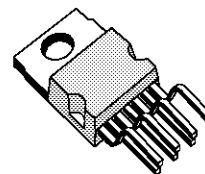


TV VERTICAL DEFLECTION OUTPUT CIRCUIT

- POWER AMPLIFIER
- FLYBACK GENERATOR
- AUTOMATIC PUMPING COMPENSATION
- THERMAL PROTECTION
- REFERENCE VOLTAGE

DESCRIPTION

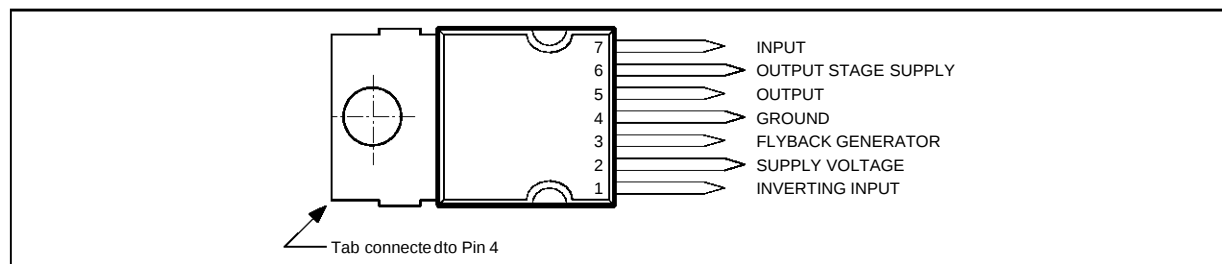
The TDA8175 is a monolithic integrated circuit in HEPTAWATT package. It is a high efficiency power booster for direct driving of vertical windings of TV yokes. It is intended for use in Color and B & W television sets as well as in monitors and displays.



HEPTAWATT
(Plastic Package)

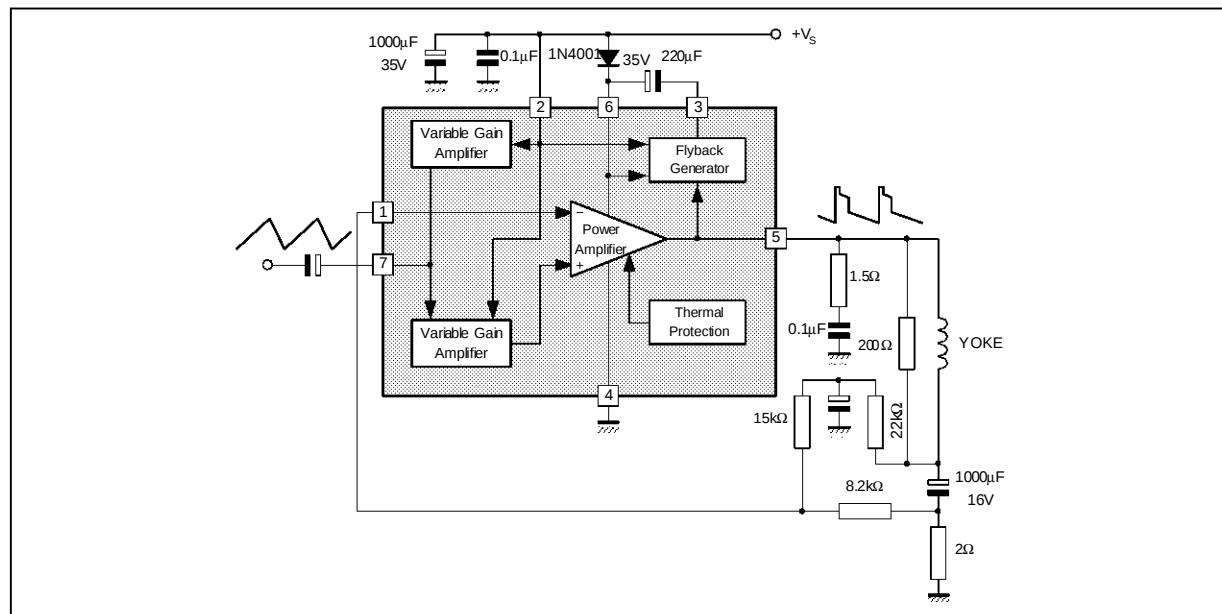
ORDER CODE : TDA8175

PIN CONNECTIONS



8175-01.EPS

BLOCK DIAGRAM



8175-02.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _S	Supply Voltage (Pin 2)	35	V
V ₅ , V ₆	Flyback Peak Voltage	60	V
V ₃	Voltage at Pin 3	+V _S	
V ₁ , V ₇	Amplifier Input Voltage	+V _S	
I _O	Output Peak Current (non-repetitive, t = 2ms)	2.5	A
I _O	Output Peak Current at : f = 50 or 60Hz, t ≤ 10μs f = 50 or 60Hz, t > 10μs	3 2	A A
I ₃	Pin 3 DC Current at V ₅ < V ₂	100	mA
I ₃	Pin 3 Peak-to-peak Flyback Current at f = 50 or 60Hz, t _{fly} ≤ 1.5ms	3	A
P _{tot}	Total Power Dissipation at T _{case} = 70°C	20	W
T _j , T _{stg}	Storage and Junction Temperature	-40, +150	°C

8175-01.TBL

THERMAL DATA

Symbol	Parameter	Value	Unit
R _{th(j-c)}	Junction-case Thermal Resistance	Max. 3	°C/W

8175-02.TBL

ELECTRICAL CHARACTERISTICS (V_S = 35V, T_{amb} = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I ₂	Pin 2 Quiescent Current			18	36	mA
I ₆	Pin 6 Quiescent Current			16	36	mA
I ₁	Amplifier Input Bias Current	V ₁ = 1V		-0.1	-1	μA
V ₃	Pin 3 Saturation to GND	I ₃ = 20mA		1	1.5	V
V ₅	Quiescent Output Voltage	V _S = 35V, R _a = 39kΩ		19		V
V ₅	Output Saturation Voltage to GND	I ₅ = 1.2A I ₅ = 0.7A		1 0.7	1.4 1	V V
V ₅	Output Saturation Voltage to Supply	-I ₅ = 1.2A -I ₅ = 0.7A		1.6 1.3	2.2 1.8	V V
V _O	Ramp Amplitude versus Voltage Supply	22V < V _S < 30V		4		%/V
G	AC Gain	V _S = 26V	0.54	0.61	0.67	V
V _O	DC Output Voltage Accuracy			8		%
V ₇	Internal Bias			2.7		V
R ₇	Input Resistance			50		kΩ
T _j	Junction Temperature for Thermal Shutdown			140		°C

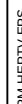
8175-03.TBL

THERMAL PROTECTION

The thermal protection circuit intervenes when the die temperatures reaches 150°C and turns-off the output power device.

PUMPING COMPENSATION

The device incorporates a special preamplifier, the gain of which varies with changes in supply voltage. This function allows perfect compensation of height variations caused by changes in brightness.

JERTV/ TPI

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