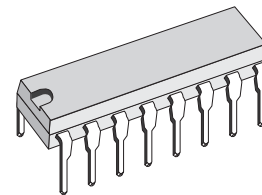


TV VERTICAL DEFLECTION OUTPUT CIRCUIT

- POWER AMPLIFIER
- FLYBACK GENERATOR
- THERMAL PROTECTION
- REFERENCE VOLTAGE



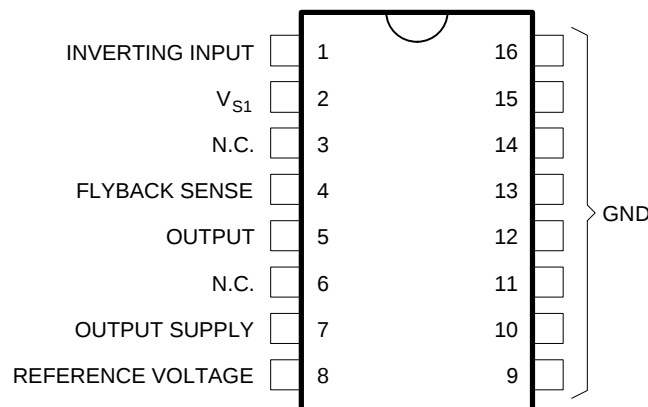
DIP16
(Plastic Package)

ORDER CODE : TDA8173

DESCRIPTION

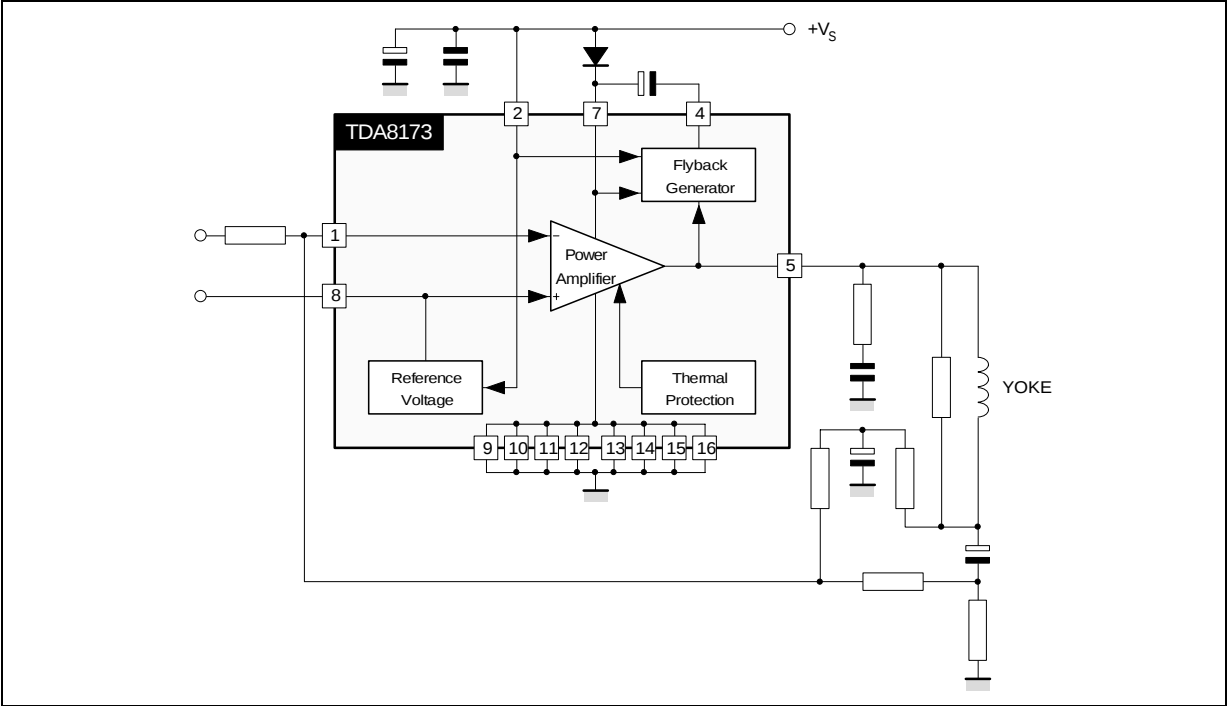
The TDA8173 is a monolithic integrated circuit in POWERDIP package. It is a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in Color and B & W television sets as well as in monitors, and displays.

