

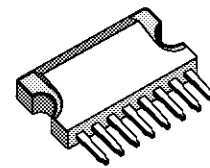
**TV VERTICAL DEFLECTION OUTPUT CIRCUIT**

PRELIMINARY DATA

- POWER AMPLIFIER
- THERMAL PROTECTION
- FLYBACK GENERATOR
- REFERENCE VOLTAGE
- WELL SUITED FOR AUTOMATIC INSERTION
- OPERATING SUPPLY VOLTAGE RANGE :  
10 to 30V

**DESCRIPTION**

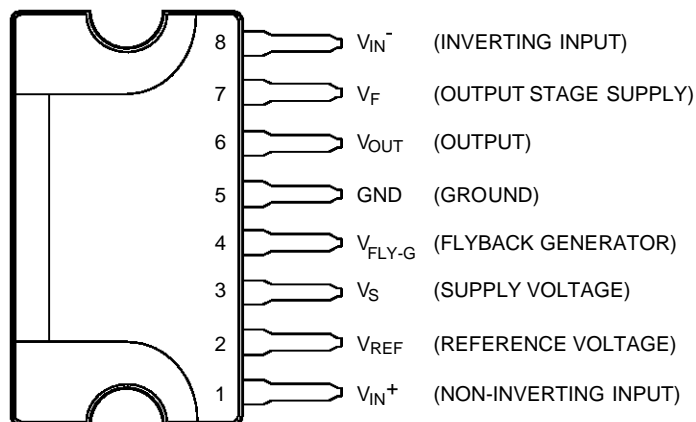
The TDA9302 is a monolithic integrated circuit in CLIPWATT 8 pins in line package. It is a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in low-cost TV as well as in monitors and display units.



**CLIPWATT8**  
(Plastic Package)

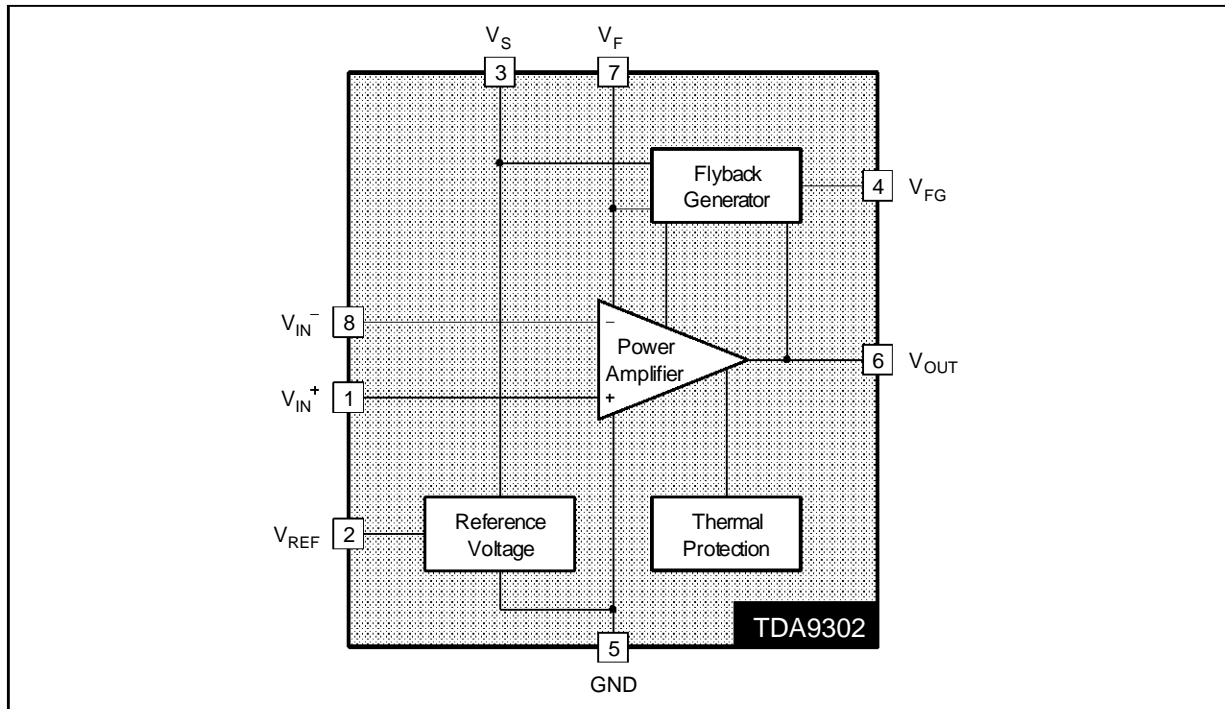
**ORDER CODE : TDA9302**

**PIN CONNECTIONS** (top view)



9302-01.EPS

**BLOCK DIAGRAM**



9302-02.EPS

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Pins	Value	Unit
$V_S$	Supply Voltage	3	35	V
$V_F, V_O$	Flyback Peak Voltage	6, 7	65	V
$V_{I+}, V_{I-}$	Amplifier Input Voltage	1, 8	$V_S$	V
$I_{OP}$	Peak Output Current	6	1.5	A
$I_4$	Flyback DC Current at $V_O < V_S$	4	100	mA
$I_4$	Flyback Peak Current - $f = 50$ or $60\text{Hz}$ , $t_{FLY} < 1.5\text{ms}$	4	1.8	A
$P_{tot}$	Total Power Dissipation at $T_{case} = 70^\circ\text{C}$		13	W
$T_{stg}$	Storage Temperature		-40, +150	$^\circ\text{C}$
$T_j$	Junction Temperature		internally limited	$^\circ\text{C}$

