

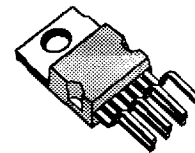
VERTICAL DEFLECTION BOOSTER

ADVANCE DATA

- POWER AMPLIFIER
- THERMAL PROTECTION
- OUTPUT CURRENT UP TO 2.0A_{PP}
- FLYBACK VOLTAGE UP TO 90V (on Pin 5)
- SUITABLE FOR DC COUPLING APPLICATION
- EXTERNAL FLYBACK SUPPLY

DESCRIPTION

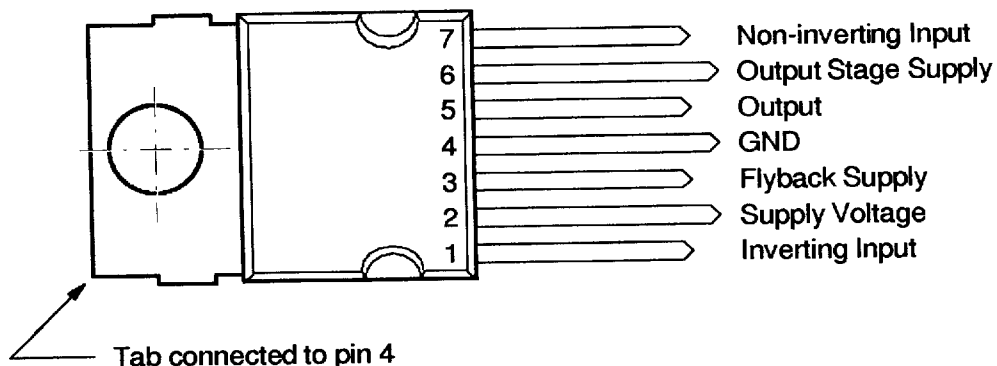
Designed for monitors and high performance TVs, the STV9379F vertical deflection booster can handle flyback voltage up to 90V. More than this it is possible to have a flyback voltage which is more than the double of the supply (Pin 2). This allows to decrease the power consumption or to decrease the flyback time for a given supply voltage. The STV9379F operates with supplies up to 42V and provides up to 2A_{PP} output current to drive the yoke. The STV9379F is offered in HEPTAWATT package.



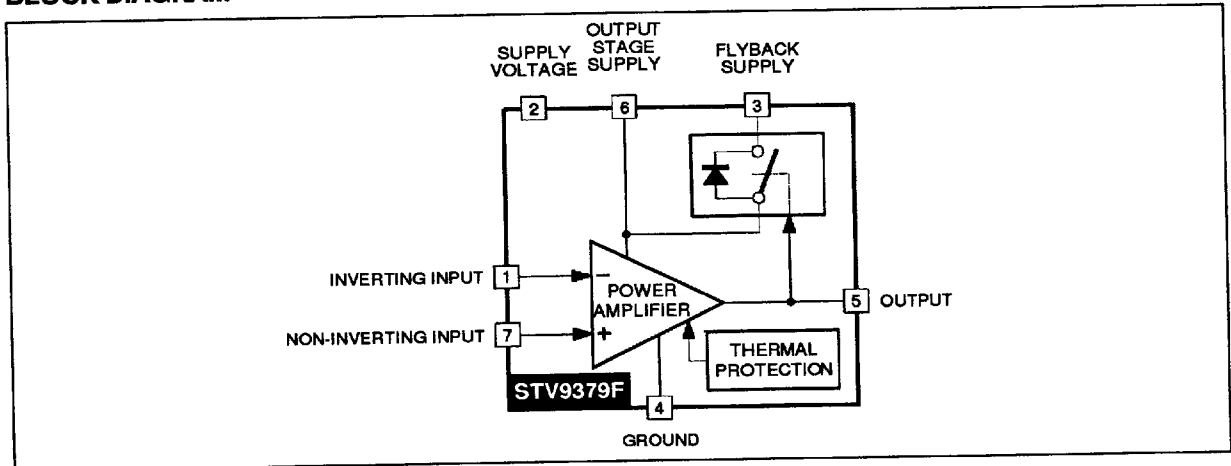
HEPTAWATT
(Plastic Package)