PIN CONNECTIONS (top view)



8173-01EPS

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage (pin 2)	35	V
V_5	Flyback Peak Voltage	60	V
V_4	Voltage at Pin 4	$+ V_S$	
V_1, V_8	Amplifier Input Voltage	$+ V_S$ $- 0.5$	V
I_o	Output Peak Current (non repetitive, $t = 2 \text{ ms}$)	2.5	A
I_o	Output Peak Current at $f = 50 \text{ or } 60 \text{ Hz}$, $t \leq 10 \text{ } \mu\text{s}$	3	A
I_o	Output Peak Current at $f = 50 \text{ or } 60 \text{ Hz}$, $t > 10 \text{ } \mu\text{s}$	2	A
I_4	Pin 4 DC Current at $V_5 < V_2$	100	mA
I_4	Pin 4 Peak to Peak Flyback Current at $f = 50 \text{ or } 60 \text{ Hz}$, $t_{\text{fly}} \leq 1.5 \text{ ms}$	3	A
P_{tot}	Total Power Dissipation at $T_{\text{case}} = 60 \text{ } ^\circ\text{C}$	6	W
T_{stg}, T_j	Storage and Junction Temperature	$- 40 \text{ to } 150$	$^\circ\text{C}$

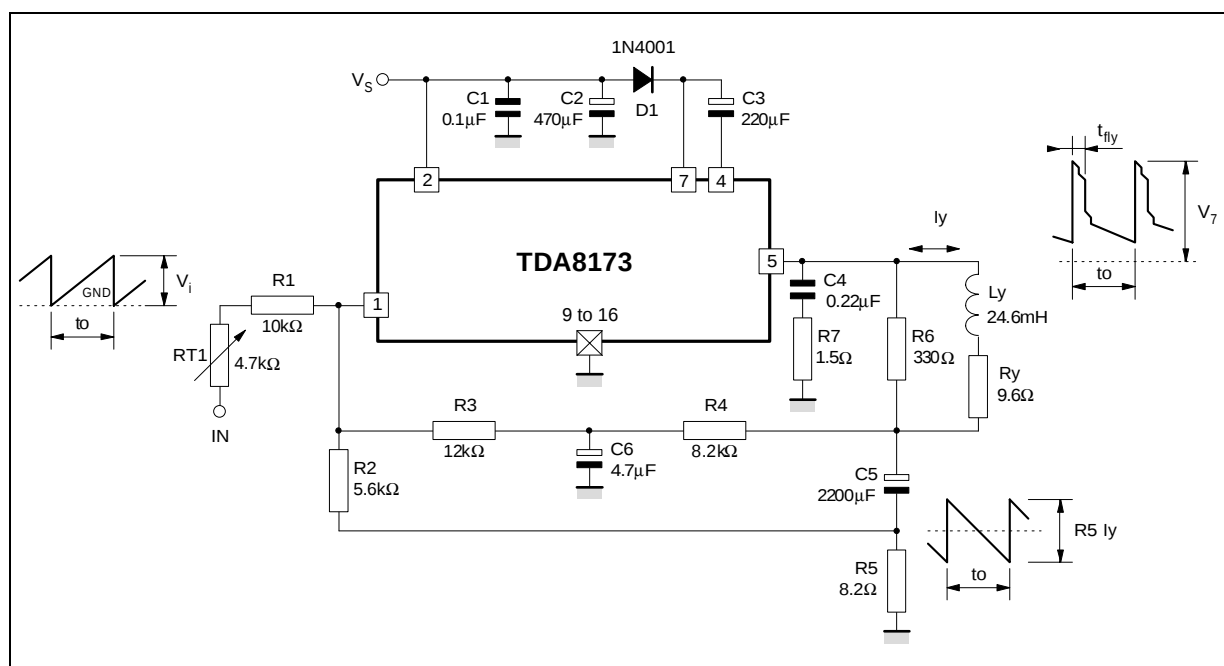
THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{\text{th}} (j-c)$	Thermal Resistance Junction-case	Max. 15	$^\circ\text{C/W}$
$R_{\text{th}} (j-a)$	Thermal Resistance Junction-ambient	Max. 70	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS(refer to the test circuits, $V_S = 35\text{V}$, $T_{\text{amb}} = 25^\circ\text{C}$ unless otherwise specified)

