STR20000 Series

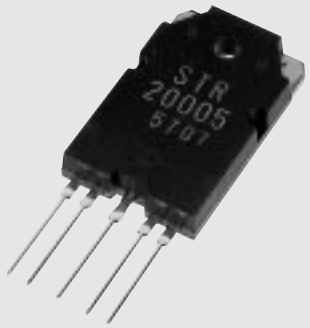
Switching Type —— Chopper • Self Oscillation Type

Features

- Requires only 4 external components
- Small size and high efficiency
- Low switching noise
- Variable output voltage
- Use of Sanken semiconductors components ensures high reliability

Applications

- For power supplies in office equipment such as electronic typewriters, printers and copiers
- For power supplies in VCRs, personal CB radios (fixed stations), etc.



External View

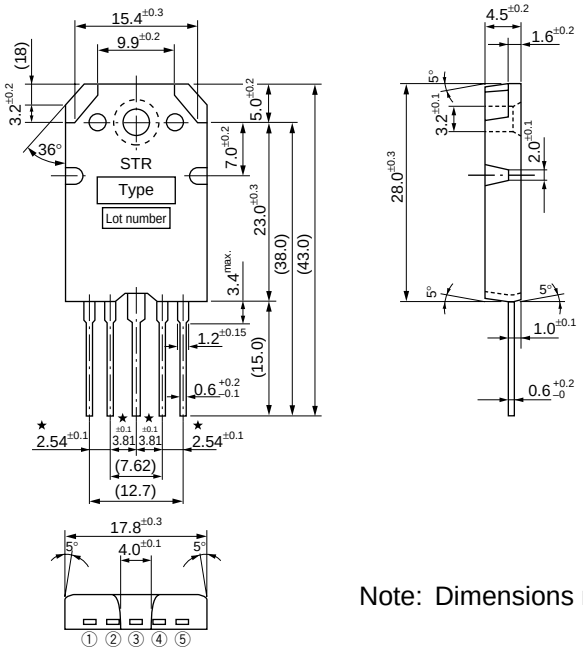
■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
		STR20005	
DC Input Voltage	V_{IN}	45	V
DC Output Current	I_O	2.0 (pulse 3.0)	A
Power Dissipation	P_D	55 (T_C=25°C)	W
		13 (T_C=100°C)	
Operating Temperature	Top	–20 to +100	°C
Storage Temperature	Tstg	–20 to +125	°C
Thermal Resistance (junction-to-case)	Rth(j-c)	1.8	°C/W

■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Ratings			Unit
		STR20005			
		min	typ	max	
DC Input Voltage Range	V_{IN}	8		40	V
	Condition	I_O=1.0A			
Output Voltage	V_O	5.0	5.1	5.2	V
	Condition	V_{IN}=20V, I_O=1.0A			
Efficiency	η		72		%
	Condition	V_{IN}=20V, I_O=1.0A			
Line Regulation	ΔV_{OLINE}			50	mV
	Condition	V_{IN}=15 to 25V, I_O=1.0A			
Load Regulation	ΔV_{OLOAD}			100	mV
	Condition	V_{IN}=20V, I_O=0.5 to 1.5A			
Ripple Rejection	R_{REJ}		45		dB
	Condition	f=100 to 120Hz			
Switching Frequency	f		30		kHz
	Condition	V_{IN}=20V, I_O=1.0A			

■Outline Drawing/Terminal Connections (unit: mm)



Plastic Mold Package Type
Flammability: UL94V-0

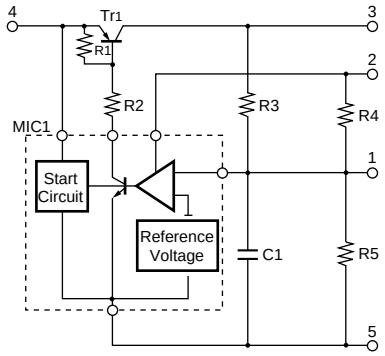
Terminal Connections

① Output Voltage Adjustment
② Output Voltage Detection
③ Switching Output (backside of case)
④ Input
⑤ Ground

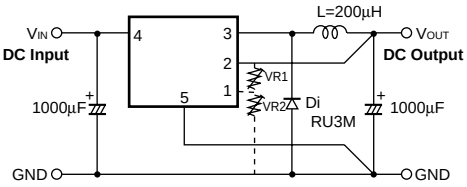
Weight: Approx. 8.2 g

Note: Dimensions marked with ⋆ are measured at the roots of the leads.

■Block Diagram



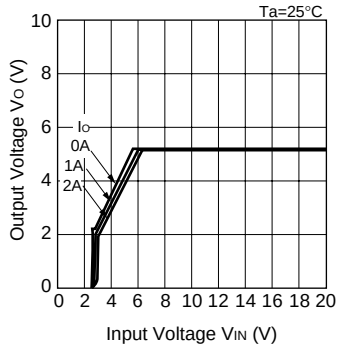
■Standard External Circuit



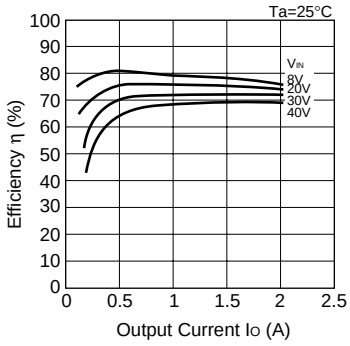
Use VR_1 and VR_2 only when adjusting the output voltages.
VR_1 : V_{out} down
VR_2 : V_{out} up
RU3M forward voltage : 0.7V

■Typical Operating Characteristics

Rise Characteristics



Efficiency Characteristics



Ta-PD Characteristics