9302-01.TBL

**THERMAL DATA**

Symbol	Parameter	Value	Unit
$T_j$	Junction Temperature at Thermal Shutdown	Typ. 140	$^\circ\text{C}$
$T_{sh}$	Thermal Protection Hysteresis	Typ. 25	$^\circ\text{K}$
$R_{th(j-c)}$	Junction-case Thermal Resistance	Max. 3	$^\circ\text{C/W}$

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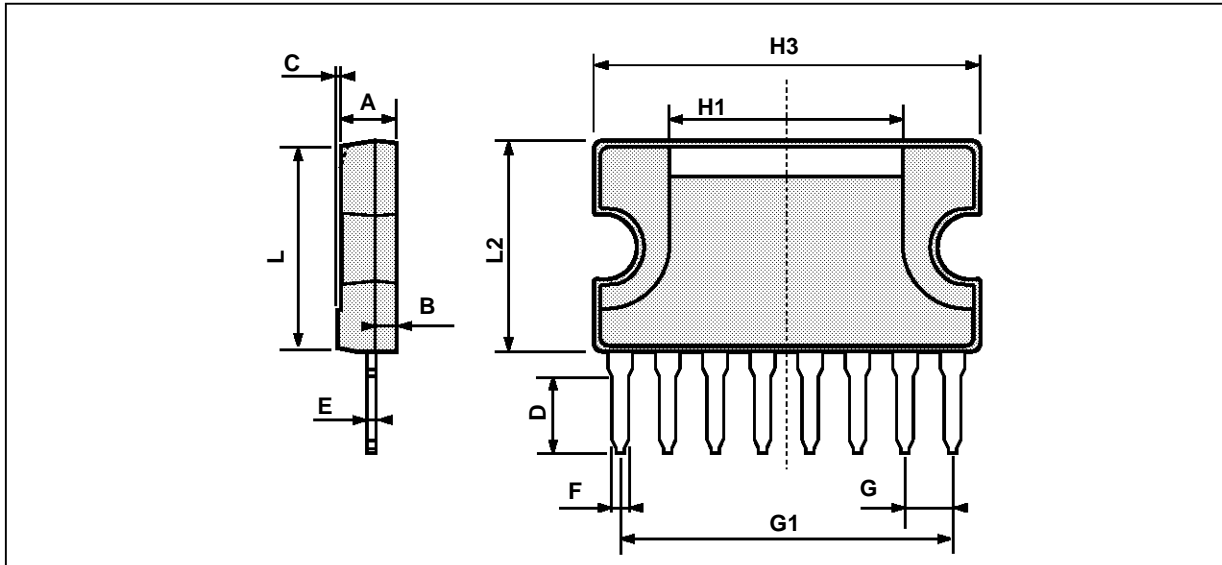
**ELECTRICAL CHARACTERISTICS**

Refer to the test circuit.  $V_S = 35V$ ,  $T_{amb} = 25^{\circ}C$ , unless otherwise specified

Symbol	Parameter	Test Conditions	Pins	Min.	Typ.	Max.	Unit
$V_S$	Supply Voltage Range		3	10		35	V
$I_{S(SB)}$	Supply Standby Current	$I_O = I_{flyb} = 0$	3		8		mA
$I_{O(SB)}$	Power Stage Standby Current	$I_O = I_{flyb} = 0$	7		17	35	mA
$I_{1-8}$	Power Amplifier Input Current	$V_I = 1V$	1, 8			1	μA
$R_{1-8}$	Power Amplifier Input Resistance		1, 8		200		kΩ
$V_{4L}$	Flyback Output Saturation Voltage	$I_{fb} = 10mA$	4			450	mV
$V_{6L}$	Power Output Low Side Saturation Voltage	$I_O = 0.1A$ $I_O = 0.8A$	6			1.2 2.3	V V
$V_{6H}$	Power Output High Side Saturation Voltage	$I_O = -0.1A$ $I_O = -0.8A$	6			2.1 3.2	V V
$V_{6/7}$	Power Output Diode Forward Voltage	$I_d = 0.8A$	6		1.5		V
$V_{4/3}$	Flyback Output Diode Forward Voltage	$I_d = 0.8A$	4		1.5		V
$V_{REF}$	Reference Voltage		2	2.05	2.2	2.35	V
$\frac{dV_{REF}}{dV_S}$	Reference Voltage Drift versus $V_S$	$V_S = 10V$ to $35V$	2			2	mV/V
$\frac{dV_{REF}}{dT_j}$	Reference Voltage Drift versus Junction Temperature	$T_j = 0^{\circ}C$ to $125^{\circ}C$	2			150	ppm/ $^{\circ}C$

9302-03.TBL

**PACKAGE MECHANICAL DATA**  
8 PINS - PLASTIC CLIPWATT



PM-CPW8.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			3.10			0.122
B			1.10			0.04
C		0.15			0.006	
D		3.50			0.14	
E		0.52			0.02	
F		0.80			0.03	
G		2.55			0.10	
G1		17.78			0.70	
H1		12.00			0.48	
H3		20.00			0.79	
L		15.90			0.62	
L2		11.00			0.43	

CPW8.TBL

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