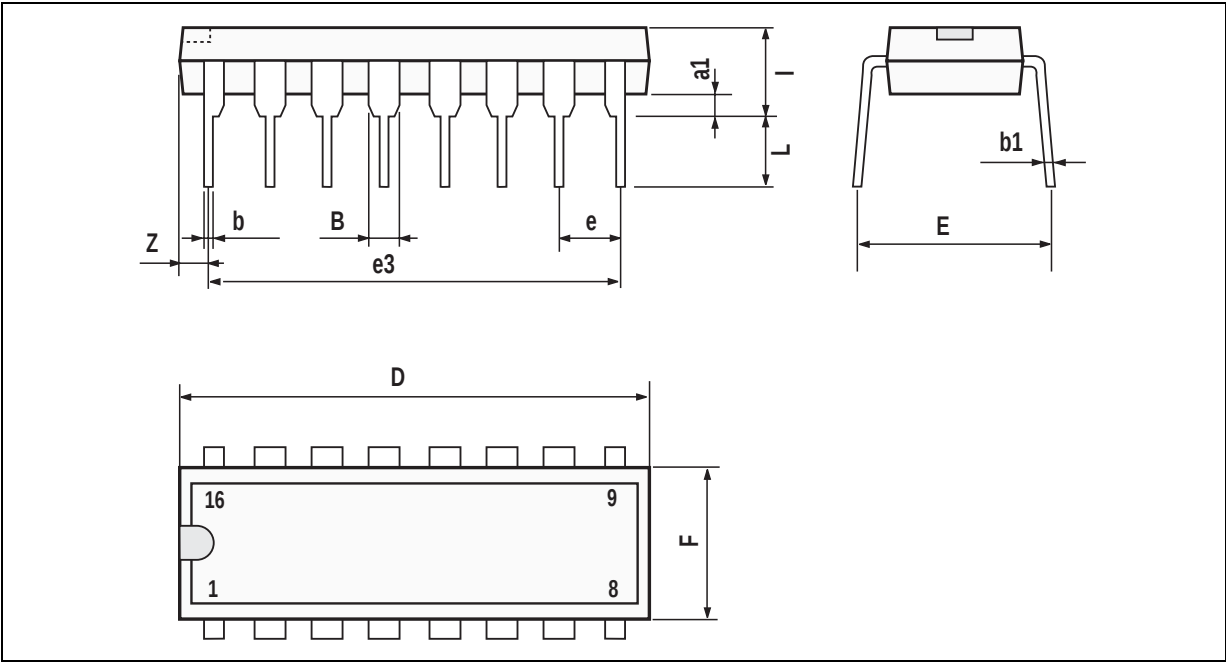
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_2	Pin 2 Quiescent Current	$I = 0, I_5 = 0$		8	16	mA
I_7	Pin 7 Quiescent Current	$I = 0, I_5 = 0$		16	36	mA
I_1	Amplifier Input Bias Current	$V_1 = 1\text{ V}$		-0.1	-1	μA
V_{4L}	Pin 4 Saturation Voltage to GND	$I_4 = 20\text{ mA}$		1		V
V_5	Quiescent Output Voltage	$V_S = 35\text{ V}, R_a = 39\text{ k}\Omega$		18		V
V_{5L}	Output Saturation Voltage to GND	$I_5 = 1.2\text{ A}$		1	1.4	V
		$I_5 = 0.7\text{ A}$		0.7	1	V
V_{5H}	Output Saturation Voltage to Supply	$-I_5 = 1.2\text{ A}$		1.6	2.2	V
		$-I_5 = 0.7\text{ A}$		1.3	1.8	V
T_j	Junction Temperature for Thermal Shut Down			140		$^\circ\text{C}$
V_8	Reference Voltage			2.2		V
$\frac{\Delta V_8}{\Delta V_S}$	Reference Voltage Drift versus Supply Voltage	$V_S = 15\text{ to }30\text{ V}$		1	2	mV

8173-03.TBL

TEST CIRCUITS

8173-03.EPS

PACKAGE MECHANICAL DATA
16 PINS - PLASTIC DIP



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	0.77		1.65	0.030		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		17.78			0.700	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z			1.27			0.050

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