

STR20000 Series

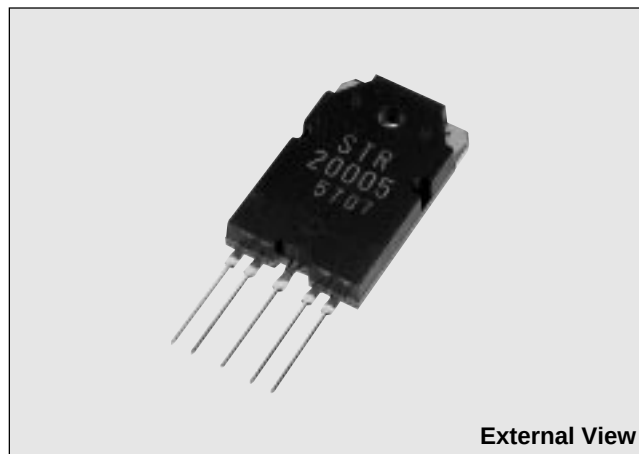
Switching Type — Chopper • Self Oscillation Type

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.



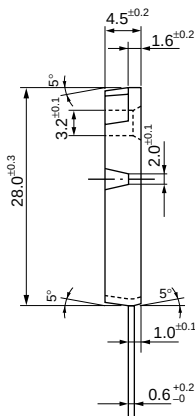
External View

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	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			

[illegible]

Flammability: UL94V-0

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

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

RU3M forward voltage : 0.7V

Rise Characteristics

$T_a = 25^\circ\text{C}$

The graph shows the output voltage V_o (V) on the y-axis (0 to 10) versus the input voltage V_{IN} (V) on the x-axis (0 to 20). Four curves are plotted for different load currents: I_o (no load), 0A, 1A, and 2A. All curves show a linear increase in V_o as V_{IN} increases, reaching a plateau at $V_o = 5\text{V}$. The plateau is reached at lower V_{IN} values for higher load currents.

Input Voltage V_{IN} (V)	Output Voltage V_o (V) at I_o	Output Voltage V_o (V) at 0A	Output Voltage V_o (V) at 1A	Output Voltage V_o (V) at 2A
2	0	0	0	0
3	2	1.5	1	0.5
4	4	3	2	1.5
5	5	4	3	2
6	5	5	4	3
7	5	5	5	4
8	5	5	5	5
10	5	5	5	5
12	5	5	5	5
14	5	5	5	5
16	5	5	5	5
18	5	5	5	5
20	5	5	5	5

