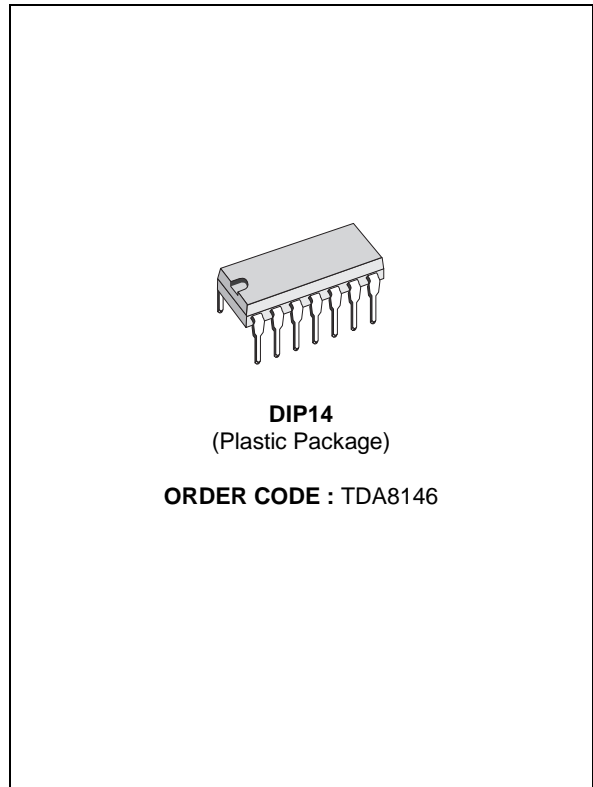


**EAST/WEST CORRECTION
FOR RECTANGULAR TV-TUBES**

- LOW POWER DISSIPATION
- PULSE WIDTH MODULATOR FOR SWITCH MODE OPERATION
- OUTPUT SINK CURRENT UP TO 800mA
- OUTPUT SOURCE CURRENT UP TO 100mA
- PARASITIC PARABOLA SUPPRESSION DURING VERTICAL FLYBACK
- VERTICAL CURRENT SENSE INPUTS GROUND COMPATIBLE
- PROGRAMMABLE PARABOLA CURRENT GENERATOR FOR DIFFERENT TV-TUBES
- EXTERNAL KEYSTONE ADJUSTMENT



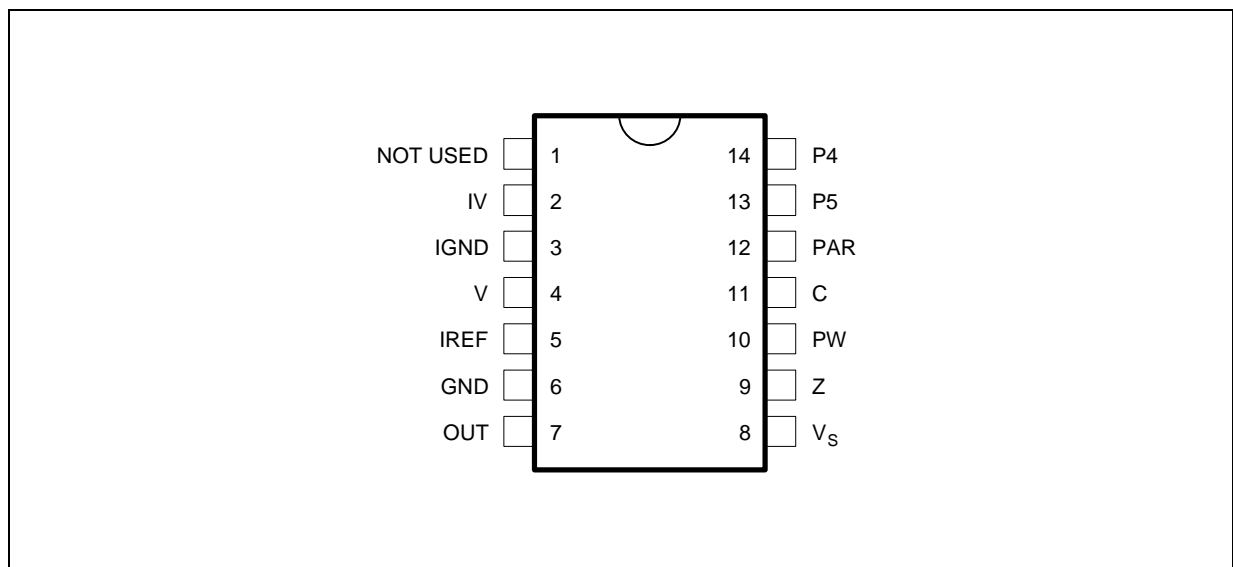
DESCRIPTION

The TDA8146 is a monolithic integrated circuit in a 14 pin dual-in-line plastic package.

