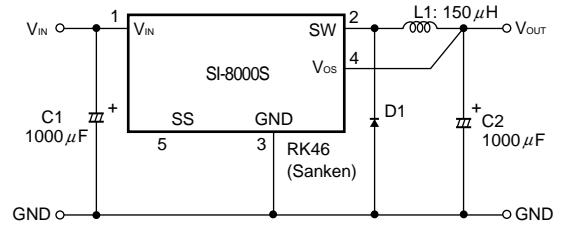
Forming No. 12
a. Type No.
b. Lot No.

Standard Connection Diagrams

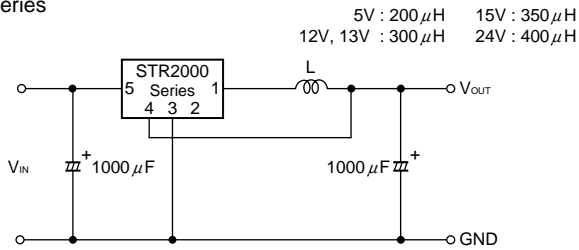
SAI Series



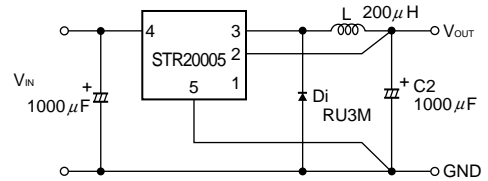
SI-8000S Series



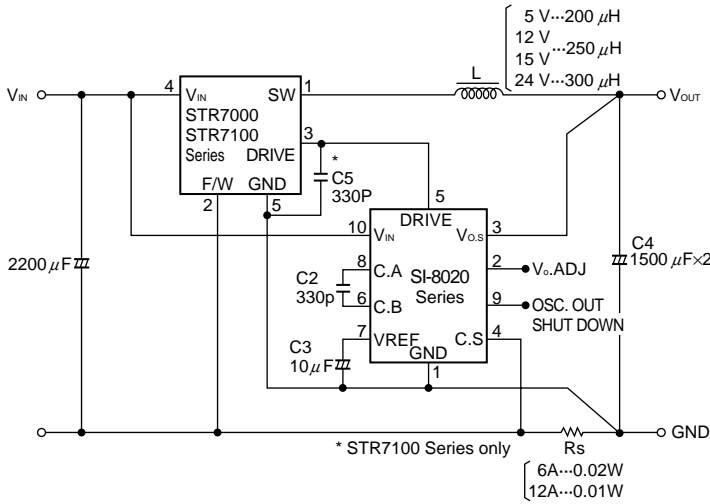
STR2000 Series



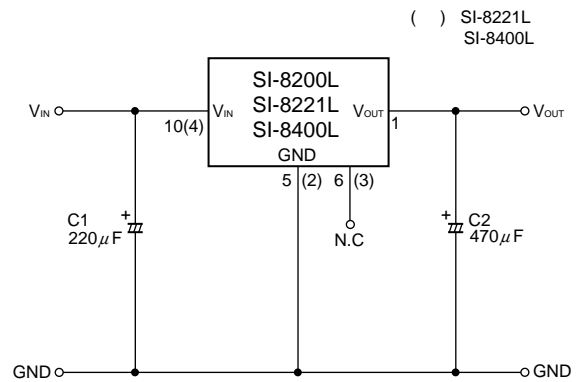
STR20005



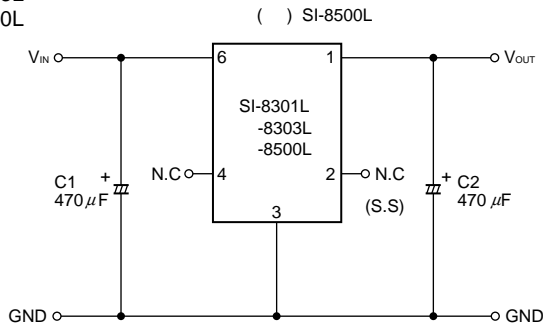
STR7000, 7100/SI-8020 Series



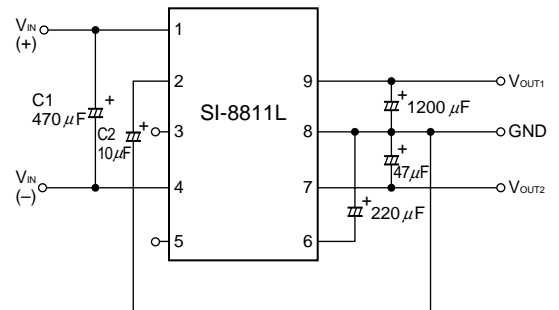
SI-8200L/8400L Series



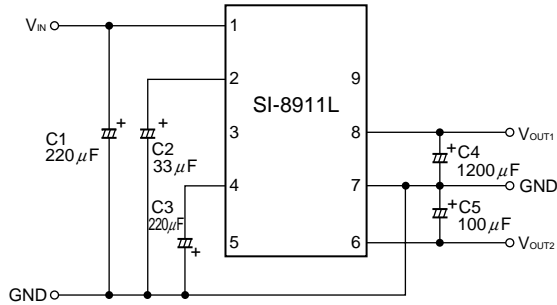
SI-8301L -8303L -8500L



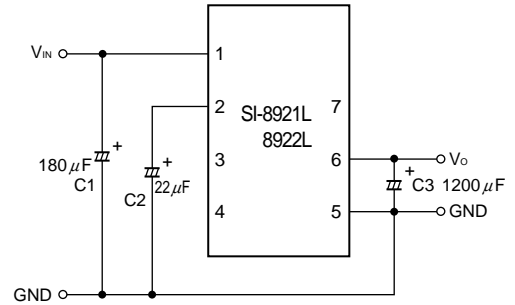
SI-8811L



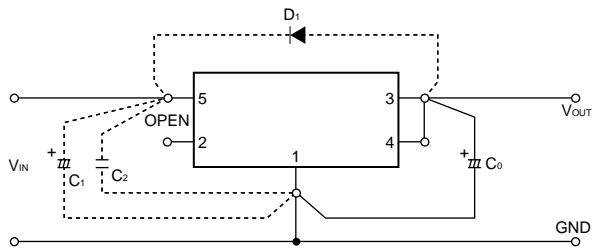
SI-8911L



SI-8921L
8922L

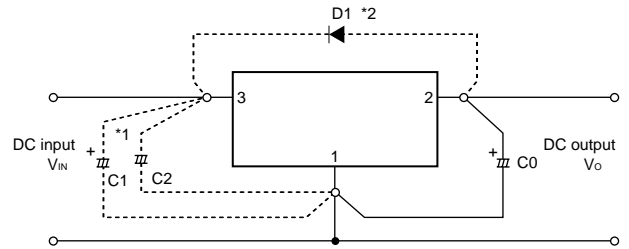


SI-3000F/3000C/3000J Series



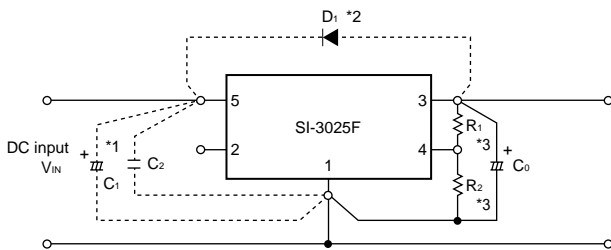
- C₀ : Output capacitor 47 to 100 µF
- *1 C₁, C₂ : Oscillation prevention capacitor (C₁ : Approx. 47 µF, C₂ : Approx. 0.33 µF)
- *2 D₁ : Diode for protection against the occurrence of a reverse bias condition between the input and the output.