ORDER CODE : STV9379F

PIN CONNECTIONS



BLOCK DIAGRAM



9379F-02.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_S	Supply Voltage (Pin 2) (see note 1)	50	V
V_6	Flyback Peak Voltage (Pin 6) (see note 1)	100	V
V_1, V_7	Amplifier Input Voltage (Pins 1-7) (see note 1)	- 0.3, + V_S	V
I_O	Maximum Output Peak Current (see notes 2 and 3)	1.5	A
I_S	Maximum Sink Current ($t < 1\text{ms}$)	1.5	A
I_S	Maximum Source Current ($t < 1\text{ms}$) (in the diode, see Block Diagram)	1.5	A
V_{ESD}	Electrostatic Handling for all pins (see note 4)	300	V
$V_3 - V_2$	Voltage Difference between Flyback Supply and Supply Voltage	70	V
T_{oper}	Operating Ambient Temperature	- 20, + 75	°C
T_{stg}	Storage Temperature	- 40, + 150	°C
T_j	Junction Temperature	+150	°C

9379F-01.TBL

- Notes :
- 1. Versus GND.
 - 2. The output current can reach 4A peak for $t \leq 10\mu\text{s}$ (up to 120Hz).
 - 3. Provided SOAR is respected (see Figures 1 and 2).
 - 4. Equivalent to discharging a 200pF capacitor through a 0Ω series resistor.

THERMAL DATA

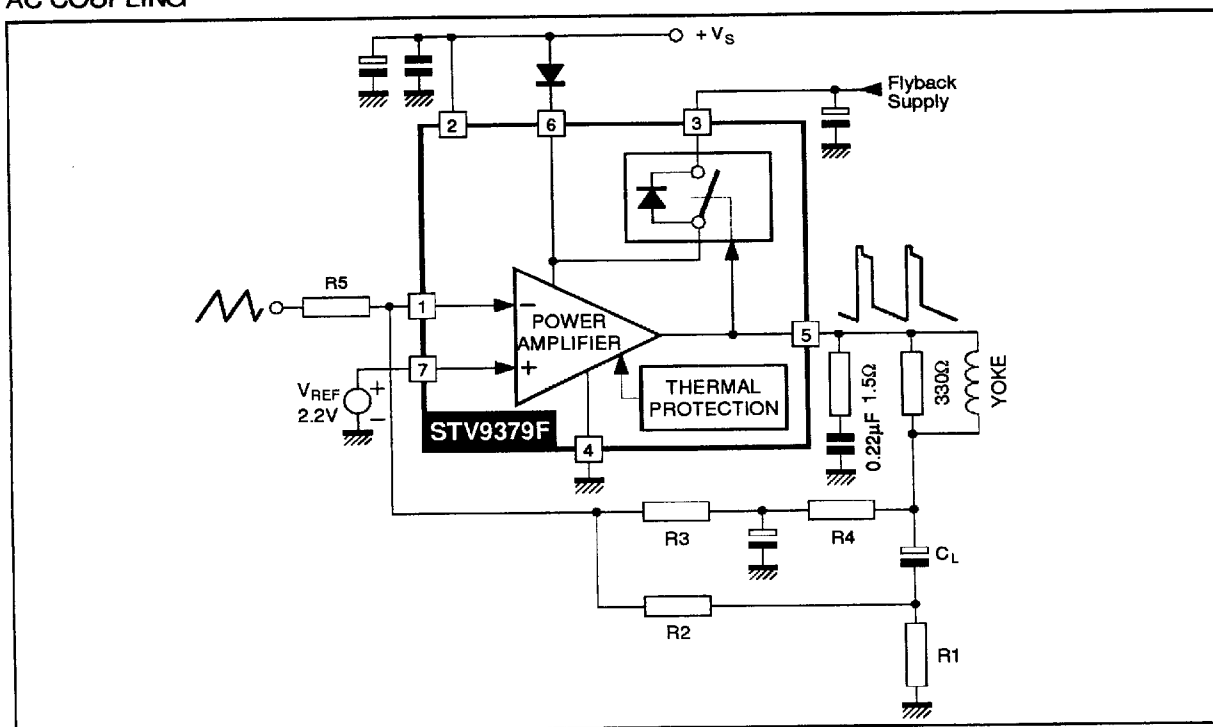
Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction-case Thermal Resistance Max.	3	°C/W
T_t	Temperature for Thermal Shutdown	150	°C
ΔT_t	Hysteresis on T_t	10	°C
T_{jr}	Recommended Max. Junction Temperature	120	°C