The TDA8146 is designed for use in the east-west pin-cushion correction by driving a diode modulator in TV and monitor applications.

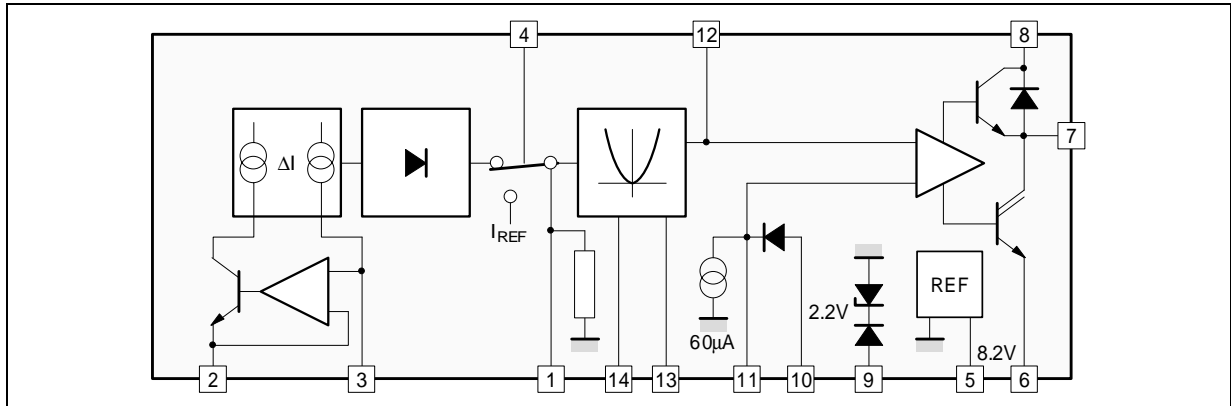
Since the parabola current generator is programmable the device can operate with different CRTs.

PIN CONNECTIONS



8146-01EPS

BLOCK DIAGRAM



8146-02.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
I_7	Output Sink Current	800	mA
I_7	Output Source Current	100	mA
V_S	Supply Voltage	33	V
V_4	Vertical Flyback Input Voltage	- 0.3 to 60	V
V_{10}	Input Voltage at Pin 10	- 10 to V_S	V
V_9	Input Voltage at Pin 9	- 10 to 20	V
V_{in}	Input Voltage at all other Pins	- 0.3 to V_S	V
T_{stg}	Storage Temperature	- 40 to 150	°C
T_j	Junction Temperature	0 to 150	°C

8146-01.TBL

THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient Thermal Resistance	Max. 80	°C/W

8146-02.TBL

ELECTRICAL CHARACTERISTICS

(refer to test circuit $V_S = 24V$, $T_j = 25^\circ C$; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		15	24	29	V
I_S	Supply Current	$V_{out} = LOW$		4	7	mA
V_5	Reference Voltage			8.2		V
V_{7L}	Saturation Voltage	$I_O = 800mA$ Sink		1.2	2	V
V_{SAT}	Diode Forward Voltage	$I_O = - 800mA$		1.1	1.7	V
V_{7H}	Saturation Voltage	$I_O = 100mA$ Source		0.8	1.25	V
I_{11}	Current Sink Pin 11		40	60	80	µA
V_9	Zener Voltage	$I_g = 5mA$	20	22	24	V
V_{4T}	Vertical Blanking Threshold Voltage		$V_S - 0.5$	V_S	$V_S + 0.5$	V
I_4	Vertical Blanking Input Current	$V_4 = 50V$	25	50	100	µA
V_2	Reference Voltage at Pin 2	$R1 = R2 = 10K$		1.3		V
V_3	Reference Voltage at Pin 3			1.3		V
V_{PARO}	Parabola Voltage at Pin 12	$\Delta V_{SE} = 0$		9.7		V
V_C	Parabola Voltage at Pin 12	$\Delta V_{SE} = + 0.8V$		7.05		V

