

STR20000 Series

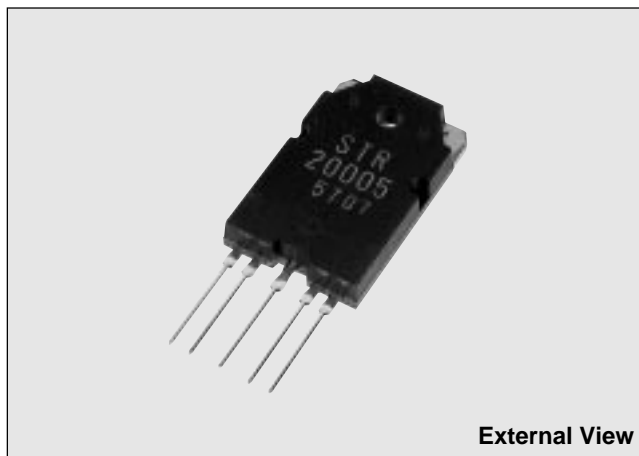
Switching Type — Chopper • Self Oscillation Type

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.



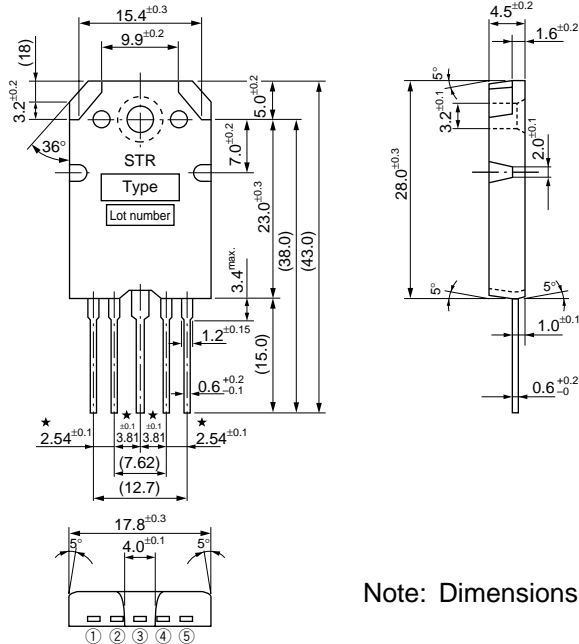
Absolute Maximum Ratings (Ta=25°C)

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	T _{op}	-20 to +100		°C
Storage Temperature	T _{stg}	-20 to +125		°C
Thermal Resistance (junction-to-case)	R _{th(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

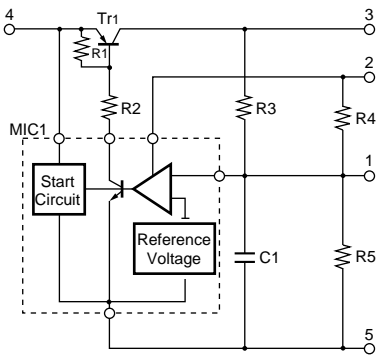
Terminal Connections

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

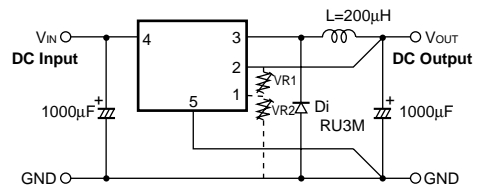
Weight: Approx. 8.2 g

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

Block Diagram



Standard External Circuit



Use VR1 and VR2 only when adjusting the output voltages.

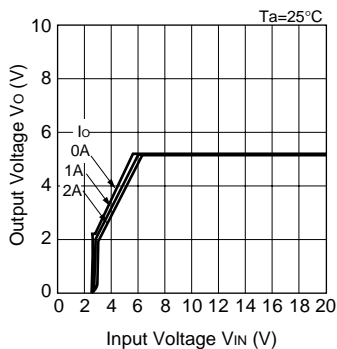
VR1 : V_{out} down

VR2 : V_{out} up

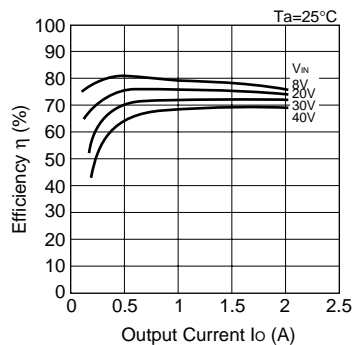
RU3M forward voltage : 0.7V

Typical Operating Characteristics

Rise Characteristics



Efficiency Characteristics



Ta-PD Characteristics