9379F-02.TBL

ELECTRICAL CHARACTERISTICS(V_S = 42V, T_A = 25°C, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V _S	Operating Supply Voltage Range		10		42	V
V _{3M}	Operating Flyback Supply Voltage		V _S		90	V
I ₂	Pin 2 Quiescent Current	I ₃ = 0, I ₅ = 0		10	20	mA
I ₆	Pin 6 Quiescent Current	I ₃ = 0, I ₅ = 0	5	10	30	mA
I _O	Max. Peak Output Current				1	A
I ₁	Amplifier Bias Current	V ₁ = 25V, V ₇ = 26V		- 0.15	- 1	μA
I ₇	Amplifier Bias Current	V ₁ = 26V, V ₇ = 25V		- 0.15	- 1	μA
V _{IO}	Offset Voltage			1	7	mV
ΔV _{IO} /dt	Offset Drift versus Temperature			- 10		μV/°C
GV	Voltage Gain		80			dB
V _{5L}	Output Saturation Voltage to GND (Pin 4)	I ₅ = 1A		1	1.5	V
V _{5H}	Output Saturation Voltage to Supply (Pin 6)	I ₅ = - 1A		1.6	2.1	V
V _{D5-6}	Diode Forward Voltage between Pins 5-6	I ₅ = 1A		1.5	2	V
V _{D3-6}	Diode Forward Voltage between Pins 3-6	I ₃ = 1A		1.5	2	V
V ₃₋₆	Voltage Drop between Pins 3-6 (2nd part of flyback)	I ₃ = - 1A		2.1	2.9	V

9379F-03.TBL

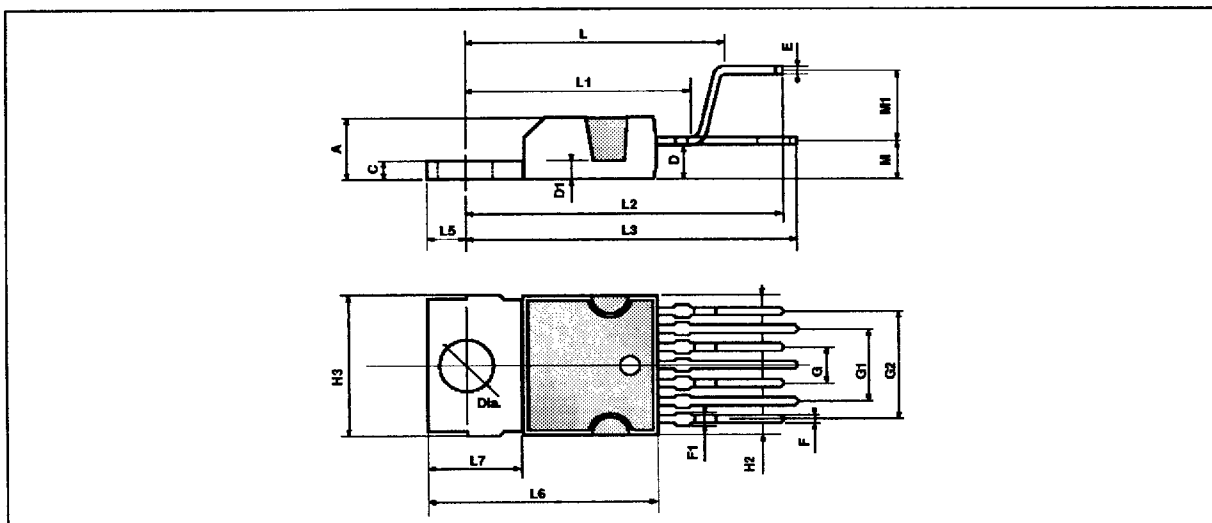
APPLICATION CIRCUITS**AC COUPLING**

9379F-03.EPS



Figure 2 : Secondary Breakdown Temperature Derating Curve
(ISB = secondary breakdown current)



PACKAGE MECHANICAL DATA : 7 PINS - PLASTIC HEPTAWAT

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			4.8			0.189
C			1.37			0.054
D	2.4		2.8	0.094		0.110
D1	1.2		1.35	0.047		0.053
E	0.35		0.55	0.014		0.022
F	0.6		08	0.024		0.031
F1			0.9			0.035
G	2.41	2.54	2.67	0.095	0.100	0.105
G1	4.91	5.08	5.21	0.193	0.200	0.205
G2	7.49	7.62	7.8	0.295	0.300	0.307
H2			10.4			0.409
H3	10.05		10.4	0.396		0.409
L		16.97			0.668	
L1		14.92			0.587	
L2		21.54			0.848	
L3		22.62			0.891	
L5	2.6		3	0.102		0.118
L6	15.1		15.8	0.594		0.622
L7	6		6.6	0.236		0.260
M		2.8			0.110	
M1		5.08			0.200	
Dia.	3.65		3.85	0.144		0.152

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