8146-03.TBL

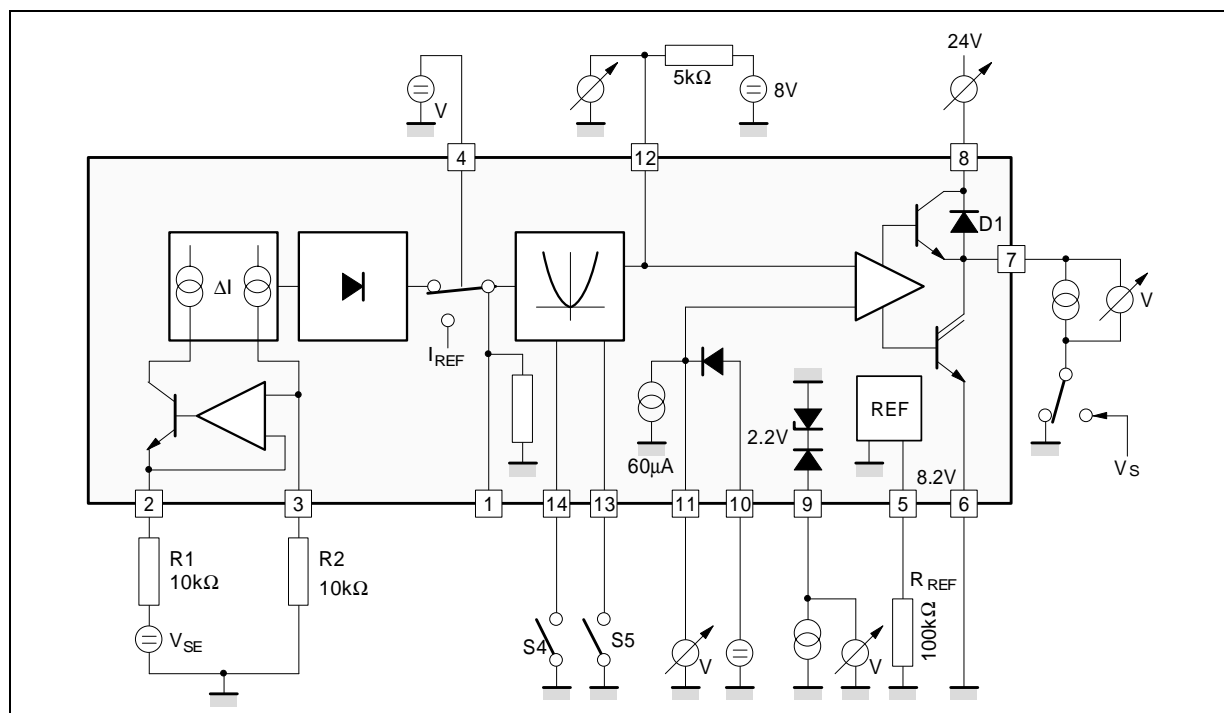
ELECTRICAL CHARACTERISTICS (continued)

(refer to test circuit $V_S = 24V$, $T_j = 25^{\circ}C$; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
K_A	Parabola Coefficient	$K_A = \frac{VA}{VB}$		0.25		
K_C	Parabola Coefficient	$K_C = \frac{VC}{VB}$; S4 + S5 open		1.75		
K_5	Parabola Coefficient	$K_5 = \frac{VC5}{VC}$; S4 or S5 Closed		1.07		
K_4	Parabola Coefficient	$K_4 = \frac{VC4}{VC}$; S4 + S5 Closed		1.17		
K_S	Parabola Symmetry	$K_S = \frac{VC}{VD}$	0.94	1.0	1.06	
K_F	Flyback Coefficient	$K_F = \frac{VC}{VD}$; $V_4 = 15V$		1.0		