SI-3000N/3001N/3002N Series



- C₀ : Output capacitor (47 to 100 µF, 50V)
- *1 C₁ : Oscillation prevention capacitor (C₁ : Approx. 47 µF, C₂ : Approx. 0.33 µF)
- *2 D₁ : Diode for protection against the occurrence of a reverse bias condition between the input and the output.

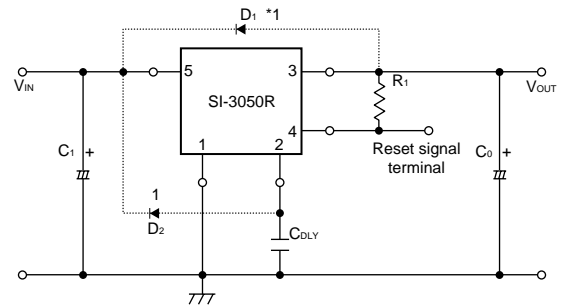
SI-3025F



- C₀ : Output capacitor (47 to 100 µF, 50V)
- *1 C₁, C₂ : Oscillation prevention capacitor (C₁ : Approx. 47 µF, C₂ : Approx. 0.33 µF)
- *2 D₁ : Diode for protection against the occurrence of a reverse bias condition between the input and the output.
- *3 R₁, R₂ : External resistor for output voltage setting
The equation (1) is applied to output voltage V_o and external resistor R₁ & R₂
$$V_o = V_{REF} \cdot \left(1 + \frac{R_1}{R_2}\right) \quad (1) \quad (V_{REF} = 2.55V \text{ (typ.)})$$

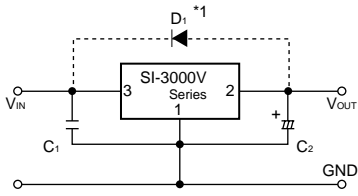
R₂ should be 2.55 kΩ for stable operation.