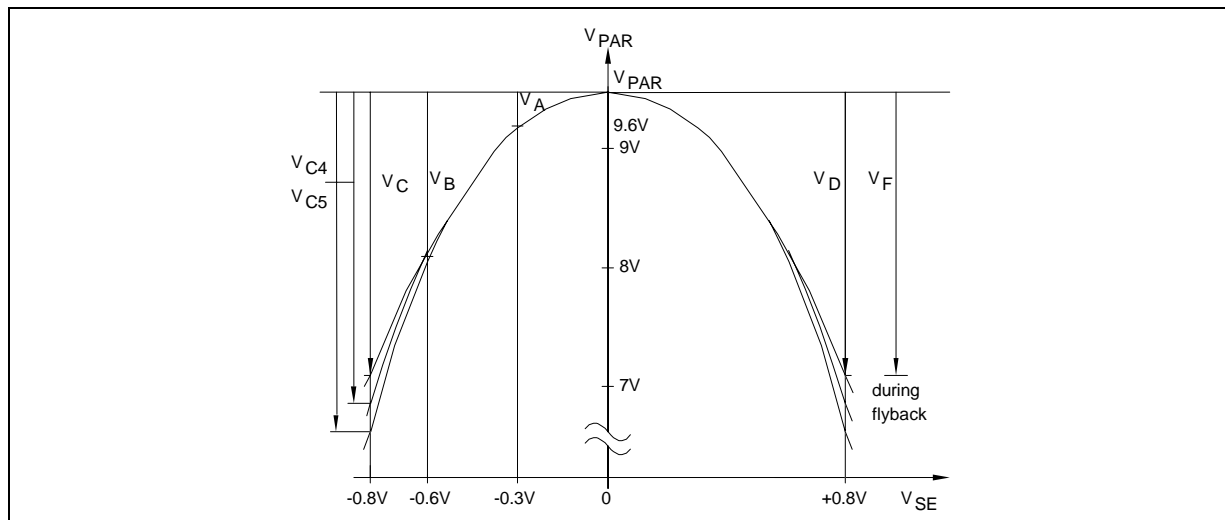
8146-04.TBL

TEST CIRCUIT



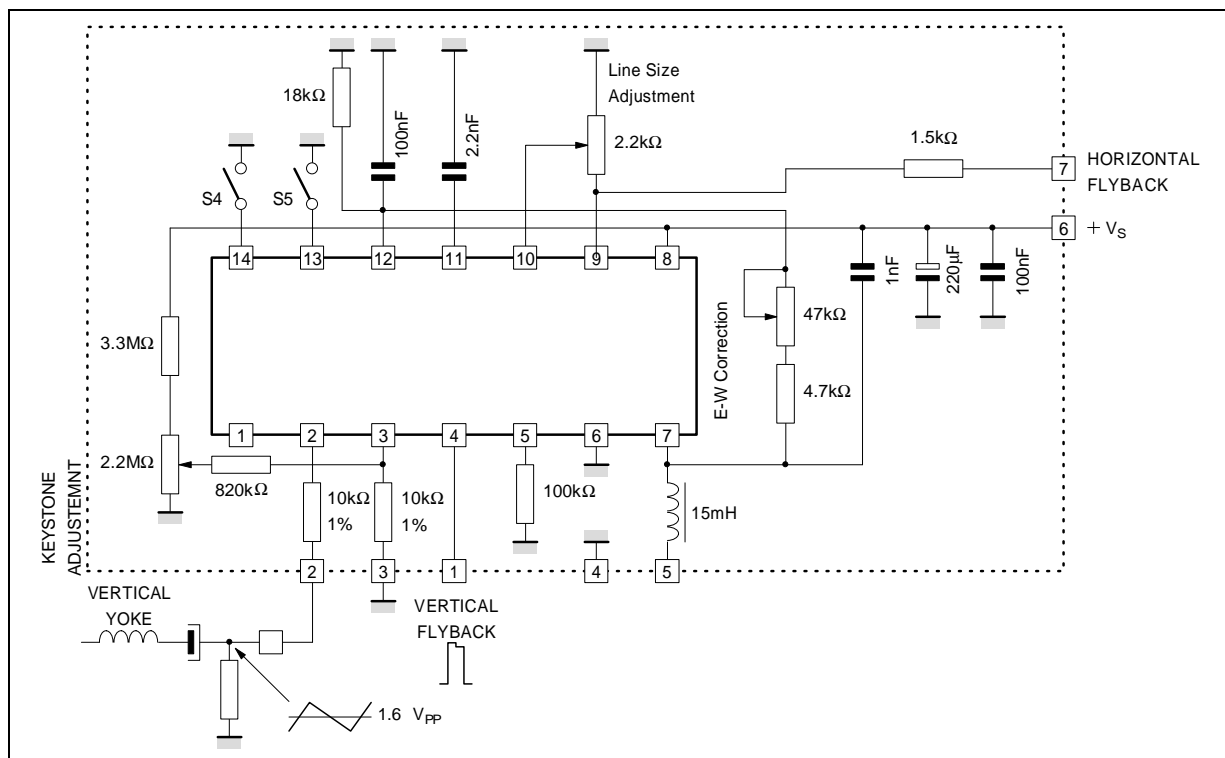
8146-03.EPS

PARABOLA CHARACTERISTICS

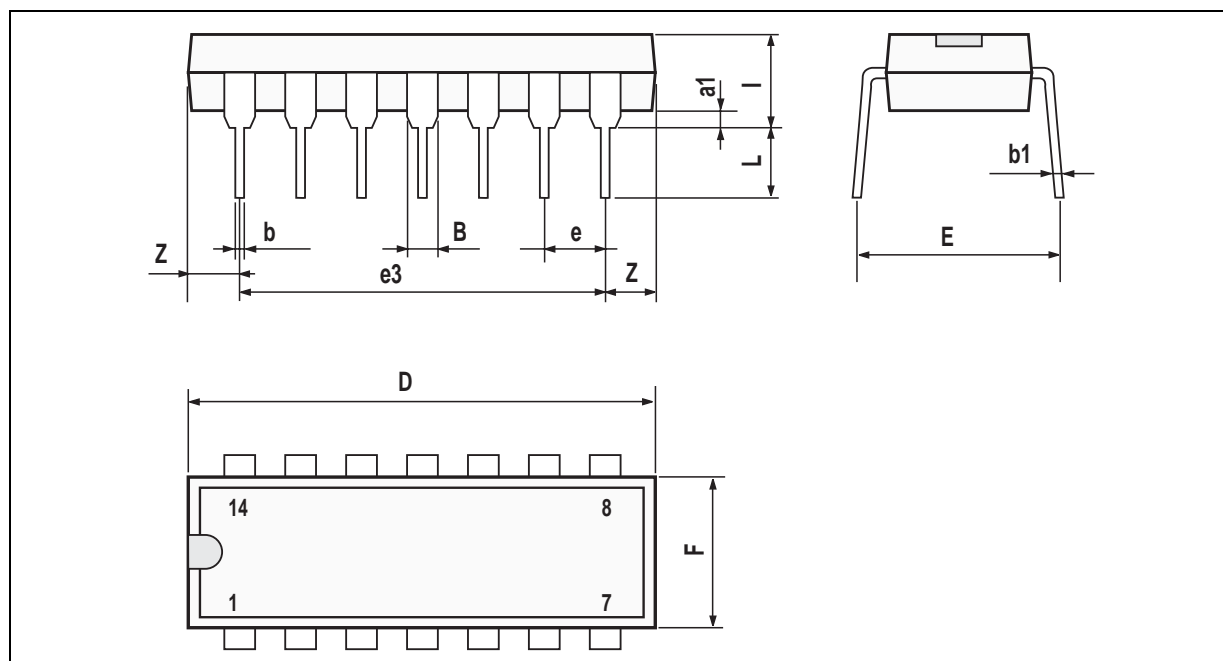


8146-04.EPS

APPLICATION DIAGRAM



8146-05.EPS

PACKAGE MECHANICAL DATA
 14 PINS - PLASTIC DIP


Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	1.39		1.65	0.055		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		15.24			0.600	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No licence is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

Purchase of I²C Components of SGS-THOMSON Microelectronics, conveys a license under the Philips I²C Patent. Rights to use these components in a I²C system, is granted provided that the system conforms to the I²C Standard Specifications as defined by Philips.

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco
 The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.