SI-3050R



- C₀ : Output capacitor (Approx. 200 µF, 50V)
- C₁ : Oscillation prevention capacitor (C₁ : Approx. 47 µF)
Wirings between 5 (V_{in}) and 1 (GND) terminals should be the shortest distance as much as possible. When the input line is inductive or if a long wire is used, add a capacitor with good high frequency characteristics and a capacitance of Approx. 0.33 µF in parallel with the C₁. Tantalum capacitors are recommended for C₁ and C₀ when operating in low temperature environments.
- C_{DLY} : Delay capacitor (reset output)
- R₁ : Pull-up resistor (more than 300Ω)
- *1 D₁, D₂ : Diode for protection against the occurrence of a reverse bias condition between the input and the output.

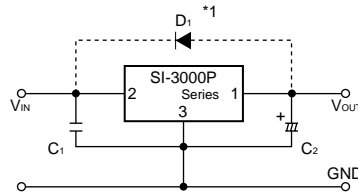
SI-3000V



C1: Oscillation prevention capacitor (0.33 μ F)
 C2: Output capacitor (47 to 100 μ F)

*1 D1: Diode for protection against the occurrence of a reverse bias condition between the input and the output.

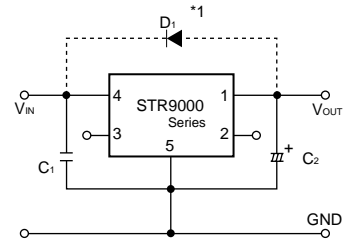
SI-3000P



C1: Oscillation prevention capacitor (0.33 μ F)
 C2: Output capacitor (47 to 100 μ F)

*1 D1: Diode for protection against the occurrence of a reverse bias condition between the input and the output.

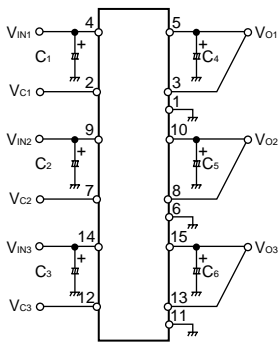
STR9000



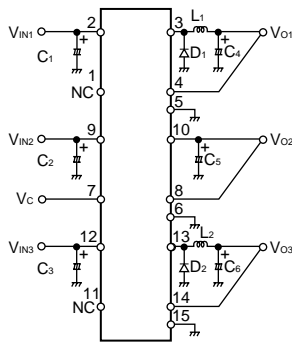
C1: Oscillation prevention capacitor (0.33 μ F)
 C2: Output capacitor (47 to 100 μ F)

*1 D1: Diode for protection against the occurrence of a reverse bias condition between the input and the output.

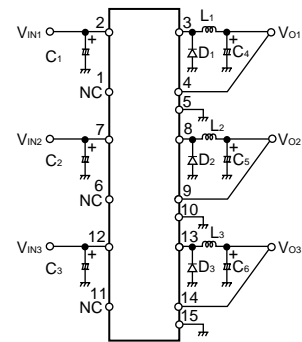
SLA3001M



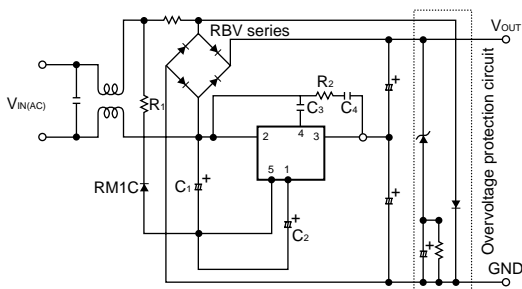
SLA3002M



SLA3004M

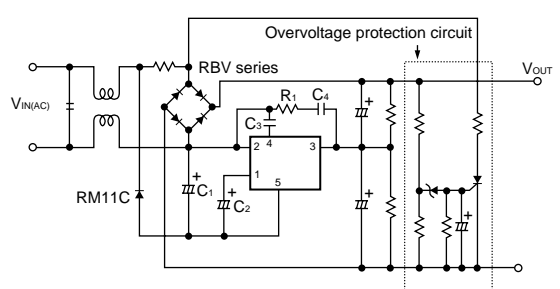


STR80000A Example of application circuit



R1: 2.2 Ω R2: 4.7 Ω
 C1: 2.2 μ F/400V C2: 100 μ F/10V C3: 0.1 μ F
 C4: 0.047 μ F

STR82000/83000 Example of application circuit



C1: 4.7 μ F/400V, C2: 1 μ F/50V, C3: 0.047 μ F/50V
 C4: 0.047 μ F/250V, R1: 4.7 Ω